Found at Sea: Mapping Ships on the Eighteenth-Century Atlantic Ocean

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Found at Sea: Mapping Ships on the Eighteenth-Century Atlantic Ocean

A dissertation presented

by

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Found at Sea: Mapping Ships on the Eighteenth-Century Atlantic Ocean

Abstract

"Found at Sea" is a historical study centered on the Atlantic Ocean. This dissertation employs ships' logbooks in combination with a GIS mapping methodology to address the ocean, itself, as a site for historical developments. Eighteenth-century mariners sailed the ocean in more varied ways than historians have previously described. This dissertation demonstrates that the Atlantic Ocean of the late eighteenth century was a highly-populated, very social, international space. It was normal for a ship to see another ship about half of the days while it was at sea. During peacetime these sightings could lead to friendly exchanges of news, food, and even spare parts in case of emergency. During wartime, shipping patterns adjusted to reflect new trading alliances and the threat of enemy vessels.

This dissertation tracks American seafarers' experiences during the Revolutionary War, the relative peace of the late 1780s, and the Quasi-War between the United States and France to investigate how the human geography of the sea changed over time. The ocean was not an entirely isolating place but rather a place with a unique form of society. The ocean separated private individuals from the intermediate institutions that usually stood between them and international relations. Mariners on the high seas consistently related to international affairs on an immediate, local scale, the same way they related to the winds or the conditions of their ships. This maritime conflation of the local with the international is essential to understanding relations among maritime powers during this period.

The dissertation contributes to current scholarship in early American history and the Atlantic World by treating the Atlantic Ocean as more than an abstracted connector for the surrounding continents. It contributes to the history of navigation by investigating the role of logbooks as instruments within a complex navigational system that directly preceded the use of chronometers. It also suggests that instrumental sources like logbooks are particularly well suited to digital humanities scholarship, because digital methods enable researchers to consider more closely the numerical portions of these sources that often go ignored.

Table of Contents

To Mom and Dad

Introduction

This is my substitute for pistol and ball. With a philosophical flourish Cato throws himself upon his sword; I quietly take to the ship. There is nothing surprising in this. If they but knew it, almost all men in their degree, some time or other, cherish very nearly the same feelings towards the ocean with me.

-Ishmael in *Moby-Dick* [1]

In the case of Herman Melville's whaler, melancholy drove him to sea. In my case, it was Herman Melville.[2] It was not a matter of melancholy that pushed me to study the ocean (although Melville can have that effect), but rather of curiosity about an occurrence that Melville described: the gam. In his chapter of the same name Melville defined the gam as a social meeting of whalers at sea. Boats crossed from one ship to the other and men tarried for a time onboard, sharing news, letters, and a congenial chat. Melville insisted that this arrangement was very common among whalers and only common to them; other ships met at sea but did so less often and with greater reserve.[3] During the hunt for the White Whale, the *Pequod* met with other ships (the *Rose Bud, Rachel, Delight,* etc.), but I was suspicious that it did so too frequently. Surely this was just a way to add characters to the story and to maintain the reader's interest during the long wait for Ahab's nemesis. When the *Rachel* reappeared at the conclusion, my suspicion only increased; surely ships would not meet again once separated.

This suspicion drifted from my mind for a time after I set aside *Moby-Dick*, but it returned with a vengeance when I ran across my first logbooks. I was investigating a different research topic at the time but began noticing meetings among ships at sea. These were not

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[1] Herman Melville, *Moby-Dick; or the Whale* (New York: Harper and Brothers, 1851), 1. Proquest Literature Online.

[2] I have Rosalind Williams and Leo Marx to thank for their fantastic Spring 2010 course "Technology and Classic American Literature," which inspired this line of thinking.

[3] Melville, *Moby-Dick*, Chapter 53, "The Gam."

whalers but merchant mariners who saw one another with shocking regularity and even spoke

from time to time. These events were social visits and more. Sometimes reports that a war had

broken out met ships in the middle of the Atlantic. At other times ships that had been lost at sea

were found at sea by the goodwill and navigational records of others. I had read about the

Atlantic World, but not about this place – not about the Atlantic.

Historians with an Atlantic perspective have studied societies on both sides of the ocean,

thereby highlighting the interconnectedness of the early modern world.[4] Yet as Jeffrey Bolster

has observed, the namesake for Atlantic History, the Atlantic Ocean, often figures in these

histories as little more than a conduit for communication and correspondence.[5] In her 2006

reflection on the state of the field, Alison Games likewise urged, "It is time to restore the ocean

to Atlantic history."[6] Daniel Vickers agreed that it is difficult to understand the centrality of the

Atlantic to the early American past because it is difficult to imagine the ocean as a place. Vickers

explained, "The practice of mapping the maritime world geographically and conceptually out of

the American mainstream has been growing since the period of the early republic, and it now

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[4] Some overviews of the field of Atlantic History include Bernard Bailyn, *Atlantic History: Concept and Contours*. (Cambridge, Mass.: Harvard University Press, 2005), Paul Butel, *Histoire De l'Atlantique*. English; *The Atlantic*. (New York: Routledge, 1999), and Horst Pietschmann, ed. *Atlantic History: History of the Atlantic System 1580-1830: Papers Presented at an International Conference, Held 28 August-1 September, 1999, in Hamburg*. Veröffentlichung Der Joachim Jungius-Gesellschaft Der Wissenschaften Hamburg ; Nr. 94. (Göttingen: Vandenhoeck & Ruprecht, 2002).

[5] W. Jeffrey Bolster, "Putting the Ocean in Atlantic History: Maritime Communities and Marine Ecology in the Northwest Atlantic, 1500–1800," *American Historical Review*, 113, no. 1 (February 2008): 19-47.

[6] Alison Games, "Atlantic History: Definitions, Challenges, and Opportunities," *The American Historical Review* 111, no. 3 (June 2006), 746. As part of his larger examination of islands, John Gillis has proposed a project in a similar vein: that we rewrite history with seas and archipelagos rather than continents at the center. John Gillis, *Islands of the Mind: How the Human Imagination Created the Atlantic World*, (New York: Palgrave Macmillan, 2004), 84-87.

seems rather conventional."[7] The primary aim of this dissertation is to map the Atlantic Ocean back into Atlantic and early American History.

This dissertation investigates the historical Atlantic's physical reality by mapping the locations of ships at sea during the eighteenth century. It is built around ships' logbooks, documents in which ships' officers recorded noteworthy events alongside navigational information tracking the ships' day-to-day movements. Although some historians recognize logbooks as navigational instruments, few contend directly with their number-filled columns.[8] This dissertation uses those columns to place the events described in each day's logbook entry in their geographical context on the ocean. Gathering material from several American archives, I have constructed a detailed database incorporating over 4500 individual entries representing 67 logbooks. Using this database in combination with a climate research database and ArcGIS, a computer mapping and analysis program, I have identified new patterns in 18th-century maritime travel.[9]

At its heart, the dissertation addresses a pair of foundational questions as yet unexplained in scholarship of the Atlantic World. If the peoples around the Atlantic basin were connected, they were connected by ships. Where were the ships? Furthermore, did it matter where they were? I have found that the ships were nearly everywhere. Eighteenth-century seafarers covered more water than historians have previously estimated, and they did so traveling along courses

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[7] Daniel Vickers, *Young Men and the Sea: Yankee Seafarers in the Age of Sail*, (New Haven: Yale University Press, 2005), 248-249.

[8] Scientists have long ago shown interest in innovative uses of historical logs. My mapping method was inspired in part by J. Oliver and J. A. Kington, "The Usefulness of Ships' Logbooks in the Synoptic Analysis of Past Climates," *Weather*, 25 (1970), 520-527.

[9] See the Appendix for more details on the databases and mapping procedure.

that historians have previously deemed impossible. Over the course of this dissertation I seek to explain where the ships were. Text alone is not up to the task of describing oceanic space, so I incorporate many maps, as well. Taken together, the maps in the dissertation constitute the most thorough depiction of eighteenth-century Atlantic traffic to date.

Using both maps and text I argue not only that ships sailed in a wide range of places but that the different geographies of each voyage mattered. A ship's particular location influenced how the captain navigated, how quickly the vessel sailed, whom it met, and what natural and human perils and providences it might encounter. Even though only the ship's officers might have known the ship's location at the time, that location still influenced the experiences of all of the people onboard. The location of the ship during the voyage could remain an important question on land when a crisis or legal issue arose. Furthermore, what happened at sea and where it happened mattered to the rest of the Atlantic World. Former Speaker of the House Tip O'Neill's famous saying "All politics is local" would have held true for the eighteenth-century Atlantic Ocean, where an encounter between ships could be a meeting between neighbors and a meeting between nations wrapped into one. The course that a ship's master chose to sail (not just the endpoints, but the path along the way) both responded to the state of international affairs and constituted those affairs.

Beyond the explicit historical questions that drive this dissertation lies a methodological experiment. How useful are computer mapping methods to address historical problems? How does incorporating geographic information systems (GIS) influence a research process? I began this project intrigued by the potential of GIS tools that had become available within the previous decade, but I was also wary of their limitations. In particular, digital humanities methods often demand a large upfront investment in time and effort before they begin to yield answers to the

researchers' questions. For example, the recently completed *Virtual Paul's Cross Project* is an effort to imagine how John Donne's 1622 Gunpowder Day sermon might have been received by modeling how well it could have been heard. This entailed the creation of a detailed acoustic model of the churchyard of St. Paul's Cathedral as it might have sounded at the time. This innovative effort to imagine how Donne's sermon was originally presented contributes to current scholarship in the history of the senses and helps scholars consider the sermon as a spoken event rather than only as a written text, but the project could only yield its fruits after the team had invested substantial time and resources into modeling the historical setting.[10] How many more projects never saw the light of day despite hundreds of hours invested? The same concern could be raised when setting out on other kinds of digital humanities endeavors. The ease with which we can access fantastic maps and visualizations such as those from the Spatial History Project at Stanford University and the Center for Digital Research in the Humanities at the University of Nebraska belies the difficulty with which they are made and the steep learning curve involved in mastering the associated software.[11] Similarly, the fact that some digitization and text encoding projects like the Women Writers Project have continued for decades speaks both to the consistently-recognized importance of this work and to the large teams and long-term institutional support often necessary for digital humanities scholarship.[12] When I began my

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[10] Virtual Paul's Cross Project, North Carolina State University, http://vpcp.chass.ncsu.edu/ accessed May 14, 2014.

[11] The Spatial History Project, Stanford University, http://www.stanford.edu/group/spatialhistory/cgi-bin/site/index.php ; Center for Digital Research in the Humanities, University of Nebraska – Lincoln, http://cdrh.unl.edu/

[12] *Women Writers Project*. Women Writers Project, Northeastern University, http://www.wwp.brown.edu/ accessed May 14, 2014.

project, I was concerned that it could take years before my research method yielded anything, much less anything valuable.

I can happily write that this methodological experiment with GIS was invaluable much earlier in the research process than I had anticipated. During my project I found that a GIS approach was about more than perfecting a final visualization. Actively mapping while researching and writing provoked new questions even as it offered new opportunities to explain the complex systems of Atlantic shipping. Mapping was particularly useful in forcing me to confront absences and aberrations that writing could simply gloss over. Whenever a ship's coordinates were uncertain or looked bizarre on the map, I knew that the logbook-keeper had faced the same uncertainty with much higher consequences. Far from encouraging a positivist vision of ships' locations on the Atlantic, mapping helped me tap into the navigational skepticism that was essential to historical seafaring. My dissertation contributes to scholarly methodology by demonstrating that humanists can gain more from instrumental documents like logbooks if we consider their full use, in this case recognizing logbooks not merely as journals but as navigational instruments and records tied explicitly to geographical locations. This source-driven way of approaching digital humanities allows us to reinvest in our current methods of scholarship by paying closer attention to original documents and making use of previously opaque details to achieve a more complete understanding of these items and the people who produced and used them.

The structure of the dissertation breaks into two parts. In the first part, chapters one and two, I explain how European and American mariners sailed the ocean during the eighteenth century. In the second part, chapters three through five, I discuss American mariners' experiences and track those experiences from the American Revolution through the Quasi-War

between the United States and France. The first two chapters rely on American logbooks but are not strictly American stories. Rather, they discuss a range of navigational activities and sailing patterns that were available to American and European mariners. The first two chapters also do not emphasize change over time in the use of the sea, as these navigational techniques and sailing patterns would have been available for the majority of the eighteenth century, if not earlier. Collectively, these first chapters establish a framework for how one might locate historical events on the ocean, and they establish the overall context of eighteenth-century navigation and shipping patterns.

The second part of the dissertation, the latter three chapters, emphasizes both an American perspective and change over time. These chapters use the framework established in the first two chapters to offer a specific history that takes into account the human geography of the ocean. One could imagine other ocean-located histories focusing on any maritime state or era where and when logbooks were in use. In the case of the late-eighteenth century United States, mapping ships at sea offers a window into the transitions from peace to war and (almost) back again.

In the first chapter of this dissertation, I reevaluate the narrative common in historical works and popularized by Dava Sobel's *Longitude* that the introduction of the chronometer toward the end of the 18th century rescued mariners from unreliable and dangerous longitudes determined by dead reckoning.[13] I have found instead that mariners sailing the Atlantic before the introduction of the chronometer used a combination of many techniques to find their

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[13] Dava Sobel, *Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time,* (New York: Walker & Company, 1995); William J. Andrewes, ed. *The Quest for Longitude: the Proceedings of the Longitude Symposium, Harvard University, Cambridge, Massachusetts, November 4-6, 1993,* (Cambridge: Collection of Historical Scientific Instruments, Harvard University, 1996).

locations at sea. These techniques included dead reckoning, astronomical observations, sounding, observing marine flora and fauna, checking the magnetic variation, and even asking directions from passing vessels. Seafarers used their logbooks not only as navigational records but also as navigational instruments through which they could weigh different types of observations. My mapping approach allows another layer of analysis by indicating when and where different techniques were used. Placing navigation in its geographical context reveals the flexibility of navigational processes during the eighteenth century and the important role of experienced judgment as to which methods to trust and when.

Chapter two of my project describes and explains Atlantic shipping patterns using a series of maps. Historians have long assumed that sailing vessels, in Robert Albion's words, "tended to follow certain well-defined sea lanes, dictated by consideration of the cargoes to be found at each end." This was not the case during the eighteenth century. Ships of several seafaring nations covered nearly the entire ocean. Ships moved through zones over a thousand miles wide, not along well-defined sea lanes or distinct routes. In addition, ships could and did travel against the predominantly clockwise winds and currents of the North Atlantic, likewise running counter to the historians' expectations that these environmental forces limited where ships could sail. This chapter's argument incorporates a series of maps depicting shipping patterns derived from both American and European logbooks. Having established that ships sailed over nearly all of the North Atlantic, I investigate how human use of the sea differed across different regions within the populous ocean.[14]

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[14] Robert Greenhalgh Albion and Jennie Barnes Pope, *Sea Lanes in Wartime,* (New York: W.W. Norton and co., 1942), 26; Helen Rozwadowski, *Fathoming the Ocean: the Discovery and Exploration of the Deep Sea,* (Cambridge, MA: Belknap Press, 2005), 4; David Eltis and David Richardson, *The Atlas of the Transatlantic Slave Trade* (New Haven: Yale University Press, 2010), Introduction: Map5.

In my third chapter I describe the changing maritime world as it was available to American mariners during the American Revolution. This chapter follows merchant mariner William Almy and privateer Philip Thrash to understand how their individual decisions and paths at sea related to the context of the Revolutionary War. Almy's story reveals that the threat of enemies enhanced the natural dangers of the ocean, making it a more dangerous place, not simply a place filled with more dangerous people. Thrash's story highlights the privateer's role in enhancing these dangers as he and his crew sought prizes but also found themselves harassing friendly vessels in the process.

Peacetime interactions among ships on the ocean reflected a much more complex social world than we usually attribute to this space. Chapter four of the dissertation moves into the era of widespread peace in the mid 1780s. Peacetime attitudes offered several benefits in the international community of the shared Atlantic Ocean. Rather than facing hostility during meetings with other vessels on the Atlantic Ocean, Americans now saw such meetings as opportunities to share news, food, and emergency assistance. This chapter also expands the geographical focus from the primary basin of the North Atlantic Ocean as it addresses unique trades that each emphasized particular regions of the ocean. The chapter considers how the specific geographic and social contexts of whaling, slaving, and East Indies voyages created experiences specific to those trades and to individual voyages within them.

Chapter five, the final chapter, tracks one American mariner's experience during and following the Quasi-War between the United States and France. John Gilbert Clark's ship was captured on the ocean during this undeclared war, making him party to a spoliation claim, a class of claims that was to have a long history in Franco-American relations and in the United States Congress. The Quasi-War and subsequent litigation situated Clark first as a *de facto*

representative of the United States and then as a lowly petitioner subsumed within the state. In the end, the undeclared status of this entirely marine war meant that the United States was responsible *for* citizens like Clark but was not responsible *to* them.

A few points of explanation are in order before diving into the body of the dissertation. This dissertation incorporates very few female historical actors. This omission is not by design, but rather by the simple fact that the eighteenth-century ocean was largely controlled by men. Women were more often at sea than is usually acknowledged, whether as passengers, officers' families, or in the case of the slave trade, cargo, but I have found very few in my logbook research. Logbooks were devices used in the management of the ship, not personal journals or diaries. Even though logs treat the personality of each sail in detail, they typically include few details about the crew and even fewer about the passengers. For example, although people of many races and nationalities doubtless served as crew on the vessels in the study, they are rarely named or otherwise identified. In fact, if crewmen were mentioned by name it was almost always a bad thing; they had mutinied, deserted, taken ill, been injured, or died. When I have found mentions of women in the logs the same was generally true, as with female slaves who died during the Middle Passage.

A careful reader may also notice that I do not use feminine pronouns to refer to sailing vessels. This is by design. Seafarers have traditionally spoken of a ship as a "she," but I have found this difficult to do. The names of the ships can make feminized phrasing strange; names like *Sebastian, Neptune, Hercules, General Greene, Washington, John, William, Federal George,* and *Bonhomme Richard* feel awkward when gendered female, as do the collectively masculine *Two Brothers*, and *Six Brothers*. Using a feminine pronoun also presents a ship as an actor with her own goals and intentions somehow different from those of the male captain and

male crew managing the helm and tending the sails. Using feminine pronouns has historical value in that it better reflects the seafarers' own language, their understanding of gender, and their understanding of ships, but it can also be unnecessarily confusing. One logbook keeper's remarks are illustrative: "att 8[AM] Saw a Schooner & spoke her he Informed Us he had 30 fathoms Of water Upon ye Eastern Eage [sic] Of the Grandbank He gave Us Sum fish."[15] I never change the genders used within quotations, but in order to avoid confusion when describing events in my own words, I treat the ships as things and the people as people.

Following on this final point, I have transcribed quotations as accurately as possible. I have striven to retain the punctuation, capitalization, and spelling in the original logbooks. When I have made additions or alterations for the sake of clarity, I have indicated the changes in the text or in the footnotes.

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[15] Henry Worth, Logbook of the brig *Leopard* (1797), Francis Stevens master, Nantucket Historical Association Library, Nantucket, MA: LOG 378, October 24, 1797.

Chapter 1: Are We There Yet?

Logbooks as Navigational Instruments

On May 18, 1776, Rhode Islander William Almy bought a book in a London shop for two shillings. Save for the Britannia watermark on every sheet, a popular motif among British papermakers, its pages were blank. Over the next four years, Almy filled them with daily records of his travels on the Atlantic Ocean, converting the nondescript sheaf of papers into a very specific kind of journal: a logbook.[1]

The first step in this transformation was to separate the book into entries representing individual days. Almy ruled each day's entry with narrow columns on the left-hand side so that he could keep an account of details like the speed and course of the ship every two hours. The delineation of the hours resembles that of a midnight-to-midnight day, but Almy followed the eighteenth-century maritime convention of counting days at sea from noon-to-noon. An entry began in the afternoon and continued through the night and morning, culminating in a noontime latitude observation.[2] To the right of the columns of bihourly readings, Almy left a large open space for general remarks about the weather, the character of the sea, the rigging of the vessel,

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[1] William Almy, Logbook of the *Calvert*, schooner/sloop *Chance,* sloop *Eclipse,* brig *Kitty,* snow *Peggy,* and *Three Friends*, Rhode Island Historical Society Library, Providence, RI: MSS # 9001-A, box 6. Rhi# 1953.5.9. Almy noted the purchase location, price, and date on the first page as well as identifying himself as "William Almy of Rhode Island." ; Watermark identified using the Thomas L. Gravell Watermark Collection, http://www.gravell.org, accessed February 28, 2012.

[2] In his popular guide, Thomas Haselden explained, "in the Column for Course you are always to set down the Course you have made by your Reckoning for those 24 Hours, (that is, from the Noon of the Day before, to the Noon of the Day you work on) the Sea Account being always kept from Noon to Noon." Thomas Haselden, *The seaman's daily assistant, being a short, easy, and plain method of keeping a journal at sea...* (London: J. Mount, T. Page, W. Mount, and T. Page, Jr., 1780), 126. Eighteenth Century Collections Online ; For more about Haselden and other similar works, see Thomas R. Adams, "Mount and Page: Publishers of eighteenth-century Maritime Books," in *A Potencie of Life: Books in Society* ed. Nicolas Barker (London: The British Library, 1993).

and any other interesting events or observations. Although he never ruled additional lines within

the remarks section, Almy sometimes recorded remarks in separate paragraphs for the first,

middle, and latter parts of the day, corresponding to the three deck watches in a 24-hour period.

Along the bottom of the page, he lined two rows for daily navigational entries including the total

distance traveled that day, the change in latitude, the change in longitude, the final longitude, the

latitude by dead reckoning, and the latitude determined by his noontime observation.

Almy's logbook was unique as a record of his own seafaring career, but its form was

remarkably similar to that of thousands of other eighteenth century logbooks. In his navigation

manual, *The Seaman's Daily Assistant*, Thomas Haselden used a sample voyage to illustrate this

standard layout (Figure 1.1). John Bettesworth recommended a similar format (Figure 1.2).

Figure 1.1: Thomas Haselden's sample logbook entry (black). Explanations added (red).[3]

[3] Haselden, *Seaman's daily assistant*, 134.

The LOG BOARD.

H	K	F	Courses	Winds	Lee-way	Remarks, &c. Tuesday, 20th Aug. 1780.
1	8	6	SSW	WNW	¼	Strong gales and fair.
2	8	6				
3	8	6				
4	9					
5	9					
6	9					
7	9	2				
8	9					
9	9					
10	9	1				
11	9					
12	9					Do. weather and cloudy,
1	9	2				
2	9			WbyN.		
3	8	6			½	
4	8	6				
5	8	6				
6	8	4				
7	8					
8	8					
9	7				¼	Fresh gales and cloudy.
10	7	2				
11	7					Do. weather.
12	7					Variation 1¼ point W.

Courfe	Diff. in miles	Diff. lat.	Dep.	Lat. per account	Lat. in ob.	Long. in	Merid. Diff.	Bearings and dif. at Noon.
S W	206½	105.3	11.8	36.59 N		12.58 N	329.3	C.St.V. 189°02 E. di 177. 5¼.

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While the exact items varied slightly from keeper to keeper, the overall form of logbooks was so common that some books were preprinted with the appropriate rows and columns.[4] Almy's log was not preprinted or ruled before a voyage, but his adherence to convention demonstrated that he had internalized the standard.[5]

Figure 1.2: A sample logboard from John Bettesworth's *Seaman's Sure Guide, or, Navigator's Pocket Remembrancer*. A logboard was an intermediate device for recording navigational information before transferring it to paper, but the format of this logboard is representative of the layout of a typical logbook.[6]

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[4] Logbook of the schooner *Sebastian* (1785), Peabody Essex Museum's Phillips Library LOGS1785S. The division lines were in a different color (red) than the ink the keeper used to write his numbers and comments (black). He also left several of the items empty, which suggests that he did not line it out himself.

[5] Unruled sheets appear as appropriate, indicating that Almy ruled new pages as he went along. For instance, between November 27 and 28, 1778, he left a blank page that he filled with a sketch of an island he was passing at that time, Santa Maria in the Azores. Almy, Logbook of the *Kitty*, November 27-28, 1778. Sketching islands and approaches to port in logbooks was yet another way in which the logbook served as a navigational device. See Patricia Johnston, "Depicting Geographic Knowledge: Mariners' Drawings from Salem, Massachusetts," in *New Views of New England: Studies in Material and Visual Culture, 1680-1830*, ed. Martha J. McNamara and Georgia B. Barnhill (Boston: Colonial Society of Massachusetts, 2012), 21-45.

The standardized form of a logbook emphasizes the fact that it was more than a chronicle of the events on the ship; it was a purpose-built document for gathering, processing, and recording navigational data. A logbook was a navigational instrument.[7] Of course, eighteenth-century navigational instruments were typically made of brass, wood, or lead and often exhibited a mysterious-looking combination of curved scales, reflectors, and lenses.[8] The logbook's paper-and-ink tables seem out-of-place; yet, like a laboratory notebook in which a scientist both records an experiment's progress and makes the notes and calculations necessary to perform it, a seaman's logbook was a piece of equipment for both recording his activities and performing them.[9]

The question I seek to address in this chapter is not *whether* logbooks were used as navigational instruments but *how*. The eighteenth-century art of navigation was a complex knowledge-gathering and decision-making process in which captains relied on a combination of celestial and terrestrial references to determine their locations. Captains used logbooks to record

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[6] John Bettesworth, *The Seaman's Sure Guide, or, Navigator's Pocket Remembrancer....* (London: 1783), 146. Eighteenth Century Collections Online.

[7] Andrew S. Cook, "Surveying the Seas: Establishing the Sea Routes to the East Indies," in *Cartographies of travel and navigation* ed. James R. Akerman (Chicago : University of Chicago Press, 2006), 70. Cook gestured toward this interpretation by listing logbooks among navigational instruments, but did not go into detail. This treatment of logbooks is also very similar to Caitlin Rosenthal's treatment of account books in her dissertation, "From Memory to Mastery: Accounting for Control in Antebellum America" (Harvard University, 2012).

[8] For examples and explanations of navigational instruments see E.G.R. Taylor and M. W. Richey, *The Geometrical Seaman: a Book of Early Nautical Instruments* The Institute of Navigation (London: Hollis and Carter, 1962); Luís de Albuquerque, *Instruments of Navigation* (Lisbon: National Board for the Celebration of the Portuguese Discoveries, 1988); J.A. Bennett, *The Divided Circle: a History of Instruments for Astronomy, Navigation and Surveying* (Oxford: Phaidon – Christie's Ltd., 1987).

[9] In some ways, this analogy stands both parallel and counter to Bruno Latour's and Steve Woolgar's treatment of inscriptions in laboratory settings. While I agree with Latour and Woolgar that technical inscriptions are in turn used to produce further inscriptions in both laboratories and on ships, logbooks demonstrate that the processes involved in making these documents were not forgotten in their later use. Bruno Latour and Steve Woolgar, *Laboratory Life: the Construction of Scientific Facts* (Princeton, NJ: Princeton University Press, 1986), 63-64.

quantitative readings and qualitative observations, to calculate their positions, and most importantly to evaluate the trustworthiness of the several navigational methods available to them. Logbooks were decision-making sites as well as records of the decision-making process. Even after full books were retired to personal, company, or naval libraries, they remained instrumental in the production of sea charts.

Unlike most histories of navigation, this chapter will not emphasize the new methods for finding longitudes that were introduced in the latter half of the eighteenth century.[10] Even though they overshadow historians' discussions of eighteenth-century navigation, these new methods had little bearing on the ways that ordinary seaman navigated for most of the century. The first of these new methods was the lunar distance method commonly associated with British Royal Astronomer Nevil Maskelyne. The lunar distance method (commonly shortened to "lunar") took advantage of the fact that the moon appeared in a predictable, different position relative to other heavenly bodies depending on the observer's longitude on the earth. Finding a lunar required carefully observing this relative position and then performing very complex calculations using accurate tables to take into account all of the orbits involved. Astronomers produced tables of sufficient quality to make the method appear practicable in the 1750s, but every calculation still required four hours time and a strong mathematical mind, putting it well beyond the abilities of ordinary merchants.[11]

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[10] The developments in chronometers and lunar calculations have been amply addressed in many histories of navigation, but the authoritative volume is William J. Andrewes, ed. *The Quest for Longitude: the Proceedings of the Longitude Symposium, Harvard University, Cambridge, Massachusetts, November 4-6, 1993* (Cambridge: Collection of Historical Scientific Instruments, Harvard University, 1996). A popular introduction to the same developments is Dava Sobel, *Longitude: The True Story of a Lone Genius Who Solved the Greatest Scientific Problem of His Time* (New York: Walker & Company, 1995).

[11] Sobel, *Longitude*, 89.

The second new method used a new device, the chronometer. The daily rotation of the earth meant the sun reached its highest point or local noon (an observable phenomenon) slightly later in western longitudes than in eastern longitudes. Every four minutes of difference in the local noontime corresponded to a difference of one degree of longitude. A chronometer was essentially a very consistent, precise device to retain the time of a given location for future comparison. Finding the difference between local noon at a ship's present location and noon in a location with known longitude (in the British case, Greenwich), gave the vessel's current longitude. The problem with this method was that ordinary eighteenth-century clocks could not keep time precisely and reliably enough for weeks at a time on tossing seas to make it feasible for calculating longitude on a voyage. John Harrison's celebrated chronometers put this task within reach in the 1760s, but his four chronometers were each carefully calibrated masterpieces built with exact craftsmanship and jeweled movements. Subsequent copies were still so expensive and rare that they could be found primarily on naval ships or voyages of discovery. Ordinary navigators did not possess chronometers for decades.

Even though all mariners eventually benefited from lunar calculations and chronometers, this chapter addresses a time period before they were relevant to the majority of mariners. Lunar calculations figure in only five of the sixty-seven logs in my database.[12] Only one logbook keeper of sixty seven mentioned calculations by chronometer (incidentally, this log was also

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[12] Benjamin B. Carter, Logbook of the ship *Ann & Hope* (1798-1799), Benjamin Page master, Rhode Island Historical Society Library, Providence, RI: microfilm VB260. A5 1976, reel 1: 64-116; Samuel Curson, Logbook of the ship *Eliza* (1798-1799), James Rowan master, Massachusetts Historical Society Library, Boston, MA: Ms. N-834 (Tall); Silvanus Coffin, Logbook of the brig *Nancy* (1797-1798), Silvanus Coffin master, Nantucket Historical Association Library, Nantucket, MA: LOG 161; Logbook of the schooner *Polly* (1795), Thomas Borden master, Rhode Island Historical Society Library, Providence, RI: MSS # 828, box 8, folder 6, July 15,1795. The keeper *observed* both the latitude and longitude ; Logbook of the sloop *General Greene* (1796-1797), Thomas Borden master, Rhode Island Historical Society Library, Providence, RI: MSS # 828, box 8, folder 6, May 1, 1796. The keeper mentioned that the latitude was by observation but longitude was by account, implying that another method for finding longitude was available to this navigator and perhaps used on other days.

among the five to include lunars).[13] Only one of these five logs shows two sets of longitudes (lunar and dead reckoning) in the same way that other logs show two sets of latitudes (observed and reckoned).[14] That logbook keepers did not cite these methods specifically is unsurprising; navigators also did not mention what type of octant, sextant, or other device they used to take their latitude observations. Some keepers may have used chronometers or lunars without stating it explicitly, but it is likely that the choice would have appeared in some fashion in the logbooks. Keepers noted when obscure days made latitude observations unreliable, and one could expect them to do the same with lunar observations. For instance, the one logbook keeper to mention both chronometer and lunar readings included both results in the same entry for comparison, much as keepers did with observed and reckoned latitudes. It is also worth noting that all five logbooks with lunars or chronometer readings are records of voyages during the 1790s, the tail end of my study period. None of the logbooks I have encountered for voyages prior to 1795 demonstrated either novel navigational method. The remaining sixty-two logbooks therefore represent the vast majority of eighteenth-century vessels that sailed successfully without lunars or chronometers.

Given the unreliability of dead reckoning, historians should be wary of exaggerating the importance of the longitude coordinate. As ships arrived at or near land, many logbook keepers mentioned that their reckonings, by which they specifically meant their dead-reckoned longitude accounts rather than the often-observed latitude readings, were in error. William Almy wrote after one voyage, "this Reckoning Is Very Erroneous But that Cannot be helpt."[15] For reasons

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[13] Carter, Logbook of the *Ann & Hope.*

[14] Coffin, Logbook of the *Nancy.*

[15] Almy, Logbook of the *Peggy,* August 25, 1776.

explained later in this chapter, most mariners could not help but develop errors in their longitude reckonings but were not helpless as a result; like Almy, they still managed to sail safely to their destinations, often using methods that did not directly translate to longitudes. This chapter is an attempt to understand the larger scope of navigational data available to captains and the choices captains made among these data in the practice of navigation. Perhaps the best way to explain the navigational challenges common in the late eighteenth century is to return to William Almy.

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Proud owner of a new, blank book in 1776 at the start of the American War of Independence, Almy had become master of his own vessel within two years, and by 1780 he was in command of the sloop *Chance.* In February of 1780, he returned to New England after a dodgy, two-and-a-half-month voyage from Spain. On February 16, low on food and probably eager to reach a safe harbor, he encountered a problem. His problem was not the vessel that had chased him that day (easily-enough evaded), but the question of his location.[16]

He gave his latitude and longitude after the chase as 40°56'N 72°36'W, roughly in the middle of Long Island. "I begin to think I am To the Eastward," Almy reasoned in his log. After one more day of sailing to the north, he reckoned the same longitude but calculated a new latitude of 41°41'N, which would have placed him 38 miles into the center of Connecticut, just a few miles from Hartford. Wherever he might have been, Almy knew that he was not in Connecticut. In fact, he was in water so deep that he sounded (used a lead weight to plumb the depth) multiple times without finding the bottom. What he did find that day were gulls overhead,

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[16] This entire account is drawn from William Almy's Logbook of the sloop *Chance*, February 15-19, 1780. Note that the dates given correspond to the entry dates and therefore represent the sea journal dating style from noon to noon rather than midnight to midnight. The chase began in the morning but ended at 2pm in the afternoon, which meant that it crossed from the 15th to the 16th in the logbook, even though the whole chase would have occurred on the 15th according to standard land dates.

rockweed floating below, and colored water all around. The next day, February 18, he was still

unable to find the bottom but nevertheless estimated his position. He wrote, "Judge myself To be

in the south channel," a relatively deep stretch of water southeast of Cape Cod, between the

Nantucket Shoals and George's Bank.[17] Almy's decision contradicted his latitude and longitude,

which placed him in the shallow waters of Long Island Sound.

Figure 1.3: Almy's route February 15-18, 1780 according to his latitude and longitude.[18]
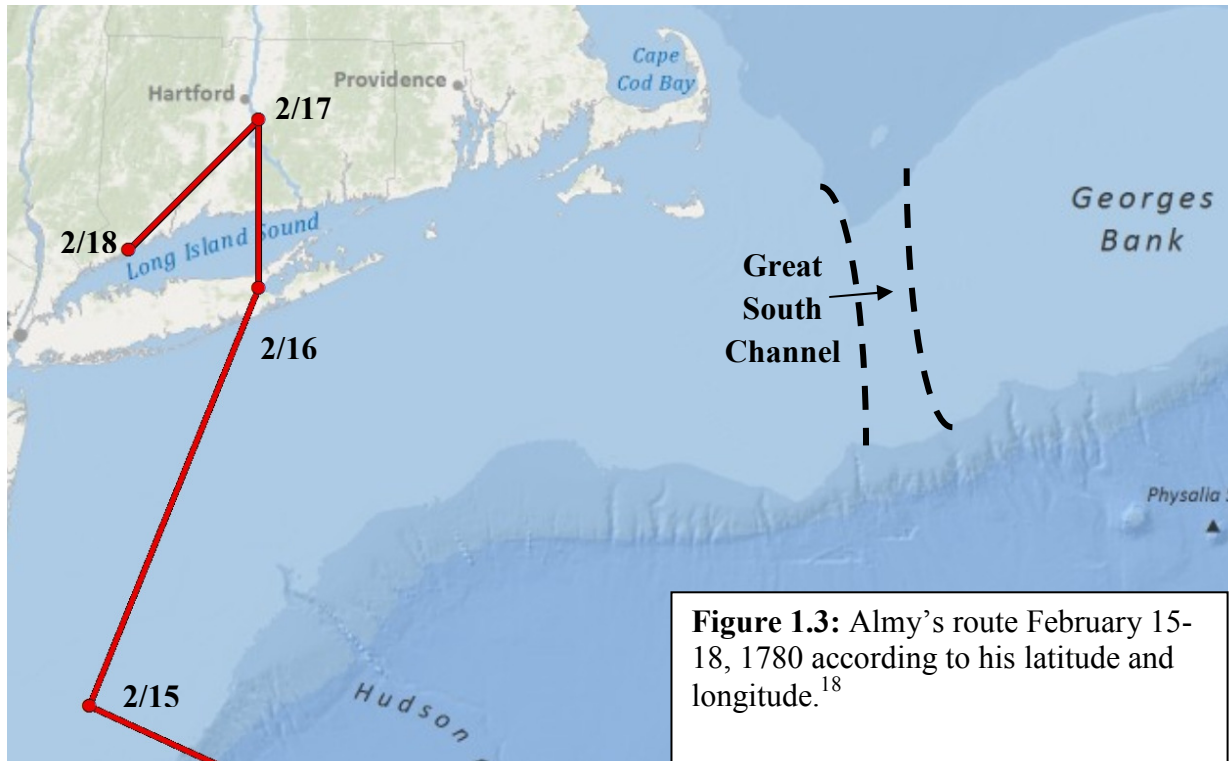
On the 19th, Almy finally "Got Bottom in 80 fathoms water, in the channel." He was

clearly confident in the position he estimated by sounding, because he stopped recording his

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[17] Nicholas Woods, "The Great South Channel: Where Marine Life Meets to Feast Every Spring" *Oceanus* The Woods Hole Oceanographic Institution, posted February 14, 2012, http://www.whoi.edu/oceanus/viewArticle.do?id=128309.

[18] All of the maps in this chapter are based on a database I compiled from logbooks (see Appendix). The locations of the ships in these maps are plotted directly (without adjustment or correction) from the latitudes and longitudes as recorded in the logbooks. All maps are Mercator projections produced using ArcGIS 10, an ESRI product, and an ESRI topography basemap included with the software.

longitude. He explained, "this Reckoning is Very Erroneous by means of being Very Long in the stream with westerly winds." In other words, the *Chance* had been fighting a head wind and the Gulf Stream current that would have pushed it to the east of his recorded longitude. After deciding he was in the channel, Almy continued sailing for several days, recording his latitude and other observations but leaving the longitude column of his logbook empty. Although his log ended before testifying to his arrival in port, it seems that Almy not only returned home in one piece but soon dedicated himself to the service of the revolutionary cause. On April 10, 1780, a William Almy petitioned for and received a commission as commander of the privateer sloop *Chance*.[19]

Almy's trouble accurately fixing his position stemmed from the method of dead reckoning. Dead reckoning was conceptually simple: keep track of the ship's coordinates by adding each day's progress to the previous day's coordinates. Execution was more complicated. Every hour or two hours, an officer of the vessel would note the course and the rate of travel in knots, half knots, and sometimes fathoms. He could do so directly in the ship's logbook but often employed an intermediate device like a traverse board, logboard, or rough deck log. With a traverse board or logboard he used either pegs or chalk for recording the course and distance on a temporary basis before it was entered into the ship's permanent written log.[20] A deck log served the same function but was a rough, abbreviated version of a logbook.[21] For instance, two logs survive for the same dates on the same sloop, called the *Independence* in the bibliographic

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[19] Massachusetts Office of the Secretary of State. *Massachusetts Soldiers and Sailors in the Revolutionary War* (Boston: Wright and Potter Printing Co., State Printers 1896-1908.) 1: 206.

[20] Taylor and Richey, *Geometrical Seaman,* 36, 64-66; Jean Le Bot, *Quand l'Art de Navigeur Devenait Science: Les Chronometres de Marine Français au XVIIIe Siecle* (Grenoble: Terre et Mer, 1983), 17.

[21] J. B. Hewson, *A History of the Practice of Navigation* (Glasgow: Brown, Son & Ferguson, Ltd., 1951), 174-175.

information for one logbook and *Independent* in the other.[22] The *Independence* log is made of rough paper with a sailcloth cover and contains only remarks, a few latitudes, and bihourly readings for the knots, half knots, course, and winds. It is notably missing the items that would appear in the bottom rows of a complete entry. The writing also shows at least two different hands. The *Independent* log, made of finer paper and a less water-resistant cover, includes all of the items one would expect in a complete, detailed logbook. It was written in a single hand. These characteristics indicate that different officers in charge during different watches kept the rough log, but the captain kept the detailed log himself. He would have copied the readings from the deck log and calculated the remainder of the navigational values to complete his log. He also constructed his remarks more formally than the remarks in the deck log, using the first person and offering his personal perspective on events.[23]

Taken together, the journals for the *Independence* illustrate the steps of dead reckoning. The columns along the left-hand side of the day's logbook entry, specifically the course and speed, had to be filled first, on deck. The helmsman tried to maintain a given course using a compass, but measuring the speed of the vessel required a log-and-line. One crewman tossed into the water a wedge-shaped piece of wood attached to a line, just as another crewman turned a half-minute glass. When the thirty seconds were up, the men determined the length of the line between the ship and the log by counting knots that were tied into the line at regular intervals.

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[22] Logbook of the sloop *Independence* (1776), Rhode Island Historical Society Library, Providence, RI: MSS # 828, box 23; Logbook of the sloop *Independence* (1776), Rhode Island Historical Society Library, Providence, RI: MSS # 828, box 5, folder 6, Rhi# 1850.3.28.

[23] For instance, on August 8, 1776, both logbooks recount that Benjamin Syms received a strapping for causing a disturbance. The officer then keeping the rough logbook (*Independence*) remarked, "Beneamin Syms Raysing a Desturbince On Board Rec.d a strapping By th Mst," whereas the keeper of the fine logbook (*Independent*) commented, "Beniman Syms raysing a muteny on Boord the Slupe Independence I peleg hoxy master Gave a [strapping] I found it to Be the Method to take"

Distance divided by time gave the speed of the ship, but the calculations had been standardized such that it was necessary to record only the number of knots that had run out.[24]

The rest of the process was a series of calculations for daily values. This was better managed in a cabin than on deck, hence the absence of daily values from the *Independence* deck log. Combining the bihourly courses and speeds with a dash of trigonometry, the logbook keeper determined the day's total course, total distance, and distance in east-west and north-south components. He then converted the distances he had covered into minutes and degrees using a series of published tables. These tables were necessary because the same angle of longitude widened into a longer physical distance near the equator than near the poles. All of these numbers made their way into boxes on the bottom row of the logbook entry, but they still represented only the distance made that day. If he was near land, the keeper could add this progress to the location of a point of land he had recently passed; otherwise, he added the latitude and longitude made that day to his previous day's coordinates. The results of these final calculations for the overall position of the vessel were the latitude and longitude "by account" or "by reckoning."

As eighteenth-century seafarers knew all too well, the problems with dead reckoning were legion. First, the log-and-line method meant that mariners could find their rates of travel only relative to the ocean, itself. A current could throw off the reckoning by tens or hundreds of miles, as Almy experienced. Second, the speed of the ship could change with changing wind conditions much more quickly than the speed could be recorded. Most extant 18th-century logbooks show records every two hours or, for warships and East Indiamen (merchant ships

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[24] Hewson, *History of the Practice of Navigation*, 158.

sailing to the East Indies), every hour.[25] If the wind changed direction or force during this time, it would be hard to gauge the speed of the vessel correctly. Third, the equipment itself was imperfect. A minor error in the length of line between the knots or a slightly short or long half-minute glass could lead to dramatic errors in the final distance covered.[26] Fourth, any number of problems at sea that might temporarily prevent the crew from tossing in a logline, such as a wild storm or the need to respond rapidly to an enemy vessel, would introduce one-time errors. Fifth, and perhaps most devastatingly, a longitude account that was in error could not simply be corrected by a noontime observation of the sun, as a latitude account could. In the period before reliable chronometers or lunar calculations, a captain whose longitude was in error could correct it only when he found a new reference point, such as land or another vessel with a more reliable longitude to share.

How great were these errors? The easiest way for historians to know is the same way that seaman knew: by comparing a vessel's reckoning to a landmark with known coordinates. The opportunity to compare with a new landmark usually coincided with the end of a voyage, which was the point when inaccuracy was likely to be most pronounced, having accumulated over the entire journey. If William Almy's February 1780 assessment that he was in the South Channel was correct when his longitude placed him in Long Island Sound, his longitude was about 4°20' off-target. Almy had been on a long voyage of 57 days since he had last reset his longitude as he

[25] W. E. May, *A History of Marine Navigation* (Henley on Thames: Foulis, 1973), 24.

[26] Hewson, *History of the Practice of Navigation*, 153-165. Hewson explained that this problem was exacerbated during the 18th century by changing measures of the shape and size of the globe. As the length of a degree was updated, published tables and the knotting of lines both needed to be updated correspondingly, but mismatches were common, and sometimes intentional to put the reckoning ahead of the ship. Like a chronically late person setting his watch a few minutes fast so that he would actually arrive on time, knotting the line short was one technique captains used to anticipate landfall early, rather than late.

passed Porto Santo in the Madeiras.[27] For comparison, 1° of error after a voyage of 6 weeks

between Great Britain and the West Indies (which would not cross the Gulf Stream) was the

minimum aspiration of the British Longitude Prize, a reward meant to encourage cutting-edge

methods for finding longitudes at sea.[28] Almy's reckoning was far from award-winning but still

good enough to guide him until he was in soundings.

Estimating the quality of dead-reckoned longitudes in the middle of a voyage, while the

vessel was at sea, is more complicated for the historian but more important in order to

understand open-ocean routes. Luckily, the 1796 voyage of the *Perseverance* offers just such an

opportunity. The *Perseverance* set sail from Salem on December 12, 1796, headed for Batavia in

the Dutch East Indies. It sailed a common route, first toward the Northwest coast of Africa, then

traveling almost directly south, passing between the Cape Verde Islands and the continent.

Slightly north of the equator, Captain Richard Wheatland began directing the ship to the

Southwest, toward Brazil, before swinging back East to round the southern tip of Africa. During

this voyage both Captain Wheatland and Nathaniel Hathorne (not to be confused with

Hawthorne) kept logbooks giving independent accounts of the voyage.[29] (Figure 1.4)

Finding multiple surviving logbooks from the same voyage is unusual in itself, but this

occasion is particularly intriguing because the logbooks were not copies of the same information

(see the *Independence/ Independent* above). Both the latitudes and longitudes for the

Perseverance logs were slightly different, implying that the logbooks were kept independently

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[27] Almy, Logbook of the *Chance*, December 23, 1779 - February 18, 1780.

[28] Sobel, *Longitude,* 53-59. Prizes were higher for accuracy to 40 minutes or 30 minutes of longitude.

[29] Richard Wheatland, Logbook of the ship *Perseverance* (1796-1798), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1796 P ; Nathaniel Hathorne, Logbook of the ship *Perseverance* (1796-1798), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1795A (OS).

Figure 1.4: Two tracks of the *Perseverance*, Dec. 28, 1796-Jan. 26, 1797.[30]

◯ = Hathorne

🔴 =Wheatland
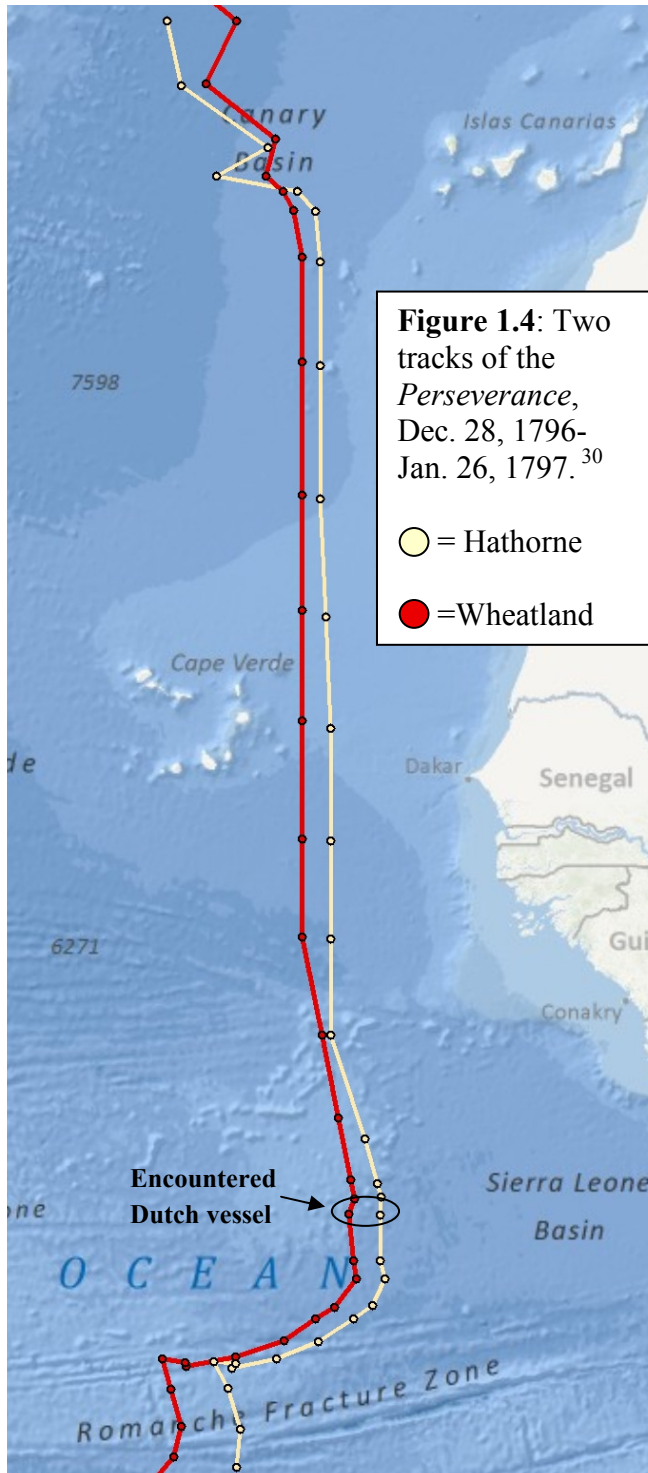
onboard. In addition, the daily entries for course, distance, difference in longitude, difference in latitude, departure, latitude, and longitude were all different, which suggests that the discrepancies between the two sets of coordinates were products of different dead reckonings rather than altogether different methods (such as dead reckoning vs. chronometer- or lunar-based reckoning). Hathorne's log also included columns for the variation of the compass and the distance to the meridian, which Wheatland's did not. While it is impossible to say whether these two logbook keepers compared results or shared instruments, even if they did so they still chose to retain different coordinates for the position of the same ship.

As is clear from the map (Figure 1.4) these tracks were offset on the East-West axis. A closer analysis of the longitude

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[30] Hathorne, Logbook of the *Perseverance*, December 28, 1796 - January 26, 1797; Wheatland, Logbook of the *Perseverance*, December 28, 1796 - January 26, 1797. Both logbooks include more of the voyage than is shown here, but the quality of the microfilm limited the accessible entries from Hathorne's log.

reveals that Hathorne's record actually moved from the west of Wheatland's to the east, crossing near the Canary Islands and thereafter continuing to diverge slightly to the east by 4.5 minutes per day, on average. Over the thirty days shown on this map, the median difference between the latitude readings for the same day was quite small: 2 minutes. All but two of the latitudes were based on observations, so this small discrepancy points to the reliability of latitude observations at the end of the eighteenth century. The median difference between the longitudes was much larger: 41 minutes. Of course, this did not necessarily mean that each logbook keeper was roughly twenty minutes off the mark. The real position of the ship might have been between Wheatland's and Hathorne's accounts, exactly on one of the tracks, or outside of both. It would have been impossible to know without more data.

As luck would have it, a third reckoning was available. On January 14, 1797 the *Perseverance* met with a Dutch cartel 35 days out from the Cape of Good Hope on its way to Holland. Both *Perseverance* logbook keepers noted the cartel's longitude account as 19°40'W, remarkably close to Hathorne's 19°33'W but farther from Wheatland's 20°18'W. Given this corroborating account, Hathorne's numbers seem more trustworthy, but the actual location of the ship is less important from a historical perspective than the keepers' behavior. The fact that both Hathorne and Wheatland copied the Dutchman's longitude but not its latitude demonstrates their distrust of their own longitudes in comparison to their latitudes. Also, as the map indicates, Wheatland did not adjust his reckoning in response to the new data, perhaps unsure about the reliability of the Dutch vessel's records.[31]

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[31] Hathorne, Logbook of the *Perseverance,* January 14, 1797; Wheatland, Logbook of the *Perseverance*, January 14, 1797.

Mariners' suspicion of dead reckonings explains why William Almy was unsurprised when his calculations claimed that he had sailed across tens of miles of dry land during his 1780 return voyage to New England. The relative reliabilities of observed latitudes and reckoned longitudes also explain why Almy thought he was really east of his reckoning rather than north or south of it. What the longitude errors do not explain is how he knew what to do next. Unlike a 21st-century reader of his logbook, to whom the problem of longitude could remain a hypothetical puzzle, Almy still had to make his way toward land without running aground. He turned to the color of the water, the flora and fauna (rockweed and seagulls), and the technique of sounding. Not only did these methods give him an idea of his location, but they did so on their own, not as steps toward finding his longitude. These concrete methods were as numerous and as varied as the features of the oceans of the world, but the most prominent could be described as sounding (for quantitative and qualitative information), qualitative descriptions of the character of the ocean (water, air, plants, animals, etc.), and meetings with other vessels.

Sounding was useful both to gauge depths and to sample the loose material making up the seabed, but at the most basic level it indicated whether a vessel was on the continental shelf. Figure 1.5 represents the sounding efforts of fifteen vessels, including William Almy's *Chance*, along the coast of North America. The location of each marker on the map is drawn from the latitude and longitude in the logbook, while the color of the marker represents whether the lead found bottom that day or not. This array of points indicates disagreement between the method of sounding and the coordinates calculated on the vessels. Some navigators found bottom when their coordinates suggested that they should not have been able to do so, while others did not find bottom when their coordinates placed them in shallow waters.

For captains whose calculated coordinates defied common sense, as did Almy's when they placed him on land, sounding was obviously more trustworthy than latitude and longitude. As has already been explained, many problems in dead reckoning could accumulate over the course of a voyage, making the reckoning of the vessel's position highly suspect. Even though sounding had errors of its own, the errors would not be compounded over many days at sea. In addition, if a captain doubted a sounding he could try again – not so with dead reckoning.

Figure 1.5: Soundings on the coast of North America [32]

● = sounded and got bottom (at any point during day)
● = sounded and did not get bottom
○ = sounded but no other information
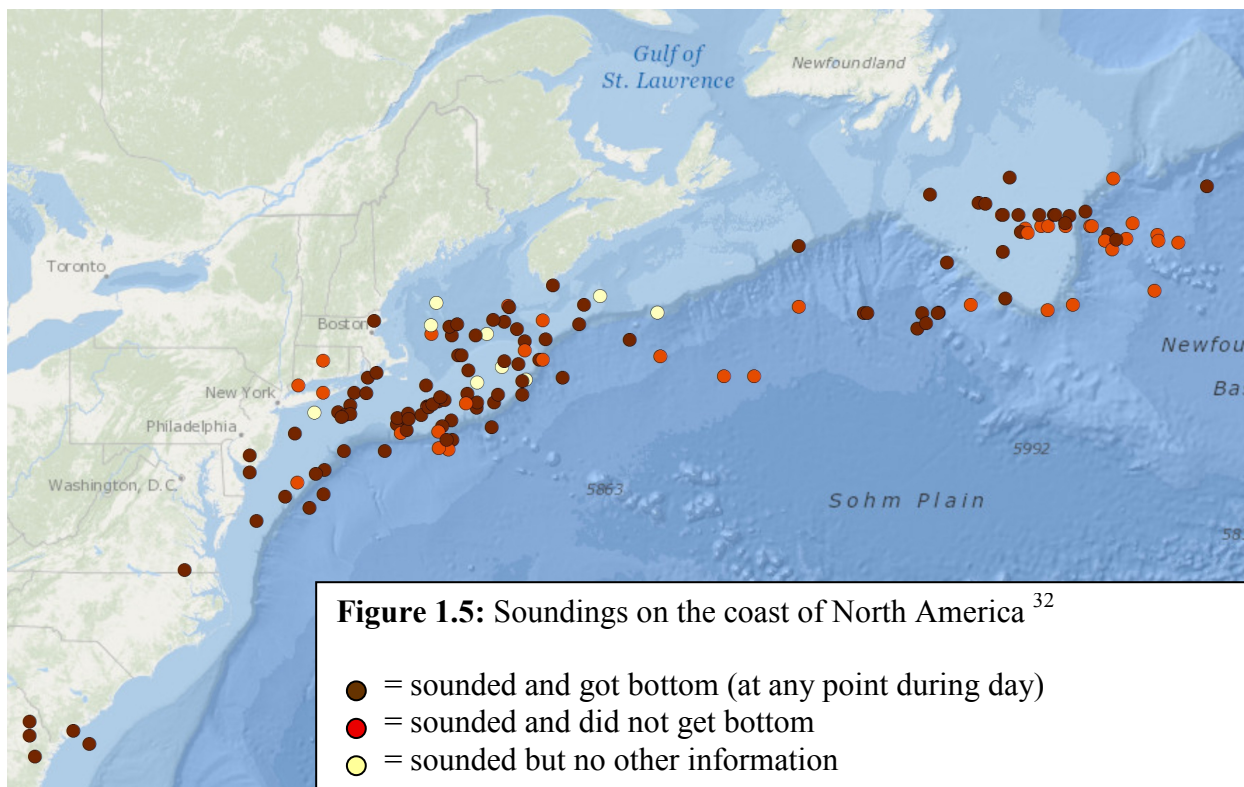
Sounding was also more useful than Figure 1.5 might suggest, because the weighted line could give more precise measurements than only finding ground or not finding it. If the lead

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[32] NB: As above, the locations of the ships in these maps are plotted directly (without adjustment or correction) from the latitudes and longitudes as recorded in the logbooks (see Appendix). Mapping the soundings using these latitude/longitude coordinates helps reveal how navigators contended with these discrepancies.

struck bottom, the length of the line indicated the depth of the water. A captain with a local chart

or knowledge of the area could use the depth to determine his vessel's location, as the captain of

Gilbert Howland's vessel did on December 18, 1791: "at 2 Pm gaut Soundings had 65 feathams

of Weater fine White & Black Sand on the South Part of gorgy's Bank."[33] The coordinates in

Howland's logbook that day placed him roughly 200 miles west of George's Bank, which was

also a reasonable location (not on land). The captain had a decision to make: trust the reckoning

or the sounding. His subsequent course to the Northwest reveals that the captain chose to trust

his sounding rather than the latitude and longitude coordinates. Based on his latitude and

longitude, the captain's Northwest course should have run the vessel aground in Rhode Island.

Howland sighted Cape Cod two days later, proving that they had been on George's Bank.

Sounding was not always the best navigational option, and indeed was not feasible in the

middle of the ocean, but captains knew they could rely on it near well-known coasts with

recognizable underwater topography. Over the Grand Banks of Newfoundland in the frigate

Boston, Captain Samuel Tucker trusted sounding so much more than his reckoning that he took a

new longitude from a landmark 45 fathoms underwater (roughly 270 feet), adjusting his account

by two degrees.[34] Even though it could not be used for most of the voyage, and knowing when to

begin sounding was still tied to dead reckoning, sounding was particularly important because the

most dangerous part of a transatlantic voyage was typically the arrival of the vessel on the

coast.[35] Errors in dead reckoning on the high seas could delay a voyage or lead a ship into

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[33] Gilbert Howland, Logbook, (1791-1805), Houghton Library, Harvard University, Cambridge, MA: f MS Am 448.15, December 18-20, 1791.

[34] Samuel Tucker, Logbook of the frigate *Boston,* transcribed in J. H Sheppard, *The Life of Samuel Tucker, Commodore in the American Revolution* (Boston: Mudge, 1868*),* 10/2/1778. Google Books

[35] Cook, "Surveying the Seas," 69.

unfavorable winds, but the same errors near the coast could destroy it on shallow sand bars or rocks.

Samuel Tucker and the master of Gilbert Howland's vessel were vindicated in choosing to rely on their soundings rather than their reckonings, but trusting the wrong navigational method could have been devastating. Circumstances like these demonstrate that a captain's decisions regarding disagreements between navigational methods were as important in the navigational process as were the methods, themselves. In such moments of crisis he had to weigh competing navigational data that he had collected in his logbook, and he often recorded his conclusion and his reason in the log. On a different voyage in the *Perseverance,* Richard Wheatland wrote, "Last Night [when] we saw the Land Judge that the ship was two or three Degree [astern] of our [Reckonings]." He decided "The [true] Longitude this Day to be 9″10 East."[36] Logbook keepers frequently used the word "judge" in these situations, thereby acknowledging the uncertainty of their navigational records as well as the personal discrimination necessary to navigate a vessel successfully. Even though bottoms could be "got," currents "found," and land "seen," all with some certainty, crews often did not "know" their positions but rather "judged" them, as in, "Judged ourselves To be On the bank."[37]

Yet another important feature of sounding was the qualitative data it yielded. Leads usually held lumps of tallow in cavities on their undersides. When a mariner sounded, the tallow grabbed loose sediment from the ocean floor, and those familiar with the materials that composed the bottoms of different regions could use this information to estimate their

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[36] Richard Wheatland, Logbook of the ship *Perseverance* (1798), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1793V (OS), July 3, 1798. This is a third *Perseverance* logbook, but covers different dates than the other two.

[37] Almy, Logbook of the *Chance*, September 14, 1779.

positions.[38] George Atkinson, keeper of a logbook on the *Lonsdale*, sounded near Cape Clear Island off the southern coast of Ireland and found that his lead brought up large brown shells, stone, and sand.[39] By contrast, a lead might pull up "green oze & sum grit" near Block Island, Rhode Island, or red and white sand near Nantucket.[40] Depending on the navigator's experience and how quickly the material of the ocean floor changed from place to place, this navigational method could be reasonably precise. Over 10 leagues, a distance that would equate to ½ of a degree of latitude, the frigate *Boston* found the bottom near the coast of France to change from red sand and shells to coarse black and red sand.[41]

Like sounding, observing flora and fauna could also yield useful qualitative data. Animal and plant life often indicated proximity to land or to major oceanic currents. During one of his voyages, William Almy noticed many robins and other small birds and "judged them to be from Cape Sable." Although not definitive on its own, this observation supported his calculated position near Nova Scotia.[42] As Richard Wheatland approached the southern tip of Africa on a voyage to the East Indies, he observed an abundance of birds, including albatross and Cape hens, as well as abundant seaweed and kelp. The following day he saw a few birds and "Run threw schools of small fish sumthing lige [sic] herins on the Coast of Sweden," comparing the phenomenon in the South Atlantic to a similar experience with herring well to the north.[43]

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[38] Taylor and Richey, *Geometrical Seaman,* 15.

[39] George Atkinson, Logbook of the *Lonsdale* (1776-1777), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1748D, September 15, 1776.

[40] Howland, Logbook, March 31 – April 1, 1792.

[41] Tucker, Logbook of the *Boston*, March 28, 1778.

[42] Almy, Logbook of the *Eclipse*, May 7, 1778

[43] Richard Wheatland, Logbook of the *Perseverance*, February 18-19, 1797.

Observing the water itself rather than the fish in it, the logbook keeper of the *General Greene*

made the common remark that his sloop's passage through the Gulf Stream was accompanied by

a change in the color of the water.[44] The logbook keeper paid close attention to this visual cue,

because it helped him compensate for the effect of the fast-moving water: "I allow one knot per

hour [gain] NE for the Stream."[45] Even the smell of "the Northern climate" could indicate

passage through the stream.[46]

Notes on depths, plants, animals, and other conditions appeared in the remarks sections of

logbooks, directing even the non-numeric portions of the entries toward the logbooks' function

as navigational instruments. Historian of navigation Frédéric Marguet pointed out that

Bartolomeu Dias had used similar cues about the changing nature of the air and water where

currents converged as a prompt to adjust his course during his voyage around the southern end of

Africa in the late 15th century.[47] Beyond simply augmenting the latitude and longitude

calculations along the edges of the log entries, such observations yielded navigational knowledge

of an entirely different kind. Whereas latitude and longitude defined a vessel's location within an

imaginary grid overlaying the surface of the globe, these other observations defined the vessel's

location relative to concrete, natural conditions. As their logbooks reveal, captains relied on both

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[44] E.G.R. Taylor, *The Haven-finding Art: a History of Navigation from Odysseus to Captain Cook* (New York: Elsevier, 1971), 25;   Joyce Chaplin, *The First Scientific American: Benjamin Franklin and the Pursuit of Genius* (New York: Basic Books, 2006), 196-200, 319-323. Chaplin explains that Benjamin Franklin attributed part of his knowledge about the stream he charted to American mariners' observations.

[45] Logbook of the sloop *General Greene* (1796-1797), Rhode Island Historical Society Library, Providence, RI: MSS # 828, box 8, folder 6, January 11, 1797.

[46] Almy, Logbook of the *Chance,* January 30, 1780.

[47] Frédéric Marguet, *Histoire Générale De La Navigation Du XVe Au XXe Siècle; Navigation Du Quinzième Au Vingtième Siècle* (Paris: Société d'éditions géographiques: maritimes et coloniales, 1931), 11. It should be noted that Marguet dated this voyage to 1486 even though the common date given is 1487-88.

concrete features of the ocean and abstract calculations. Whether they corrected their latitude and longitude accounts with concrete observations as the keeper on the *General Greene* did or transitioned between a reliance on abstract navigation and concrete navigation as they neared land, navigators used their logbooks to mark their decisions. The logbook was where the abstract and the concrete met.

Another common navigational method provided both concrete and abstract data: encountering other ships. At a basic level, the mere presence and behavior of certain types of vessels indicated the region of the ocean through which the logbook keeper was passing. George Atkinson of the *Lonsdale* saw "A great many sails fishing" on the Grand Banks.[48] The importance of this regional resource meant that the North Atlantic was the most likely place to encounter fishermen, either working on the Banks or in transit to or from their home ports. Of the entries I have transcribed that specifically mentioned encountering fishing vessels (and included sufficient information to be mapped), all were in the North Sea or the northern part of the Atlantic (Figure 1.6). The vessels hugging the coast were engaged in fishing; those farther afield were carrying cargoes of fish from the coastal fishing areas or in one case simply interested in talking about the price of fish.[49] A captain surrounded by many anchored sloops and schooners fishing could make a good bet that he was on the Grand Banks, but more generally he could assume that he was over the continental shelf and would probably be able to sound. Though not particularly precise, the presence of whalers, slave ships, or vessels of particular nationalities could have been early signs that a vessel was entering associated regions.

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[48] Atkinson, Logbook of the *Lonsdale*, August 28, 1776.

[49] Francis Boardman, Logbook of the brigantine *Hind* (1784-1786), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1774A, September 21, 1785.

Figure 1.6: Reports of fishing boats encountered.
- ○ = Vessels carrying fish or speaking about fish
- ○ = Vessels actively fishing
- • = Entry not reporting fishing boat sighting

Sources: Author's Database, ESRI Basemap
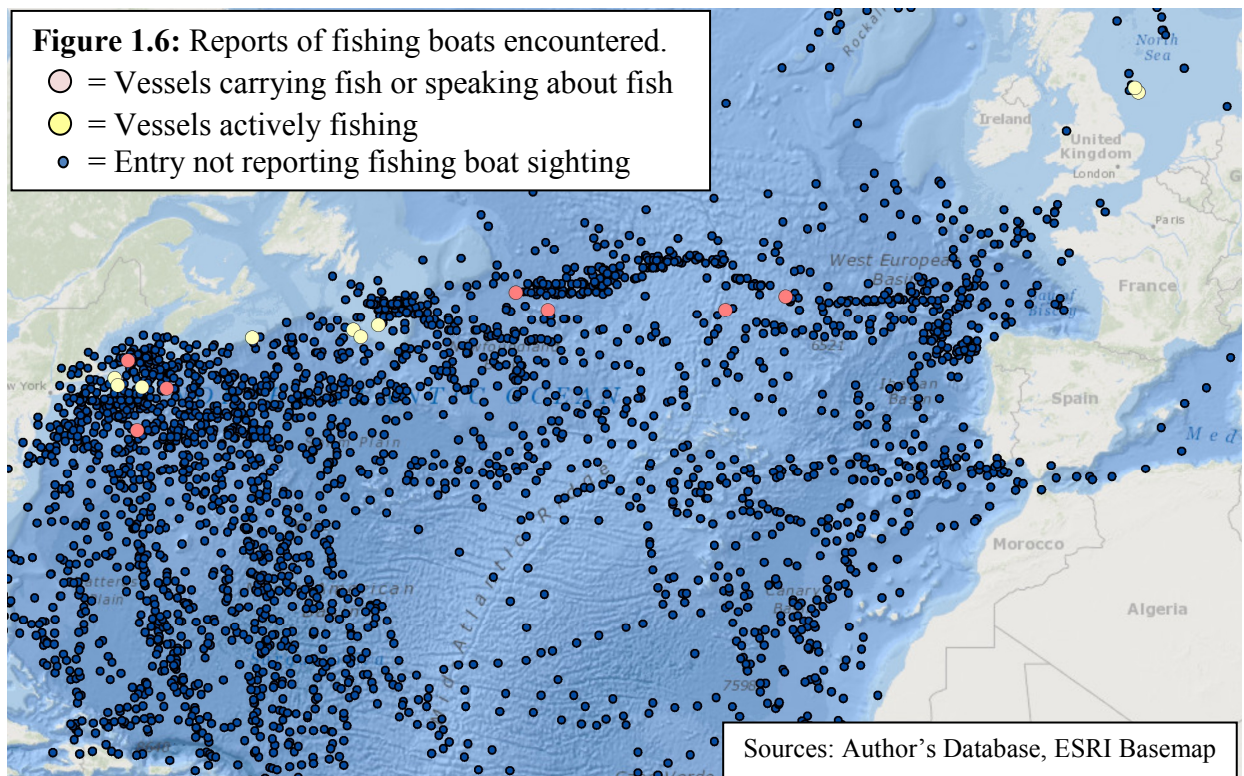
Logbooks also give evidence that mariners shared both concrete and abstract navigational data when they met. On two occasions Samuel Tucker of the frigate *Boston* mentioned sounding readings he learned by speaking with the commanders of the other two vessels in his small naval group: the *Ranger* and the *Providence*.[50] While on the sloop *Eclipse,* William Almy remarked: "Spoke with a french Snow from Bordeaux 75 days Out for Carolina ... The french Captain Came board of us for he was Very much Lost."[51] At this point Almy was only out 10 days from Cape Cod, so his reckoning had had relatively few days to accumulate errors in comparison to that of his new acquaintance. Out of nineteen available examples of ships sharing longitude reckonings, the average difference between the accounts of the two vessels was 3°13'. This was not excellent agreement, but it could be just as useful to confirm a longitude as to be warned that

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[50] Tucker, Logbook of the *Boston*, September 24 & 26, 1778.

[51] Almy, Logbook of the *Eclipse,* July 8, 1778.

it might be inaccurate. While logbook keepers only occasionally mentioned exchanging navigational data, it is certainly possible that other captains who spoke with one another, traveled in company, or shared meals and conversation aboard each other's vessels included navigational items as topics for discussion. Notably, the captain who shared the price of fish also shared his longitude reckoning and, because he was unfamiliar with the course to Boston, desired to keep company with the *Hind*.[52]

In a way, the final role of a logbook as a navigational instrument was to facilitate this sharing of knowledge through the larger maritime community. When a logbook became full or its owner turned to land-based pursuits, it was retired from active use on the sea but remained a record with navigational relevance. Rather like Jesse Ramsden's dividing engine, which won a partial prize from the British Board of Longitude for its production of extremely fine scales for sextants, a retired logbook was still a navigational instrument, albeit at a distance.[53] Some retired logs circulated directly in the keepers' home ports, while other logs became the basis for new charts or other publications.[54] The phenomenon of magnetic variation provides a good case study.

Due to the fact that the magnetic north pole was slightly offset from the true north pole, compasses did not always point true north. Christopher Columbus had observed that his compass diverged from true north partway through his first voyage to the Americas. He quickly turned the variation into a navigational marker upon his return to Europe, expecting to find land relatively

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[52]Boardman, Logbook of the *Hind*, September 21, 1785.

[53] Andrewes, *Quest for Longitude,* 404. Eric G. Forbes, *The Birth of Scientific Navigation: The solving in the 18th century of the problem of finding longitude at sea.* Maritime Monographs and Reports No. 10 (Greenwich, London: National Maritime Museum, 1974), 5, plates 6-7.

[54] Johnston, "Depicting Geographic Knowledge," 27-45.

soon after his compass again pointed to true north.[55] What began as a single observation in the 15th century became a contender as a potential system for finding longitude by the 18th. The earth's magnetic field was sufficiently complex that the compass variation could serve as another set of invisible lines overlaying the entire globe that would allow a navigator to find his position. The invisible lines could be mapped like latitude and longitude lines, but because it was a natural phenomenon, the effects of moving from one line to the next were more tangible than the effects of moving between meridians of longitude. The astronomer Edmond Halley's isogonic chart for the year 1700 is the best known example of this principle, where a navigator could find his position on the chart at the intersection of the appropriate variation line and the latitude (Figure 1.7).[56]

Unfortunately, this method was imperfect. In some places the latitude and variation lines were nearly parallel, so the variation could not serve as a means of finding longitude. Although present everywhere, the magnetic field was not uniformly useful for navigation. The greater problem with this method was that the magnetic field of the earth fluctuated such that William Mountaine and James Dodson, fellows of the Royal Society of London, "found it so much changed in the space of about Forty Years, that those Curves laid down by Dr. HALLEY were grown intirely [sic] useless."[57] In order to produce more current charts, French, Dutch, and

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[55] Marguet, *Histoire Générale De La Navigation,* 26.

[56] This chart has been reprinted in a number of historical works, including Andrewes, *Quest for Longitude,* 31-32 and in the same volume in J.W. Thrower's article, "Cartography," 59; L. A. Bauer, *Halley's Earliest Equal Variation Chart.* (Chicago: University of Chicago Press, 1896), accessed online through the Harvard University Library: http://nrs.harvard.edu/urn-3:FHCL:5142154, March 24, 2012.

[57] William Mountaine, and James Dodson, *An account of the methods used to describe lines, on Dr. Halley's chart of the terraqueous globe : shewing the variation of the magnetic needle about the year 1756, in all the known seas; Their Application and Use in correcting the Longitude at Sea; with some Occasional Observations relating thereto* (London: W. and J. Mount, T. Page and Son, 1758), 4. Eighteenth Century Collections Online.

Figure 1.7: Edmond Halley's Isogonic Chart showing lines of equal magnetic variation for the year 1700.[58]

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[58] L. A. Bauer, *Halley's Earliest Equal Variation Chart.*

English hydrographers processed large collections of logbooks for their up-to-date magnetic data. The importance of common mariners' knowledge was so great that A.R.T. Jonkers has gone so far as to term the 18th century the "Age of Data" with respect to geomagnetism. Even though Halley was the only natural philosopher to conduct expeditions specifically for the purpose of gathering variation readings, new data constantly poured into hydrographic offices in the form of ships' logs.[59]

In 1758 Mountaine and Dodson published a pamphlet explaining how they converted the contents of logbooks into the charts they had for sale.[60] Decrying their competitors' method of extrapolating new charts from the old, Mountaine and Dodson instead chose to prepare and revise charts based on recent logs from the navy, East-India Company, Hudson's Bay Company, and several individual mariners in addition to other sources for observations of compass readings on land.[61] The two men had to contend with many of the longitude inaccuracies already discussed in this chapter, noting that "the Difference of Longitude made between two Ports, by different Ships, or by the same Ship in different Voyages, frequently disagreed with each other, and with the *Chart*."[62] The chart mentioned here was a stable description of known locations over which the hydrographers could lay the variation lines. Whereas captains used their logbooks

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[59] A.R.T. Jonkers, *Earth's Magnetism in the Age of Sail* (Baltimore: Johns Hopkins University Press, 2003), Ch. 4, 102-128, particularly 102-105.

[60] Mountaine and Dodson, *An account of the methods*.

[61] Mountaine and Dodson, *An account of the methods,* 4-6. The competitors were Robert Douglas and Mr. Leadbetter, employed by the proprietors of Halley's Chart. Mountaine and Dodson claimed that Leadbetter and Douglas simply extrapolated projected the movements between two sets of readings to gain a third set for later years.

[62] Mountaine and Dodson, *An account of the methods*, 7.

to make decisions among navigational methods, hydrographers had to decide how to resolve

disagreements among logbooks. In this case, Mountaine and Dodson decided to average the

accumulated error over the course of a voyage in order to accurately place mid-voyage variation

readings in their chart. This was probably the best available option, although it assumed that the

error accumulated evenly rather than becoming more pronounced as the vessel crossed a

powerful current or encountered a storm. After placing all of the readings from several vessels

onto a temporary chart, the hydrographers accepted some and rejected others "according as they

were supported or not, by concurrent Testimony."[63] They indicated the degree of confirmation of

different variations using dotted or broken lines.

Variation charts were rather complicated, but hydrographers also used logbooks for basic,

descriptive charts. Alexander Dalrymple, a hydrographer for the British East India Company and

later for the Admiralty, was not interested in developing charts to show variation but in

systematizing charts showing landmasses, hazards, and preferred routes. Like Mountaine and

Dodson, he used the organizations' collections of logbooks to prepare a complete series of charts

for voyages to the East Indies. As historian Andrew Cook has observed, most British charts

before Dalrymple's project had been produced independently by individual captains working

from their own logbooks. Dalrymple undertook his ambitious life's work in 1779 in an effort to

produce a set of systematically-organized set of charts that had the authority of prominent

maritime institutions and hundreds of logbooks.[64]

As these examples demonstrate, retired logbooks remained instrumental in the production

of the charts that guided ships across the ocean. Logbooks became part of a feedback loop in

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[63] Mountaine and Dodson, *An account of the methods*, 8.

[64] Cook, "Surveying the Seas," 69-96.

which they provided the data for printed charts or written guides that captains could then use alongside new logbooks on later voyages. Although the feedback loop has since ended, data gathered in historical logbooks are still used for reliable information about the nature of the earth. United States Navy Lieutenant Matthew Fontaine Maury prepared meteorological charts with mariners' reports in the 19th century that continue to enable 21st-century climate research.[65] Similarly, a pair of recent *Science* articles employed ships' records of magnetic variation to shed light on the earth's still-changing magnetic field.[66]

Technical documents in the eighteenth century and today, logbooks are best understood if the conditions of their production and use are taken seriously. They were both sites and records of navigational decision-making, allowing their keepers to judge among readings and observations while preserving navigational data for future use by themselves, contemporary hydrographers, or posterity. As sites of decision-making, logbooks helped captains to use both concrete observations and abstract calculations in concert to determine their positions at sea. Sometimes complimentary, at other times contradictory, the navigational methods of dead reckoning, latitude observations, soundings, observations of flora and fauna, and confirming data with other mariners were all coordinated through the logbook, to be selected as the situation demanded. Choosing the best method or methods, captains navigated with more confidence than they could have navigated with any one method alone.

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[65] Maury solicited weather information from mariners and in exchange supplied them with the charts he produced. Maury's collection has since become incorporated into the International Comprehensive Ocean-Atmospheric Data Set, which is used for climate research. National Climatic Data Center (U.S.), *The Maury collection [computer file]: global ship observations 1792-1910.* Version 1.0. (Asheville, N.C.: National Oceanographic and Atmospheric Administration, 1998) CD-ROM; "International Comprehensive Ocean-Atmosphere Data Set" (ICOADS), National Oceanic and Atmospheric Administration, accessed March 31, 2011, http://icoads.noaa.gov/.

[66] David Gubbins, Adrian L. Jones, and Christopher C. Finlay, "Fall in Earth's Magnetic Field Is Erratic," *Science*, 312, No. 5775 (May 12, 2006): 900-902; Masaru Kono "Ships' Logs and Archeomagnetism," *Science* 312, No. 5775 (May 12, 2006): 865-866.

Chapter 2: Between Port A and Port B

On the first of July, 1769, the brig *Sally* broke out from the English Channel into the Atlantic Ocean. *Sally's* master, Solomon Townsend, set a course to the west-southwest toward the British colony of New York. The brig's crew maintained roughly the same course for a week before making several adjustments, oscillating north and south as they made their way west. Sailing conditions were tame, if inconsistent. The weather varied among clear, cloudy, and rainy weather; the wind ranged between light and fresh breezes; but on only two occasions did the sky gather into a thunderstorm with powerful gales. *Sally* made steady progress westward in the same meandering way throughout the voyage, passing just north of the Azores on July 20th and arriving in New York Harbor one month later, on August 20th.[1]

Along the way, Townsend spent some time visiting with captains he happened to encounter on the high seas. On July 12th Townsend and two of his passengers dined with Collin Campbell onboard his sloop *Peggy*. Like Townsend, Campbell was sailing from the British Isles to the British colonies in North America, in his case from Liverpool to Virginia. Later the same day Townsend spoke with a brig going in the opposite direction, from Charleston, South Carolina, to Porto, Portugal. Over the seven weeks of his journey, Townsend mentioned seeing or speaking with other vessels in 22 of his logbook entries, representing slightly fewer than half of the days he spent at sea. As was normal for shipping voyages, he tended to see more vessels in the first weeks and last weeks of the journey, when he was within a few days' sail from a coast.

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[1] Solomon Townsend, Logbook of the brig *Sally* (1769-1773), Mystic Seaport Collections Research Center, Mystic, CT: LOG 588, July 1 – August 20, 1769.

Indeed nearly everything about Townsend's voyage on the brig *Sally* was normal. The weather was mundane, the overall length of the passage was within the regular range for a voyage from London to New York, and the meetings with other ships were ordinary.[2] It should be surprising, then, that Townsend's route did not match those portrayed in 18th-century charts. Figure 2.1 shows Townsend's track alongside the tracks from three prominent Atlantic Ocean charts, two by mapmaker Emmanuel Bowen and one by former governor of Massachusetts Thomas Pownall.[3] If Bowen's "Course to New York &c" was meant to encompass voyages like *Sally*'s, it did a very poor job of it. Current historians would have done little better anticipating Townsend's track. The fact that Townsend was moving westward in this northern part of the Atlantic ocean runs counter to historians' expectations for travel by sail, because he would have been facing headwinds and the upper reaches of the Gulf Stream during much of his voyage. Nevertheless, Townsend could and did take his own uncharted northerly route without incident. Something is out-of-place in current historical understandings of ocean travel: the ships.

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[2] Table 4.9 in Ian K. Steele, *The English Atlantic, 1675-1740: An Exploration of Communication and Community*, (New York: Oxford University Press, 1986), 299, indicates that ships arriving in New York from London in the month of August during the years 1711-1739 had experienced voyages lasting from 8-10 weeks. Note that, although the *Sally*'s first recorded latitude/longitude location was entered on July 1, 1769, as it exited the English Channel, Lloyd's List (no. 3488, dated June 27, 1769) published its departure from London as June 25, 1769. Thus the length of the voyage was 8 weeks, from June 25 – August 20, at the short end of the range Steele identified.

[3] Emanuel Bowen, "A new chart of the vast Atlantic Ocean : exhibiting the seat of war, both in Europe and America, likewise the trade winds & course of sailing from one continent to the other, with the banks, shoals and rocks drawn according to the latest discoveries, and regulated by astronomical observations," (London: Publish'd according to Act of Parliament, for the London Magazine, 1755), in the collections of the Massachusetts Historical Society Library, Boston, MA; Emanuel Bowen, "A new map or chart of the Western or Atlantic Ocean, with part of Europe, Africa & America, showing the course of galleons, flota &c. to and from the West Indies," (London: Printed for E. Cave,at St. Johns Gate, London, 1740), in the collections of the Massachusetts Historical Society Library, Boston, MA; Thomas Pownall, "The Atlantic Ocean" in Thomas Jefferys, *The West-India atlas: or, a compendious description of the West-Indies: illustrated with forty one correct charts and maps, taken From actual surveys. Together with an historical account of the several countries and islands which compose that part of the world* (London: Sayer and Bennett, 1788), accessed on October 22, 2012 through the David Rumsey Historical Map Collection at http://www.davidrumsey.com/home.
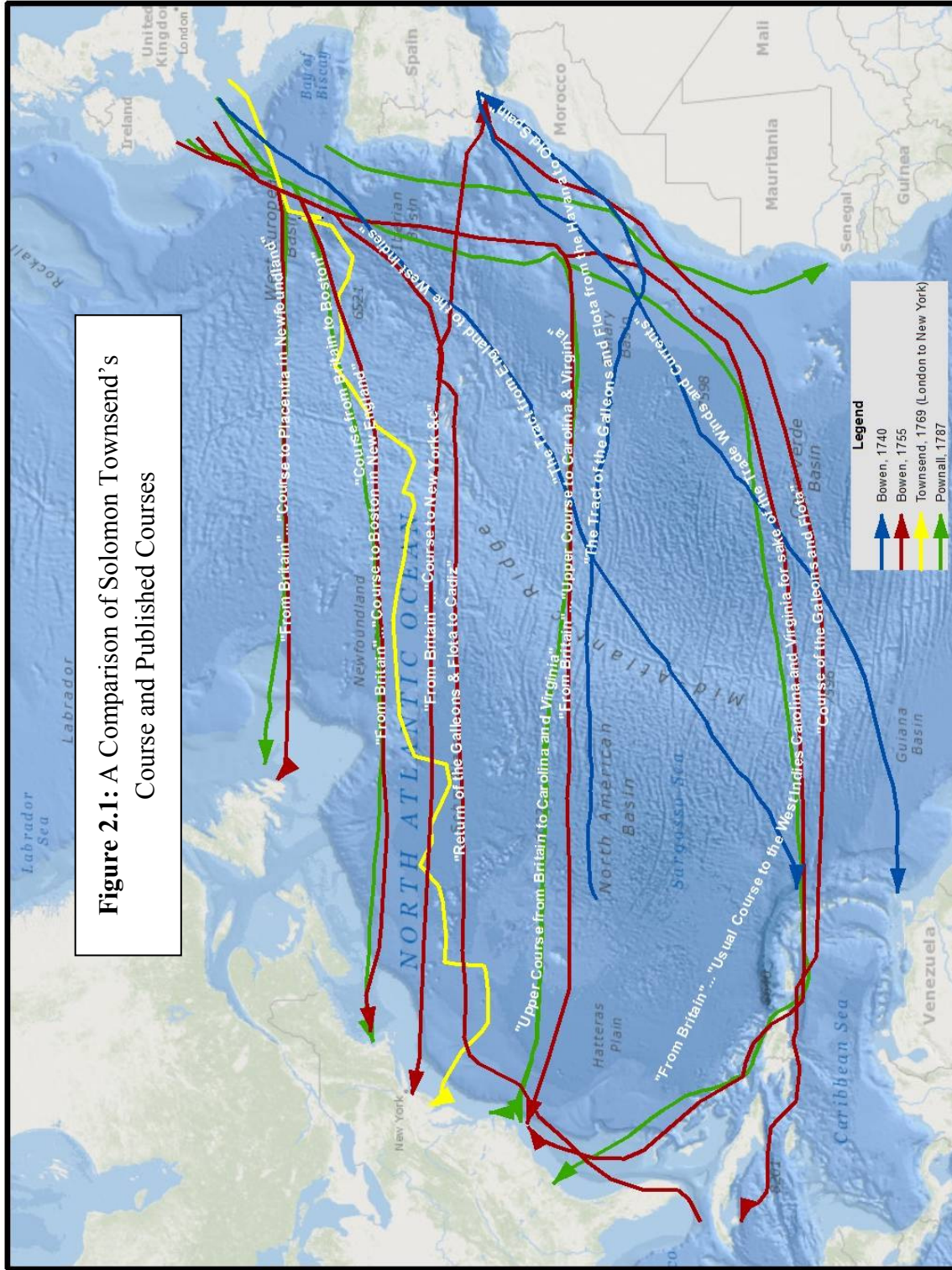
Figure 2.1: A Comparison of Solomon Townsend's Course and Published Courses

Despite the neat routes outlined by contemporary mapmakers and accepted by subsequent historians, the actual paths ships sailed on the eighteenth-century Atlantic Ocean did not align with spatially distinct routes. Rather, they covered nearly the entire ocean. The shipping of each maritime nation formed a slightly different pattern connected to its European and colonial ports or major trading partners; however, all of these patterns overlapped into large, populous zones of travel on the high seas. The vast breadth of the areas of travel and the occasional transit of ships contrary to the Atlantic's predominantly clockwise flow of winds and currents demonstrate both the navigational possibilities of the ocean as it was sailed by eighteenth-century seafarers and the need for historians to improve our maps and verbal descriptions in order to explain this trackful sea. Substituting areal models of shipping patterns for linear models better reflects this reality. Abandoning linear models also allows us to ask far more interesting questions about mariners' interaction with the natural forces that simultaneously enabled and obstructed their voyages; if winds and weather did not circumscribe where ships could and could not sail, what roles did they play?

The body of this chapter will begin with a brief review of common linear interpretations of eighteenth-century shipping patterns. The bulk of the chapter will then offer an areal model as a more correct and useful way to think about the multitudes of crisscrossing voyages that together constituted ocean traffic. Speaking about shapes and geography on the ocean through words alone would further contribute to a restrictive understanding of ocean travel; therefore, much of this chapter comprises maps built directly from thousands of navigational records. Although maps in histories are often simply illustrations meant to assist the textual claims, in this case the maps are as much part of the overall argument and evidence as is the text.

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Historians have traditionally used two types of sources, economic records and published navigational aids, in order to understand early modern Atlantic traffic. Economic records like account books, receipts, customs records, shipping lists, and merchant trade publications are by far the most common means of understanding where ships went and why.[4] The paperwork surrounding financial transactions has also given insight into other, often geographical, aspects of ocean voyages. In his 1942 book *Sea Lanes in Wartime*, Robert Albion used insurance prices to analyze the relative influences of competing navies as they patrolled different ocean regions. More recently, David Eltis, Martin Halbert, and their research team have made it possible to grasp the important but dispersed slave trade by amassing an astounding collection of slave trade data in their Trans-Atlantic Slave Trade Database.[5] These data, covering slaving transactions at ports in Africa, the Americas, and Europe, comprise a familiar tabular form in the project's online database, but David Eltis and David Richardson have also translated some of their key findings into cartographic form through the *Atlas of the Transatlantic Slave Trade.[6]*

Economic histories give a sense of the amount and kind of trade, whether in slaves, grain, tobacco, molasses, wine, specie, or anything else. They also do well in showing trade by region, using the transactions in major port cities to discover the resource-extracting economic life of

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[4] Among many, see such works as Curtis P. Nettels, *The Emergence of a National Economy, 1775-1815*, vol. 2 of *The Economic History of the United States*, ed. Henry David et al. (New York: Holt, Rinehart and Winston, 1962); John J. McCusker and Russell R. Menard, *The Economy of British America,1607-1789*, (Chapel Hill: University of North Carolina Press for the Institute of Early American History and Culture, 1991, first published 1985); James D. Tracy, *The Rise of Merchant Empires: Long-Distance Trade in the Early Modern World, 1350-1750*, (Cambridge: Cambridge University Press,1990); Peter A. Coclanis, ed., *The Atlantic Economy during the Seventeenth and Eighteenth Centuries: Organization, Operation, Practice, and Personnel,* (Columbia, SC: University of South Carolina Press, 2005); Horst Pietschmann, ed. *Atlantic History: History of the Atlantic System, 1580-1830*, (Göttingen: Vandenhoeck & Ruprecht, 2002).

[5] *Voyages: The Trans-Atlantic Slave Trade Database,* www.slavevoyages.org

[6] David Eltis and David Richardson, *The Atlas of the Transatlantic Slave Trade* (New Haven: Yale University Press, 2010)

hinterlands and hinterwaters. Unfortunately, buying and selling happened (for the most part) at the ends of voyages rather than in the middle, so financial records give little sense of how goods, people, and currency moved from one sale to the next. Historians' maps of trade routes may use lines that give the appearance of representing actual ships' paths, but only the endpoints of these lines have geographical meaning (Figures 2.2 and 2.3).[7] Quite conscious of this issue, Eltis and Richardson acknowledged in their *Atlas* that "the paths of the slave trade, shown with arrows, connect points of departure and points of arrival, but they are not intended to portray the actual routes of the slave vessels."[8] In the end, this is an inherent limitation of financial sources. For actual routes, one must look elsewhere.

Using navigational aids is another productive, albeit less common, way to understand shipping patterns. Much as travelers today rely on maps and verbal directions when they venture beyond their familiar haunts, 18th-century navigators turned to sailing directions, charts, and tables listing the geographical coordinates of ports in order to help them find their way. The historian Ian Steele used charts displaying courses in combination with historical sailing directions to reconstruct 18th-century shipping routes. His 1986 volume *The English Atlantic, 1675-1740: An Exploration of Communication and Community* remains the best historical effort to describe early modern North Atlantic shipping routes. Like many economic historians, he identified specific British transatlantic routes by region and type of goods: sugar/West Indies,

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[7] In addition to Figures 2.2 and 2.3, see for example Kenneth Morgan, *Slavery and the British Empire: From Africa to America*, (Oxford: Oxford University Press, 2007), Map 5, p55; Philip D. Curtin, *The Atlantic Slave Trade: A Census*, (Madison: University of Wisconsin Press, 1969), Figure 14, p 215.

[8] Eltis and Richardson, *Atlas*, xxiii. Of course, not all lines on maps must be geographically meaningful, and indeed different styles can be quite useful for purposes other than showing ships' routes. By using gradual curves and lines whose widths represented the number of slaves traded between ports, Eltis and Richardson couched their new findings within a cartographic vocabulary already established in the field. See Philip D. Curtin, *The Atlantic Slave Trade*.

L'ATLANTIQUE DES IBÉRIQUES AU XVIIIè SIECLE
Les échanges commerciaux : routes, ports et produits
(trafic négrier exclu)

Figure 2.2: Map Showing Narrow, Gradually Curving Routes [9]

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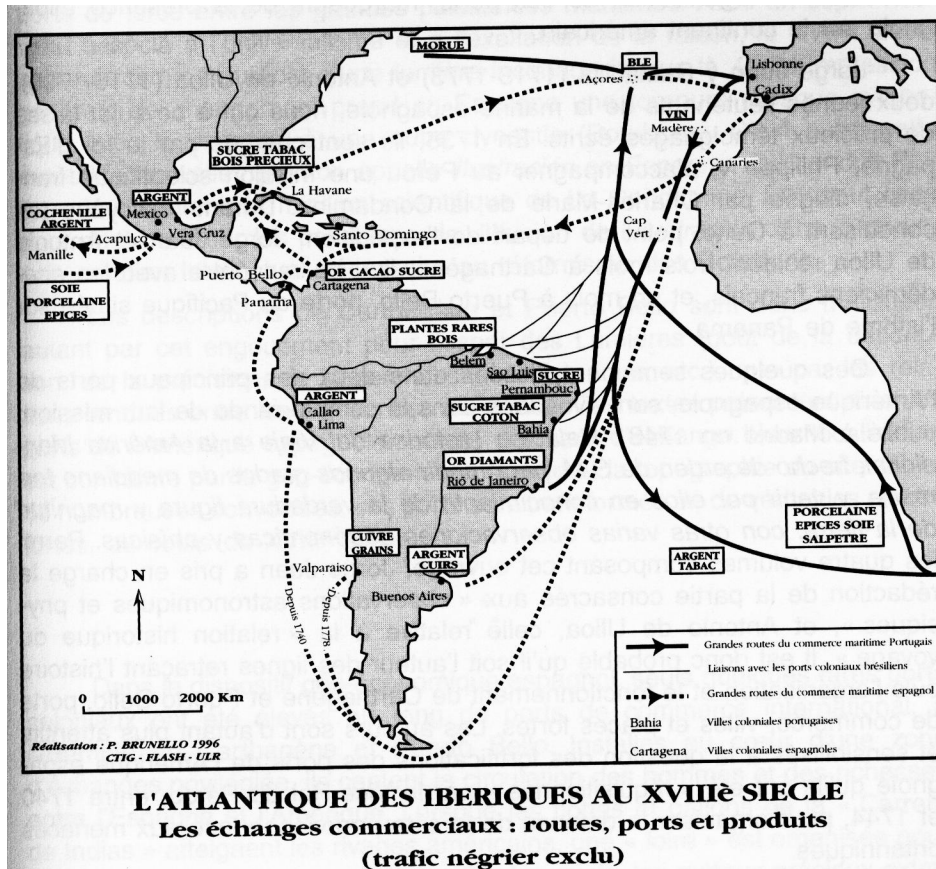
[9] Guy Martinière, and Laurent Vidal. *Les Européens et la Mer au XVIIIe Siècle: Les Ibériques de l'Atlantique au Pacifique.* (Paris: Ophrys, 1997), 51.

Figure 2.3: Map Showing Straight-Line Routes
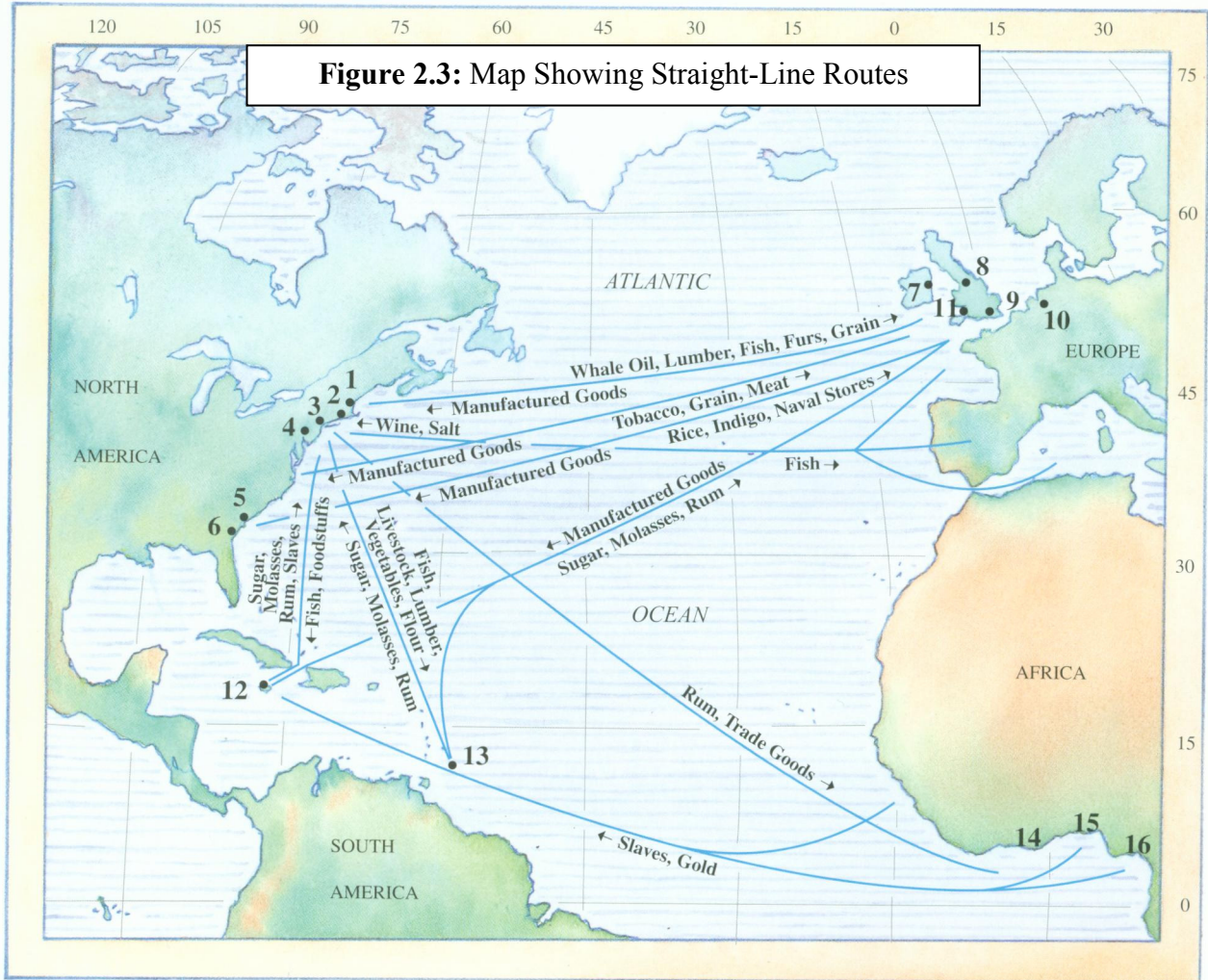
Figure 3 **Eighteenth-Century Atlantic Ocean Trade Routes**

——— Trade Routes

1. Boston
2. Newport
3. New York City
4. Philadelphia
5. Charleston
6. Savannah
7. Dublin
8. Liverpool
9. London
10. Amsterdam
11. Bristol
12. Jamaica
13. Barbados
14. Gold Coast
15. Bight of Benin
16. Bight of Biafra

(Dennis O'Brien map)

tobacco/Chesapeake, and so forth. Yet, Steele went a step further to describe the shapes of the routes on the ocean and depicted them with a series of maps.[11] Using written route descriptions and commercially available maps, Steele found that captains had access to several alternative paths between each origin and destination. He recognized five different routes from Great Britain to the Chesapeake, for instance. Some of the routes were direct lines, while others swooped low along the European coast before crossing the Atlantic. These different courses reflected different techniques for addressing the predominantly clockwise flow of currents and winds in the North Atlantic.[12] A direct voyage westward from Britain was the shortest distance to the American colonies, but the winds and currents, including the Gulf Stream, made progress very slow. On the other hand, a southerly path covered a much greater distance but could take advantage of the trade winds to cover that distance more quickly. In all, Steele found and mapped roughly a dozen common routes described in merchant publications from 1675-1740 (Figure 2.4).

Steele offered an excellent beginning, but his routes exhibited a few important limitations, because they were based on historical trade publications. First, these publications represented the routes as prescribed rather than the routes as actually run, none of them showing the type of zigzag track left by Solomon Townsend or by other mariners sailing into headwinds (Figure 2.1). Like the contemporary maps on which he based some of his routes, Steele represented the paths as narrow lines, giving no sense of the common variation from those ideal lines. Second, Steele was interested in the speed and reliability of news shared from London to

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[11] Ian K. Steele, *The English Atlantic, 1675-1740: An Exploration of Communication and Community* (New York: Oxford University Press, 1986), 22, 46, 80. Writing at nearly the same time, Joseph C. Miller likewise displayed the directions ships would sail in the Southern Atlantic slave trade as influenced by wind and currents. He also used narrow lines. Joseph C. Miller, *Way of Death: Merchant Capitalism and the Angolan Slave Trade, 1730-1830*, (Madison: University of Wisconsin Press, 1988), 318-324.

[12] Steele, *English Atlantic*, 8; Eltis and Richardson, *Atlas*, 8, Map 4.
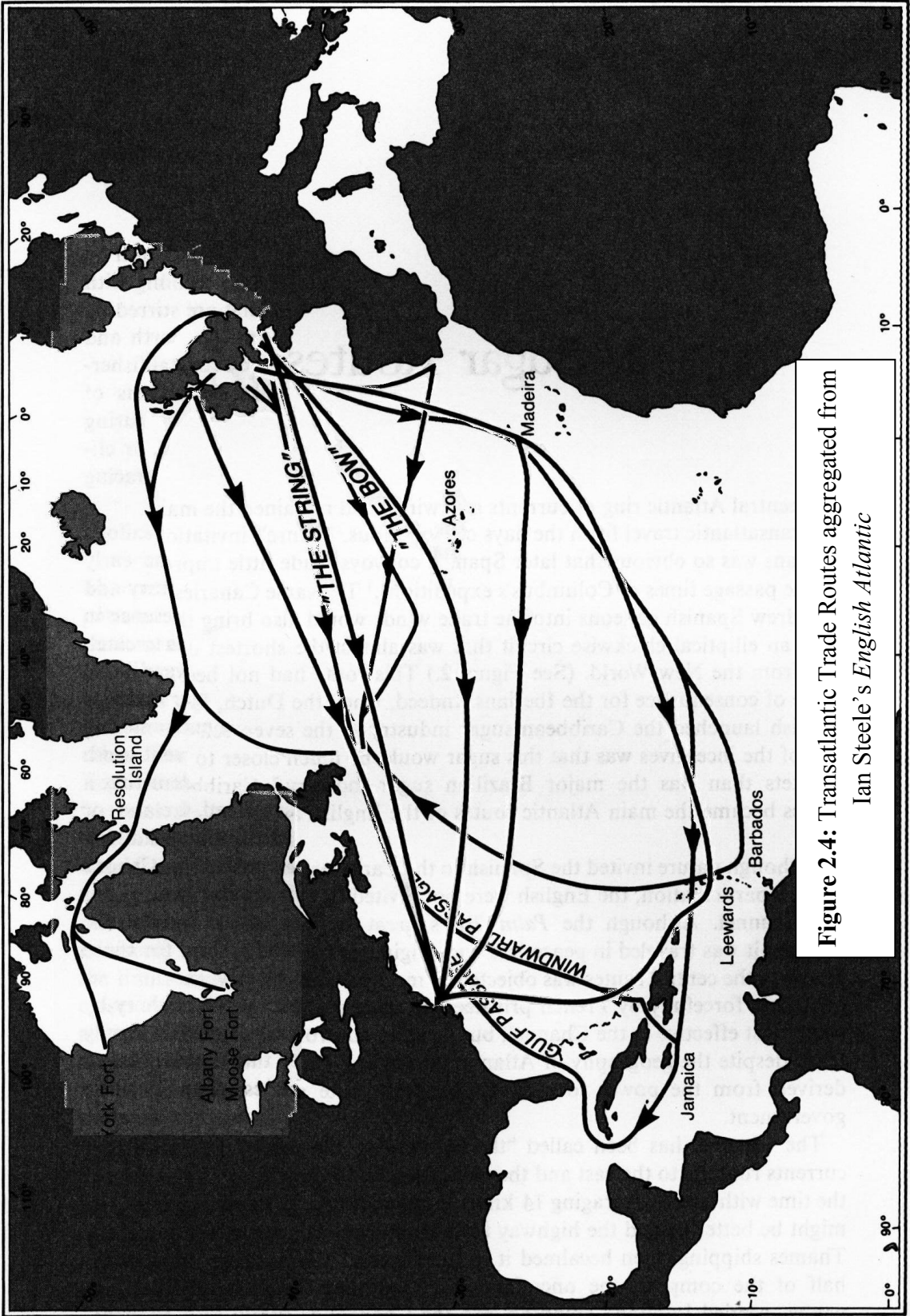
Figure 2.4: Transatlantic Trade Routes aggregated from Ian Steele's *English Atlantic*

the British North American and Caribbean colonies, so he limited his study to British shipping and emphasized voyages outward from the British Isles over those inward to Britain or among colonies. Third, as with all historical works, Steele's was limited to a specific time period, from 1675-1740. Some routes may have changed over time, so his charts may not reflect later periods. For instance, Steele cited former Massachusetts Governor Thomas Pownall's 1787 chart as verification that the same southern routes via Madeira that were used during the seventeenth century continued to be used through the late eighteenth century, but he also observed that Pownall missed two other routes to the Chesapeake.[13] Pownall may have missed these routes, but it is also possible that the paths that had been popular generations earlier had fallen into disuse by the 1780s.

These two types of sources, economic records and navigational aids, both have a tendency to emphasize linear descriptions of routes. Whether depicted as straight or gently curving lines from Port A to Port B, ideal, linear routes miss the variation that made sea travel unique from land-based modes of transportation. This linear understanding of oceanic travel appears in historians' language as well as in maps. Writing in the 1940s about eighteenth-century shipping, Robert Albion and Jennie Barnes Pope claimed, "Shipping... tended to follow certain well-defined sea lanes, dictated by consideration of the cargoes to be found at each end." This statement seemed reasonable and still makes sense in large part because the word "lane," an axiomatically linear, well-defined space, had already become strongly associated with sea voyages by the mid twentieth century.[14] In fact, the term "sea lane" did not appear in the

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[13] Steele, *English Atlantic*, 47.

[14] Robert Greenhalgh Albion and Jennie Barnes Pope, *Sea Lanes in Wartime; the American Experience, 1775-1945* (Hamden, CT: Archon Books, 2nd ed., 1968), 26.

essential eighteenth-century marine dictionary, William Falconer's *Universal Dictionary of the Marine*. [15] Rather, the concept of "ocean lanes" was introduced in its modern form in 1855 by Lieutenant Matthew Fontaine Maury, whose express purpose was to organize the dangerously chaotic traffic then covering the oceans. Collisions among steamships in the foggy northern reaches of the Atlantic eventually drove steamship companies to adopt Maury's lanes, which separated eastward and westward traffic into two lanes 20-25 miles wide and from 1-10 degrees of latitude apart. Maury envisioned these lanes as a double-track railroad, but his suggestion that sailing vessels should shear off the lanes at night to allow steamers to pass demonstrates that even his rail analogy was incomplete.[16]

A more recent historical analogy likewise compares oceans traffic to land transportation in the form of highways.[17] Although this analogy successfully reflects the heavy use of the sea as a medium for transporting cargo and people, like a lane or a railroad, a highway again evokes a linear, narrow space. To the extent that this narrow type of oceanic shipping space exists now, it exists only because it was intentionally constructed over decades of decreasingly wind-dependent shipping. James Morris offers a more accurate description of eighteenth-century American shipping patterns: "A dual-track and complementary trade system had developed by

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[15] William Falconer, *An universal dictionary of the marine: or, A copious explanation of the technical terms and phrases employed in the construction, equipment, furniture, machinery, movements, and military operations of a ship. : Illustrated with variety of original designs of shipping, in different situations; together with separate views of their masts, sails, yards, and rigging. To which is annexed, a translation of the French sea-terms and phrases, collected from the works of Mess. Du Hamel, Aubin, Saverien, &c.* (London: Printed for T. Cadell, in the Strand, 1789. First edition 1769).

[16] Frances Leigh Williams, *Matthew Fontaine Maury, Scientist of the Sea* (New Brunswick, NJ: Rutgers University Press, 1963), 265-267; Charles Lee Lewis, *Matthew Fontaine Maury, the Pathfinder of the Seas* (Annapolis, MD: The United States Naval Institute, 1927), 83.

[17] Helen Rozwadowski, *Fathoming the Ocean: The Discovery and Exploration of the Deep Sea* (Cambridge, MA: Belknap Press of the Harvard University Press, 2005), 4; Alistair Simon Maeer, "The Cartography of Commerce: the Thames School of Nautical Cartography and England's Seventeenth Century Overseas Expansion" PhD Dissertation (Arlington: University of Texas, August 2006), 10.

the eve of the Revolution, one track crossing the Atlantic at many points by many routes, the other track going up and down the Atlantic coast from Boston to Charleston and out across the blue waters of the fabled Caribbean."[18]

Eighteenth-century English-speaking mariners emphasized the vagaries of sailing by using the word "course" to describe the paths they intended to sail. "Course" implied that the helmsman guided the vessel in adherence to a compass direction rather than to an imaginary road. In a graphic illustration, the logbook of the schooner *Success* included a chart for a voyage from Cape Ann to Cape Portugal. This chart was nothing more than three sheets of paper glued together with a hand-drawn circle on the left side marked with the degrees of a compass. The course to Cape Portugal was described on the chart as North 88° East and drawn as a narrow triangle extending from the appropriate degrees of the circle Eastward. The ship's daily position was marked against this thin triangle so that, with only angles and distances, one could see its progress. Notably the ship did transgress the lines that extended from the circle, but it was the overall course that mattered, not the edges of any lane.[19]

Early modern English-speaking logbook keepers used a variety of other terms to explain the paths of vessels on the sea. In order to improve his calculations, an distinguished between the compass course the helmsmen steered and the "Course made good," the course that the ship actually travelled due to currents or other influences.[20] The now-common word "route" was

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[18] Morris, James M. *Our Maritime Heritage: Maritime Developments and their Impact on American Life.* (Washington, D.C.: University Press of America, 1979) 28. Morris still used the word "track," but in the spatially abstract sense of a career track or educational track rather than the spatially concrete sense of railroad tracks.

[19] Logbook of the schooner *Success* (1778-1779), Philip Thrash master, Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1778S (B24)

[20] Lt. Joseph Strout, Logbook of the United States brig *Herald*, Capt. James Sever master, United States National Archives, Washington, DC: RG 45, entry 608 (10), vol 1 of 5; Isaac Gorham, Logbook of the brig *Enterprise* (1787-

roughly equivalent to "course" in the eighteenth century, but "route" could also identify the

destination of a voyage. Hence a West-Indies route was not so much a defined trail on the ocean

(like US Route 66) as it was a direction toward the West Indies.[21] Other terms like "wake" and

"track" (sometimes "tract") referred to the path that a particular ship had already taken across the

water.[22] Wakes were visible on the ocean surface for some distance behind a vessel, so a ship

could literally follow in another's wake.[23] Wakes disappeared with time, but cartographers used

navigational records to transfer the tracks of important vessels onto maps and globes for long-

term reference. As one final clarification, the term "road" was common in eighteenth-century

marine contexts, but it did not describe a path along which vessels sailed. Roads were places for

anchoring vessels offshore, so although they were specific, stable locations, they were not sea

lanes.[24] A "road" at sea was like a parking lot for ships, not a highway.

Of course, linear route descriptions are problematic only as generalizations, because they

cannot encompass the variety of courses ships actually sailed. Historians who trace the paths of

individual vessels do well drawing the jagged lines and engaging with those lines through their

narratives. Stories of exploration benefit from maps that show the ships' exceptional courses

over the ocean. Biographers of important figures who went to sea have also used vessels' tracks

1789), John DeWolf master, Rhode Island Historical Society Library, Providence, RI: MSS # 9001-G, box 4, May 8-9, 1788 and May 27, 1788.

[21] As late as 1789 Falconer's dictionary still listed the word "route" among foreign phrases introduced from French, but the OED indicates that it had transferred to English well before then, as in the introduction of George Anson, *A voyage round the world, in the years MDCCXL, I, II, III, IV*, (London: 1748).

[22] Falconer, *Universal Dictionary of the Marine*, "Track," "Wake."

[23] The smooth surface of a ship's wake can endure for a surprisingly long time, possibly due to the displacement of organic film on the ocean's surface. Brian Hayes, "Trails in the Trackless Sea," *American Scientist*, 81, No. 1 (January-February 1993): 19-20.

[24] Falconer, *Universal Dictionary of the Marine*, "Road."

to match the drama of human affairs to tumultuous voyages.[25] Indeed, the genre of biography

and the plotted individual voyage line are a natural match: both usually emphasize exceptional

traits or experiences, the very things that are lost by drawing the consensus line of a standard

course. Still, while historians know instinctively that all human lives have their fair share of

aberration, we forget this fact as it applies to sailing voyages. In translating the wandering trace

of the individual vessel into a general trend, we have tended to simplify by losing essential

features common to all vessels' paths: their twists and turns.[26]

How, then, should we describe ocean travel? How can we map it without relying on

narrow lines? How can we write about it coherently without analogies that conflate it with more

familiar forms of travel? The first step is acknowledging that the ocean was used both intensively

and extensively by thousands of vessels in thousands of places year after year.

Figure 2.5 is a rough census of the Atlantic Ocean from 1769-1800. It depicts Atlantic

voyages as if each ship were passing through a turnstile every time it entered a new degree-by-

degree parcel of the ocean (hence the pixelated appearance). Rather than representing presumed

routes, this map represents over 2000 recorded voyages as they were described in logbooks.[27] By

representing voyages as they were sailed rather than as they were imagined, this approach

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[25] Nathaniel Philbrick, *In the Heart of the Sea: The Tragedy of the Whaleship Essex,* (New York: Penguin, 2000), 179; David McCullough, *John Adams,* (New York: Touchstone, 2001), 184-185); Joyce Chaplin, *Round about the Earth: Circumnavigation from Magellan to Orbit,* (New York: Simon and Schuster, 2012), 2-3, 104-105, 150-151, 302-303; Eltis and Richardson, *Atlas*, Introduction: Map 5.

[26] This characteristic could be described in the mathematical or scientific sense as "roughness," referring to the jaggedness of the line. Due to the obvious potential for confusion with the conditions of a "rough sea" I have avoided this term, but I do use a similar concept to investigate the causes of course changes.

[27] "Voyage" here means instances (legs) of sea travel between two destinations. Counting voyages is not an exact science, because a single leg was often part of a round-trip between two ports or a more complicated circuit including three or four ports. On the other hand, a voyage could be conceived as a single leg, with insurance and other documentation to match. See Kenneth Morgan, "Shipping Patterns and the Atlantic Trade of Bristol, 1749-1770," *The William and Mary Quarterly*, Third Series, 46, No. 3 (Jul., 1989), 506-538.

Figure 2.5: Traffic on the North Atlantic, 1769-1800

Sources: Author's Database, CLIWOC database, ESRI Basemap

Vessels per Square Degree
1
2
3 - 4
5 - 7
8 - 11
12 - 17
18 - 28
29 - 48
49 - 75
76 - 562
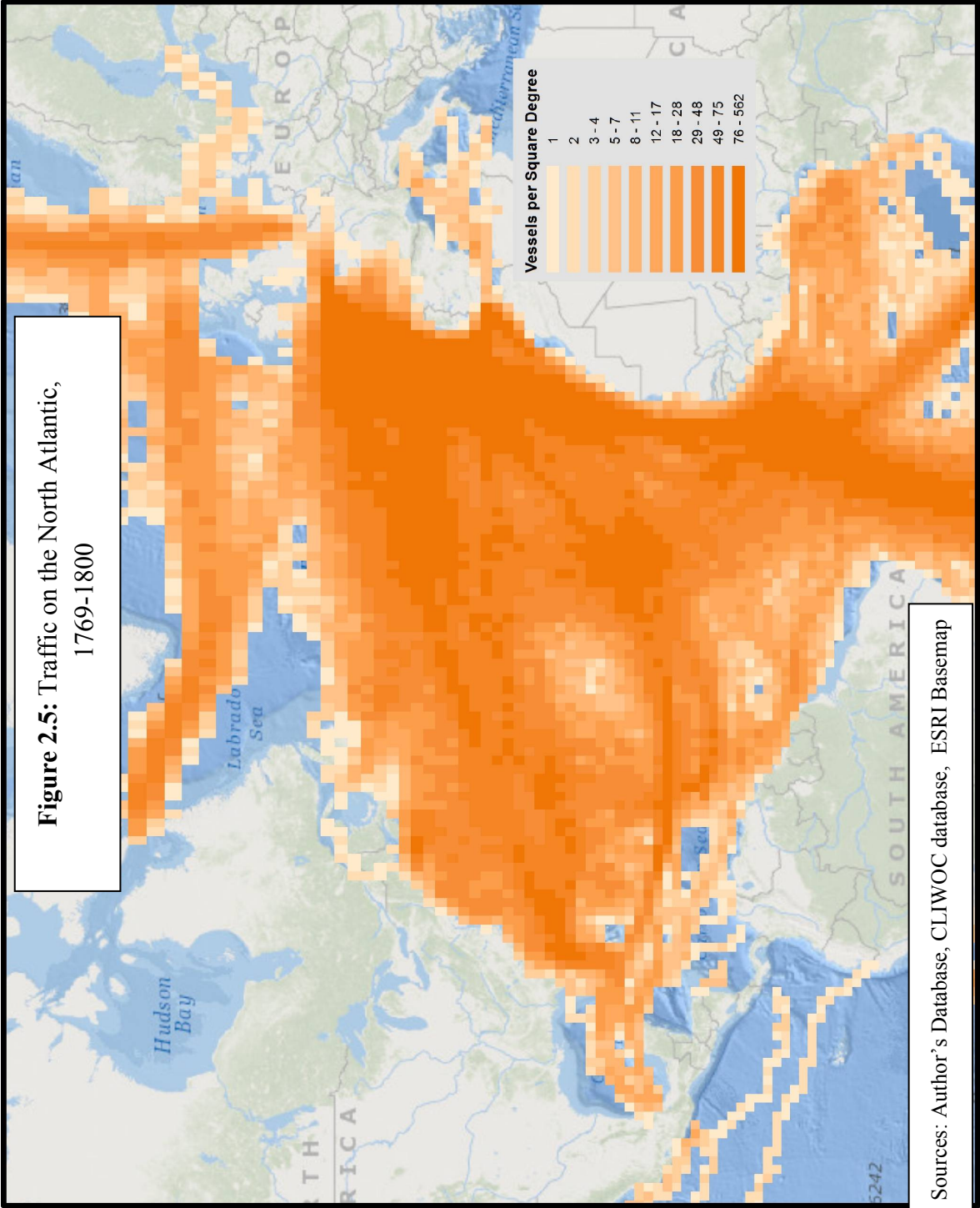
reveals that nearly all of the North Atlantic Ocean was teeming with ships. These vessels sailed more densely in some areas than in others, but the traffic clearly extended well beyond the linear paths of Figures 2.1-2.4.

It is important to note, however, that this map is not statistically-representative of shipping as a whole; it demonstrates where ships *were*, not where they were not. Due to the attrition of logbooks over time and the investment required to transcribed them for mapping, this map represents only a very small fraction of all of the voyages sailed on the Atlantic during this period.[28] Particular types of vessels are most likely to be missing from this picture. Small vessels sailing within sight of the coast or remaining within soundings would not have kept the detailed logs available for longer, transatlantic voyages. Moreover, the types of records kept near the coast present a challenge for mapping, as they often replace latitudes and longitudes with references to landmarks (both on land and underwater) that may have changed since the times the logs were recorded. For instance, Gilbert Howland spent most of January, February, and March of 1792 in the Chesapeake Bay moving among places like "Saras Crick," Mr. Allen's Landing, and Mr. Southhall's.[29] Shuttling among individuals' holdings while wintering in the Chesapeake was a common part of seasonal sailing patterns, but it is much more difficult to reconstruct such local movements than to plot the voyages that carried Howland to and from the bay.[30] Due to the scarcity of mappable records, fishing boats and local coastwise traders are

[28] See for instance Paul Butel, *The Atlantic*, (London: Routledge, 1999), 154. Butel notes at least 1359 arrivals in the Chesapeake colonies and French and British Antilles in 1773 alone.

[29] Gilbert Howland, Logbook (1791-1805), Houghton Library, Harvard University, Cambridge, MA: f MS Am 448.15, January 17 – March 25, 1792.

[30] Morris, *Maritime Heritage*, Chapter 2, 19-38.

missing from my maps, even though they were numerous and important both economically and environmentally.[31]

The survival of logs is also dependent on chance occurrences over the years (fires, pest damage, loss, etc.) and choices made by the logs' many owners, who had their own reasons for considering these hefty books worth preserving or neglecting.[32] Historians also have biases in the logs that we sample, whether these are accidental biases introduced by geography, linguistic skill, or funding, or intentional biases related to our research questions. I chose the voyages in my database by years, mappability, and archival access. I did not preselect for more or less exciting voyages, but I did try to secure at least one or two voyages of several distinct types (whaling, transatlantic, slaving, naval, privateer, Atlantic to Pacific). I have supplemented my database in this chapter with a much larger collection from the *Climatological Database for the World's Oceans 1750-1850* (CLIWOC) in order to include European vessels.[33] CLIWOC was a European Union-funded climate research project that lasted from 2000-2003. CLIWOC's team comprised five partner institutions from the United Kingdom (2 partners), Spain, the Netherlands, and Argentina. Its final report, available with the full database on the project website, details its research methods. Although this was a very large project, the goal was to

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[31] Jeffrey Bolster's oeuvre is essential reading on the importance of taking the oceanic space of fishing into historical consideration. Most recently, his *Mortal Sea: Fishing the Atlantic in the Age of Sail* (Cambridge, MA: Harvard University Press, 2012) demonstrates both the economic importance and environmental impact of these preindustrial fishing fleets. Bolster also co-directs the History of Marine Animal Populations Center at the University of New Hampshire, where recent postdoctoral fellow Stefan Claesson has produced an online atlas of fishing grounds that gives a sense of the parts of the ocean where fishing vessels would have appeared in great masses, albeit during the 19th century rather than the 18th: *Historical Atlas of Marine Ecosystems*, http://hmap.unh.edu/, accessed September 24, 2013.

[32] The Connecticut State Library tells a lovely, tragic story of its acquisition of a slave-trade logbook: "Log Book of Slave Traders between New London and Africa, 1757-8" http://www.cslib.org/slaverlog.htm, compiled by Mark Jones, 2005, accessed September 23, 2013.

[33] Climatological Database for the World's Oceans 1750-1850, version 1.5, http://www.ucm.es/info/cliwoc/ accessed December 5, 2012.

understand ocean weather, so an even sampling of the member archives was not as important as corroboration among the logs used. As a result, the sources used reflected the strengths and weaknesses of the partner institutions (for instance, of the 1624 logbooks used, only 12 came from France).[34]

These caveats about the statistical representativeness of these maps are meant as a warning for critical reading, but the maps nevertheless uphold my central contention that narrow routes are inadequate for describing 18th-century shipping. Figure 2.5 represents the minimum of oceanic traffic. The ocean was much fuller than this picture, but it was certainly not emptier. Ocean travel could have been more varied, and it could have varied from year to year, but it certainly was not more constrained in the decades from1769-1800.

Mapping not just where ships were but also how they moved illustrates the options available to 18th-century seafarers. In Figure 2.6, each line represents a single vessel. The lines are color-coded to indicate whether the overall direction of the voyage was to the East (yellow), West (green), or not significantly in either direction (pink). Ships in the Northern part of the Atlantic between North America and Europe were generally sailing eastward. Westward movement was more common between southern Europe or Africa and the Caribbean or South America. Voyages that ended in roughly the same longitude as they began were usually sailing North and South. Such voyages often occurred near the coasts on either side of the Atlantic. Around the edge of the main North Atlantic basin, a few isolated paths reached for specific goals, like the course from the United Kingdom toward Hudson's Bay and back. Other ships traveled from Britain or the Low Countries through the North Sea toward the rich sealing and

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[34] "CLIWOC Final Report," 9. Accessed December 5, 2012, http://pendientedemigracion.ucm.es/info/cliwoc/Cliwoc_final_report.pdf . Please see the appendix for more details.
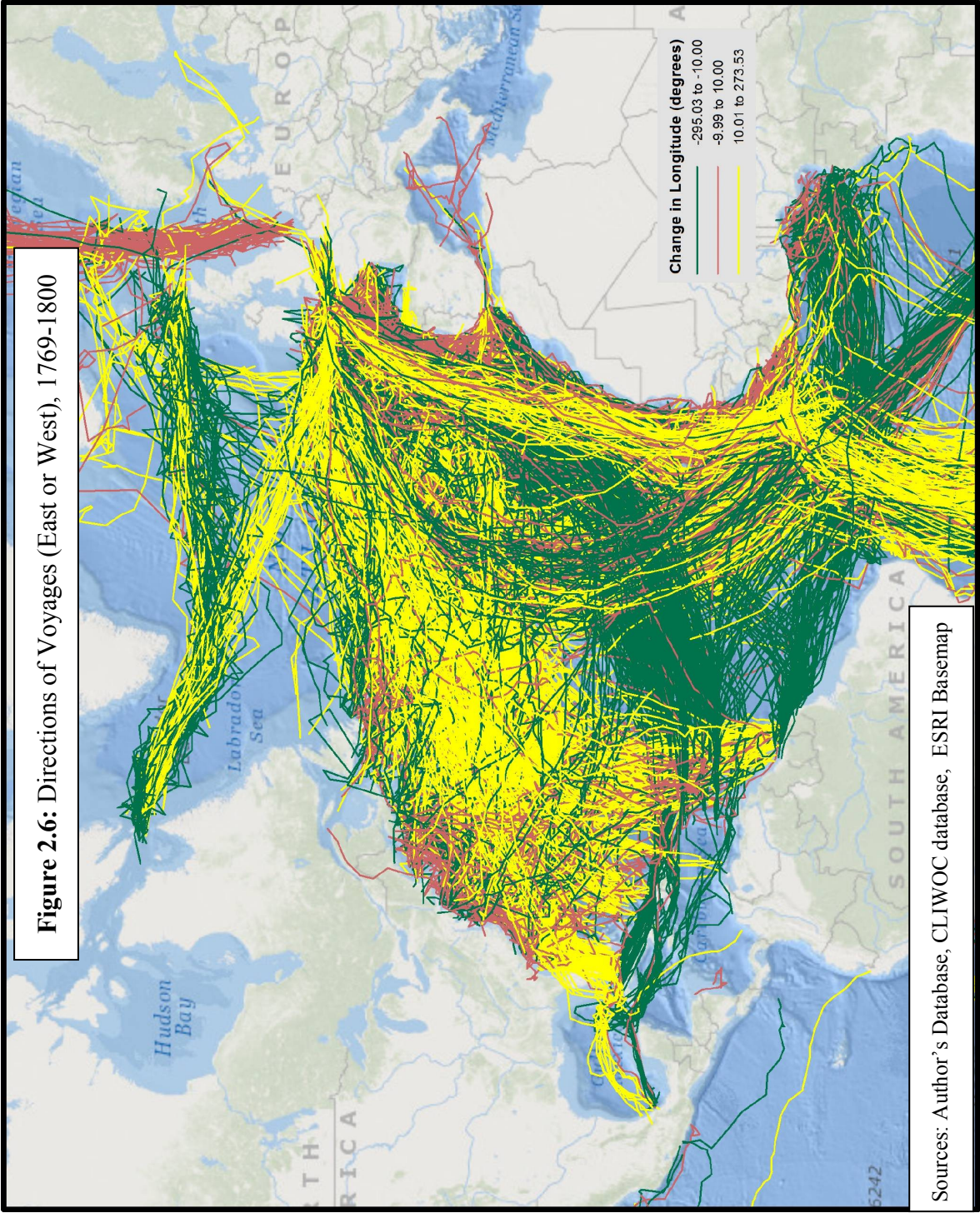
Figure 2.6: Directions of Voyages (East or West), 1769-1800

Change in Longitude (degrees)
— -295.03 to -10.00
— -9.99 to 10.00
— 10.01 to 273.53

Sources: Author's Database, CLIWOC database, ESRI Basemap

61

whaling of the Arctic Ice; then they returned along the same paths. Still other mariners sailed South and East, lingered along the African coast, purchased slaves, and then sailed Westward for markets in the New World.

Of course, not all of this is surprising. The generally clockwise circulation of ships in the main basin of the North Atlantic corresponds with the predominant currents and winds in that region. Adherence to this North Atlantic gyre fits well with historians' expectations about Atlantic shipping. However, even though the trends overwhelmingly favor clockwise circulation, most areas of the map show a smattering of the other colors coming through. This means that ships' courses were not restricted by the winds and currents in each area of the ocean; the same clockwise winds simultaneously propelled ships going with and against the common grain. Breaking the voyages out into separate maps by direction helps uncover these less common tracks that, in Figure 2.6, become needles in the crisscrossing haystack of voyages (Figures 2.7-2.10).[35] Those bucking the trend, including Solomon Townsend's *Sally*, were battling against or cutting perpendicular to the usual winds. American voyages to the Caribbean, likely carrying provisions for the cash-crop dependent islands, likewise traveled against the gyre. These mariners dodged far out to sea in order to avoid the Gulf Stream current and accompanying winds from the Southeast.

Traveling against the wind would not have been as fast as traveling with it, but it was certainly not an insurmountable obstacle, even for transatlantic voyages. Figure 2.7 reveals that many ships like the *Sally* sailed against the westerly winds of the northern part of the North Atlantic. These vessels faced what Edmund Burke aptly called "that uphill Sea" much as hikers

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[35] Note that these line segments reflect ships' daily movements, not full voyages.

Figure 2.7: Westward Daily Movement, 1769-1800

Sources: Author's Database, CLIWOC database, ESRI Basemap

Day's Distance Travelled (nautical miles)

0.00 - 50.00
50.01 - 100.00
100.01 - 150.00
150.01 - 200.00
200.01 - 400.00

Figure 2.8: Eastward Daily Movement, 1769-1800

Day's Distance Travelled (nautical miles)

0.00 - 50.00
50.01 - 100.00
100.01 - 150.00
150.01 - 200.00
200.01 - 400.00

Sources: Author's Database, CLIWOC database, ESRI Basemap

Figure 2.9: Northward Daily Movement, 1769-1800

Sources: Author's Database, CLIWOC database, ESRI Basemap

Day's Distance Travelled (nautical miles)
0.00 - 50.00
50.01 - 100.00
100.01 - 150.00
150.01 - 200.00
200.01 - 400.00

65

Figure 2.10: Southward Daily Movement, 1769-1800

Day's Distance Travelled (nautical miles)

0.00 - 50.00
50.01 - 100.00
100.01 - 150.00
150.01 - 200.00
200.01 - 400.00

Sources: Author's Database, CLIWOC database, ESRI Basemap

would climb a mountain – through a series of switchbacks.[36] By sailing diagonally toward the wind a ship could still make forward progress, and periodically tacking (turning across the wind) or wearing (spinning away from the wind before turning across it) kept the ship from going too far to the side of its intended course. Often these zigzag turns would be executed on the same day, and would therefore be visible only with a finer-grained analysis. At other times sailing into a consistent wind could result in long jogs, as in the *Sally*'s case. Captains sailing from London to New York had the choice of taking switchbacks "uphill" into the wind or of going around the hill by following the winds and currents to the south. Both were viable overall strategies, and within each strategy the captain's discretion and the local conditions led to a great deal of variation.

Interestingly, none of the voyages in the combined database sailed eastward against the trade winds. In the area where the trade winds guided ships westward from the Iberian Peninsula and the wine islands off of the African coast, Figure 2.8 displays very few days of eastward travel, none representing a coherent voyage. This unity of traffic moving in only one direction is very unusual in comparison with the rest of the ocean. One possible explanation is politico-economic, that the vessels represented in the databases (predominantly British, Dutch, Spanish, and American) had little reason to travel from South America or the Caribbean toward the mouth of the Mediterranean. This argument may hold true for most of the countries involved, but Spain is an obvious exception. Several Spanish vessels in the collection did sail from the Gulf of Mexico to the Spanish mainland, but they did not battle the trade winds. Instead, they kept to the lower portion of the northern swath of eastward travel, perhaps stopping at the Azores along the

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[36] Edmund Burke, "Speech on Stamp Act Disturbances," Jan.-Feb. 1766, *The Writings and Speeches of Edmund Burke*, II, edited by Paul Langford (Oxford: Oxford University Press, 1981) 44.

way. In doing so, they gained from the Westerly winds and traveled a shorter overall distance due to the curvature of the Earth. Whereas the distances and winds involved in a westward voyage from Great Britain allowed for multiple viable options, the winds and distances involved in an eastward voyage from the Caribbean seem to have encouraged only northward paths. The unidirectionality of the southern swath may explain why the northern swath of eastward travel was about 25% wider than the southern swath of westward travel (15 degrees of latitude wide rather than 12 degrees). Spanish ships that might have sailed against the trade winds instead sailed with the westerlies but pushed the edges of the westerlies, broadening the northern eastward zone rather than crafting a separate zone to the south. This difference in directions of usage (and hence the spaces used) may seem insignificant, but it is an important distinction missing from older models of Atlantic shipping routes. Among other things, it speaks to the experiences of seafarers who (as will be seen in later chapters) met far fewer other seafarers in the south than in the north.

Of course the Atlantic was not always predictable, and even the reasonably reliable, clockwise North Atlantic gyre did not always behave. Samuel Curson lucked into good winds in the wrong part of the sea in 1798, remarking "I believe it is rather unexpected to have the Wind so favourable at [sic] it does not usually Blow from that Quarter in these Latitudes."[37] William Almy and Benjamin Carter experienced the other side of the coin. While trying to sail westward with the trade winds Almy worried, "The wind altho we are in the Trades Still Inclines To the

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[37] Samuel Curson, Logbook of the ship *Eliza* (1798-1799), James Rowan master, Massachusetts Historical Society Library, Boston, MA: Ms. N-834 (Tall), October 7, 1798.

westward [as] if it Raily Intended To Starve Us."[38] As Carter sailed south near the Cape Verde

Islands, he similarly complained, "Though in the Lat. of the trade winds yet we have not

experienced much regularity in them. The NE. trade wind has blown about 24 hours only The

winds to day are EbS 1/2 E, EbS, E, EbN, Eb.S, NW, NNE, & ENE."[39] Both Almy and Carter

were hoping for the trade winds from the east and northeast, but they had been unable to find

them despite sailing in the most likely waters. Such variations (and frustrations) were as much a

part of the voyage experience as were the days that lived up to expectations.[40]

If winds did not sharply define where ships could and could not sail, they did have other

effects. The intensities of the colors in Figures 2.7-2.10 reflect the overall speed of the vessels.[41]

As one would expect, ships sailing with the trade winds typically moved faster than those sailing

against them. In addition, the parts of the ocean where vessels commonly found the trade winds

tended to be among the fastest parts of the ocean as a whole. In order to give some sense of the

overall speed of Atlantic shipping, Figure 2.11 depicts the mean daily distance ships achieved as

they traveled through different parts of the ocean (as represented by a one-square-degree

latitude/longitude grid). On the high seas, vessels sailing with the predominant winds sometimes

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[38] NB: sailors typically described winds by the direction from which they came. Hence a wind inclining to the westward was a wind *blowing from* the west toward the east. A westward wind was a headwind for a vessel sailing to the west.

[39] Benjamin B. Carter, Logbook of the ship *Ann & Hope* (1798-1799), Benjamin Page master, Rhode Island Historical Society Library, Providence, RI: microfilm VB260. A5 1976, reel 1: 64-116, July 29, 1798.

[40] For a description of variations in the trade winds, see Steele, *English Atlantic*, 8, 45-47.

[41] NB: When measuring geometrical features on a map that represents a large area of the earth's surface, it is essential to use the correct projection. The Mercator Projection preserves angles but is apt to distort areas and distances (hence the stretched appearance of features near the poles). In order to accurately compare distances, it is better to calculate them taking into account the geometry of the earth than to measure distances on a flat map. Although the earth is not quite spherical, I have opted to calculate daily distances on a sphere rather than a geoid, because the imprecision of historical latitudes and longitudes would likely negate the precision advantages of complex geodesic calculations. I have instead used the spherical law of cosines configured to calculate distances between points on a sphere.

Figure 2.11: Mean Distance Sailed per Day, 1769-1800

Mean Daily Distance (nautical miles)

8.95 - 84.98
84.98 - 107.80
107.80 - 126.77
126.77 - 150.24
150.24 - 467.25

Sources: Author's Database, CLIWOC database, ESRI Basemap

70
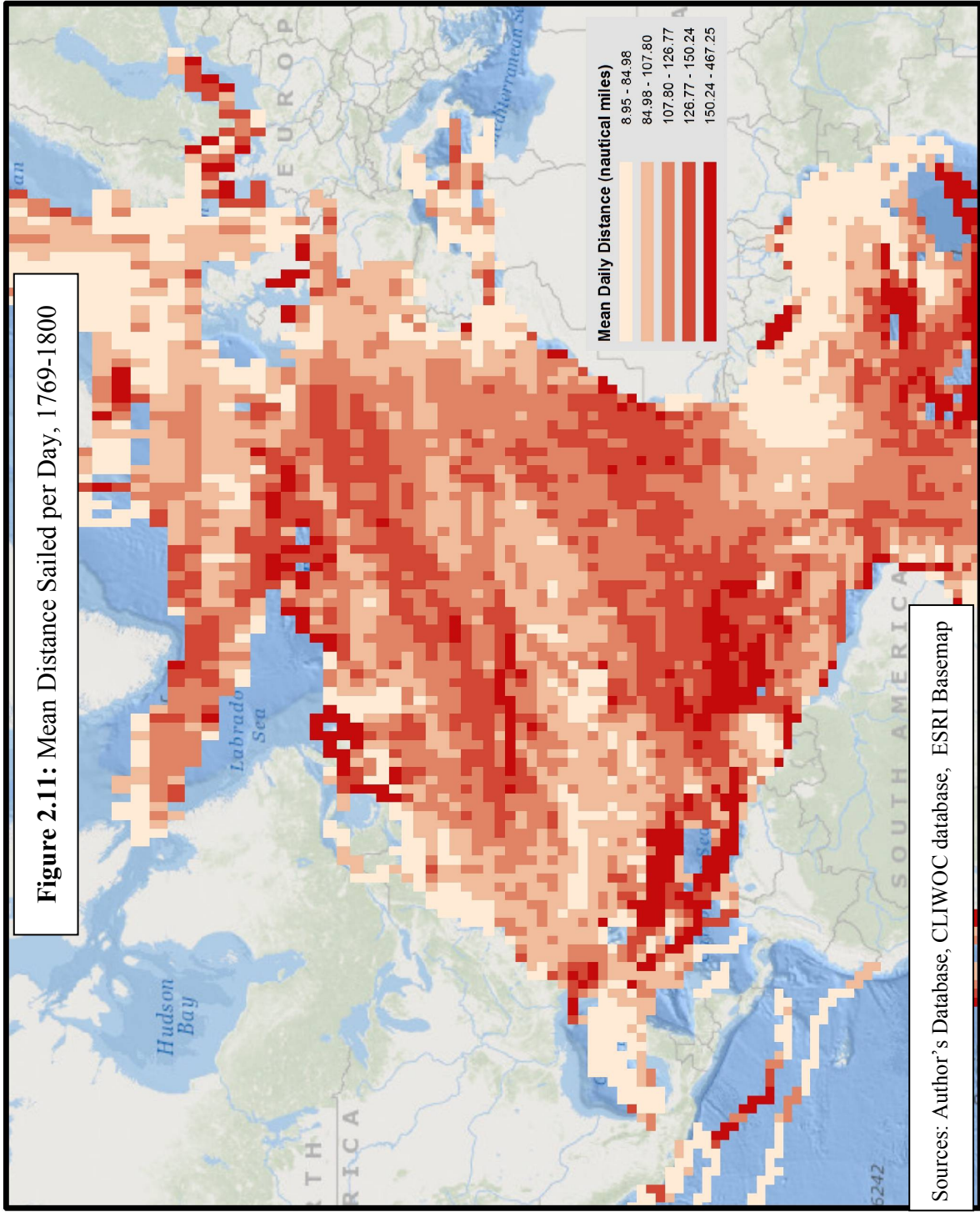
mingled with vessels sailing against them, bringing down the mean speed, but nevertheless the areas of the westerlies and trade winds stand out due to the high speeds they fostered. Mean daily speeds tended to be lower in the center of the North Atlantic, near the wind-poor Sargasso Sea. Coastal speeds were inconsistent. Some coastal speeds were slow, because long-haul vessels needed to navigate more carefully as they neared port. For instance, as the Beaumont approached Hispaniola, Isaac Gorham decided to wait an extra day before entering the harbor. He explained, "@6Pm all most up with the high lands but the breeze faled So fast that I thought it two dangres to Run in and So Concled [concluded] to Stand of & on all night."[42] On the other hand, departing ships seizing on favorable winds might have leapt from their ports very quickly. One notably slow area of travel was the African Slave Coast, where ships often lingered for weeks or months while trading. The notorious Middle Passage from Africa to the Americas could also be very slow, in part because it fell between the circulation patterns of the North and South Atlantic. The speeds of these voyages had life-or-death consequences for slaves, as a slow passage typically translated into a deadly passage. How a slave ship's crew maneuvered the complicated winds in the region between the African slave-trading coast and the Americas could increase or slightly alleviate the horrors of the passage (see Chapter 4). Wind could not overcome other motivations to sail certain courses, but it could shape the experiences of sailing along those paths.

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For 18th-century seafarers, the behavior of the winds was just one set of many natural phenomena that impacted their voyages. Landlubbers would now group most of these into the single category of weather, but early-modern logbook keepers typically treated the winds,

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[42] Isaac Gorham, Logbook of the ship *Beaumont* (1785), Isaac Gorham master, Rhode Island Historical Society Library, Providence, RI: MSS # 9001-G, box 4, April 16, 1785.

weather, and sea as separate entities. For example, on October 4, 1798, Samuel Curson noted,

"Weather Continues Pleasant but the wind not so good as we wish."[43] Weather, winds, and sea

conditions were often related (squalls of wind and rain made a frequent pair, as did fresh breezes

and pleasant weather or a head wind and a head sea), but they were not equivalent, nor was wind

a component of weather. Winds could be classified largely by direction and potency: fresh gales

from the Northeast, moderate breezes, light airs all around the compass. Weather used a different

set of descriptors: clear or pleasant weather to heavy weather, clouds, rain, snow, hail, fog, haze,

or thunder and lightning. Weather included only the precipitation and appearance of the sky, not

the wind within it. The sea was also its own category, perhaps heavy or calm or exhibiting a

directional swell.[44] The distinction between weather, sea, and winds had practical benefit in that

it enabled precise discussions about the natural conditions of a vessel's immediate world. Such

clarity was particularly helpful when the wind, water, and atmosphere were in disagreement. For

instance, just three days after complaining about the inconsistent trade winds, Benjamin Carter

remarked: "Heavy rain, filld all our empty water Casks. What Geographers Say concerning the

Climate in the Torrid Zone we find to be true, that it rains & clears up many times a day in these

latitudes."[45] The winds did not live up to expectations, but the rain did, and that was a good thing

for sailors in need of fresh water.

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[43] Curson, Logbook of the *Eliza*, October 4, 1798. Similarly, Isaac Gorham, keeper on the *Enterprise*, saw the weather as pleasant even though the winds were against him. He observed on October 16, 1787, "this 24 howers has been attend [sic] with Light breezes and pleasent weather but the wind Still Continues to the Southword and Eastword."

[44] For instance, successive days of Reuben Hussey's log of the *Friendship* began with descriptor pairs of: almost calm with rainy weather (wind and sky descriptors); a large swell and calm (sea and wind descriptors); smooth sea and cloudy weather (sea and sky descriptors); and fine weather and a bad sea (sea and sky descriptors). Pairs like these were common across many logbooks, with the sea being mentioned less often than the wind and weather. Reuben Hussey, Logbook of the *Friendship* (1770), Nantucket Historical Association Library, Nantucket, MA: LOG 85, April 23-26, 1770.

[45] Carter, Logbook of the *Ann & Hope*, August 1, 1798.

In a broader sense, recognizing that mariners counted wind and weather independently is one way to help understand how they thought about their environment. Jan Golinski has found that weather diary-keeping, which was popular during the late 17th and early 18th centuries, helped diarists observe the regularities in the world around them. Rather than focusing on unusual events or "meteors" like many of their contemporaries did, people who kept weather journals were especially conscious of the everyday, and in turn the *in*frequency of strange phenomena. Golinski argues that this way of understanding the weather was consistent with Enlightenment ideas regarding the rationality and orderliness of the universe. Whether recording daily conditions made logbook keepers more rational or less prone to superstition than sailors who did not keep logs is difficult to say, but nevertheless the way that these chroniclers recorded the weather reflected a practical, segmented understanding of their environment. The fact that keepers wrote of the winds and weather separately, and even maintained columnar observations devoted to the wind alone, suggests a unique perspective on the forces they encountered, a perspective they may not have shared with landsmen who had no need to consider the propulsion and maintenance of sailing vessels.[46]

On at least one occasion, a seafarer's attention to the winds and weather even allowed him to track a hurricane. After he ended his sea journal on August 3, 1785, Francis Boardman continued to fill the margins around the entry with notes on his ensuing month in port. He observed a very strong storm that struck Point Peter, Guadeloupe, on the night of August 24th and the morning of the 25th. The storm knocked down houses and endangered vessels in port, killing many of the men aboard. Boardman was able to sail away a few days later and arrived in

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[46] Jan Golinski, "Time, Talk, and Weather in Eighteenth-Century Britain," in *Weather, Climate, Culture*, ed. Sarah Strauss and Benjamin S. Orlove (Oxford: Berg, 2003), 17-38; Jan Golinski, *British Weather and the Climate of the Enlightenment*, (Chicago: University of Chicago Press, 2007).

Eustatius on September 3rd only to find that this island's vessels had also been damaged by the storm: "but 1 Sail Returnd out of 20 that went out."[47] Using colonial newspapers to track the same hurricane, Matthew Mulcahy has found that it moved through the Antilles and Jamaica from August 24-28.[48]

These dates match Boardman's dates well, but Eustatius was not the end of Boardman's weather tracking. He picked up with his sea journal again as he began a voyage toward Salem, and along the way spoke with the captain of a brigantine bound to Providence. The captain shared that on September 6th in the latitude of 22°30' N and longitude of 60°24' W, he had met with Captain John Felt, who was sailing south from Salem. Felt had reported losing his deck load eight days earlier (August 29th) to a gale from the northwestward and westward. Colonists often described hurricanes as coming from the north and west, and the close timing suggests that Felt had run across the same storm as it continued out to sea (perhaps somewhere east and south of Bermuda).[49] Francis Boardman did not say what he made of the information that came to him through the waterborne grapevine, but he did consider it worth the effort to write down the smallest details of the other vessel's encounter with Felt, including the coordinates where Felt and the other vessel met. (Boardman did not even bother to record the name of the captain he spoke with directly.) [50]

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[47] Francis Boardman, Logbook of the brigantine *Hind* (1784-1786), Francis Boardman master, Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1774A, August 3, 1785.

48 Matthew Mulcahy, *Hurricanes and Society in the British Greater Caribbean, 1624-1783*, (Baltimore: Johns Hopkins University Press, 2006), 113.

[49] Mulcahy, *Hurricanes*, 43.

[50] Boardman, Logbook of the *Hind*, September 13, 1785.

This story might seem like nothing more than a round-about way of saying that captains discussed the weather at sea. It is quite possible that in Boardman's case that was all that happened. In some cases, though, weather expertise that accumulated in communities of seafarers helped explain marine phenomena as a whole. The structure and behavior of hurricanes was not well-known during the 18th century. Mulcahy attributes to Benjamin Franklin the conjecture that a hurricane could move in a different overall direction than the direction of the winds within a given part of the storm. Franklin did have extensive first-hand experience sailing across the Atlantic, but as Joyce Chaplin has emphasized, he also relied heavily on seafaring acquaintances for their observations of the Gulf Stream, lightning at sea, waterspouts, and similar phenomena. It was strings of weather notes like Boardman's that helped piece together larger theories about hurricanes and similar extreme weather.[51]

Boardman did not sail through the storm, itself, but extreme winds and weather encountered while at sea also made marks in the shapes of ships' courses (Figure 2.12). As the *Eliza* dodged about from one day to the next, Samuel Curson wrote in his logbook of a strong current, rough water, squalls, hazy weather, and unfair winds.[52] Similarly, the logbook keeper on the *Peggy* complained of excessive heavy squalls, a large sea, and flying clouds as his sloop sketched a path resembling that of a dancing bee.[53] John DeWolf's *Enterprise* was redirected again and again by weak contrary winds. Even though they were nonthreatening light breezes,

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[51] Mulcahy, *Hurricanes*, 43-44; Joyce Chaplin, *The First Scientific American: Benjamin Franklin and the Pursuit of Genius*, (Basic Books: New York, 2006), 147-153, 319-324.

[52] Curson, Logbook of the *Eliza*, September 17-21, 1798.

[53] Logbook of the sloop *Peggy* (1779), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1778S (B24), January 1-19, 1779.

Figure 2.12: Reactions to Extreme Winds, Seas, or Weather

Sources: Author's Database, ESRI Basemap
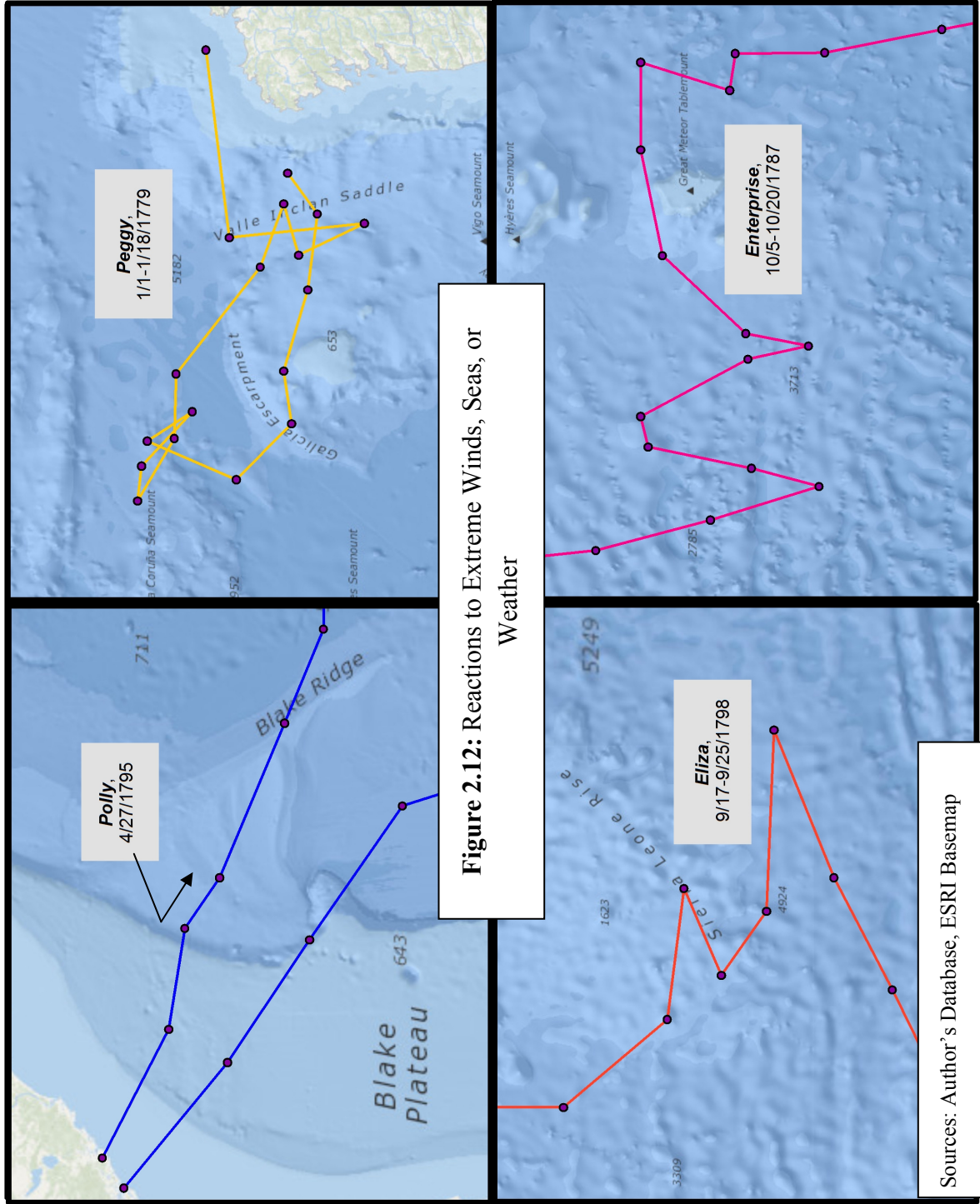
their adverse direction led the *Enterprise*'s logbook keeper to denounce them as horrible ("herebel").[54]

Of course, it is easy to cite several examples of ships moving strangely in bad conditions, but these stories do little to put weather conditions in perspective. Thomas Borden's *Polly* managed a very slight deviation in course despite encountering a "most survear tempess with thunder And Lightning Wind and Rain."[55] Eye-tests to pick out curlicue patterns can also give false positives; the *Peggy* was a prize very recently captured in a privateering voyage, and a small prize crew might have found it difficult to handle an unfamiliar vessel. The entire voyage of this vessel was short and erratic, so weather conditions may be only partly to blame. Although it is difficult to determine precisely how much influence weather conditions had, one approach seems suggestive.

One could hypothesize that after a ship was on its way most course adjustments would have been gradual. That is to say, excluding the first few days and last few days of a voyage, when a ship may have been maneuvering around obstacles before heading into port, a ship on its ideal course with ideal conditions would have been unlikely to deviate dramatically from the course it had taken the day before.[56] In my database, 2516 days could be analyzed for course change and were at least two days from the beginning or end of a voyage. For these entries this initial hypothesis seems to hold true: 1463 days showed course alterations under 22.5 degrees (either clockwise or counterclockwise). A difference of 22.5 degrees is equivalent to the

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[54] Gorham, *Enterprise*, October 7-18, 1787.

[55] Logbook of the schooner *Polly* (1795), Thomas Borden master, Rhode Island Historical Society Library, Providence, RI:MSS # 828, box 8, folder 6, April 27, 1795.

[56] Not all logbook keepers consistently recorded courses-made-good, so I applied the spherical law of cosines in order to calculate course changes. This required latitude/longitude locations for three consecutive points.

difference between points on a 16-point compass, for instance between a course N and a course NNE. Well over a third of the entries, 935, demonstrated course alterations below 11.25 degrees (the even smaller difference between points on a 32-point compass or between N and N by E). In contrast, some days saw more dramatic course changes that approached 180 degrees, or complete reverse. The average course change across the full set of measurable days was 33.86 degrees.[57]

Given that course alterations were generally low, one could further hypothesize that different weather conditions would have different effects on a ship's apparent course. Perhaps a storm would drive a ship in the wrong direction while pleasant weather would allow the helmsman to maintain his course more exactly. Conveniently, logbook keepers used a reasonably standardized vocabulary of common descriptors when writing about wind and weather conditions. The most common descriptors fall into a set of 18 overall conditions (Table 2.13). Each of these conditions might have been used with a modifier to indicate intensity (fresh breezes vs. light breezes, for instance, or heavy rain vs. drizzle), but this basic set roughly encompasses the field of prominent wind, weather, and sea conditions vessels encountered. For comparison to non-weather events, the table also includes a column that represents changes in course when the logbook-keeper's ship saw or interacted with one or more other vessels.

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[57] Some readers may point out that I have previously argued against using statistics to analyze these data. While I have warned that the distributions of ships on the ocean may not be appropriate for statistical analysis because of limitations and biases regarding which logs have been included in the database, it is reasonable to apply statistical tests in this different case. In this case, the goal of the tests is to determine how vessels reacted to weather conditions when they experienced them, not the overall number of times the weather events occurred or where they occurred in the ocean. In other words, it is reasonable to use these tests to reflect broader trends as long as ships sailing in different waters reacted similarly to similar events (lightning, snow, rain, etc.) when those events occurred. This is different from suggesting, for example, that ships experienced snowy days a certain percentage of the time, because that would depend on where and when the ships were sailing.

Table 2.13: Course Changes from Day to Day

	Mean Change of Course (°)	Two-tailed t-test p-value	F-test p-value
All eligible days	33.86	NA	NA
Breeze	30.02	0.005221	1.822E-04
Gale	36.79	0.09093	0.07541
Clear weather	37.08	0.1667	0.04443
Calm or inclining to calm	40.92	0.01479	0.01054
Fair weather	26.29	3.281E-04	9.545E-05
Lightning	22.35	5.287E-04	1.481E-05
Squall	32.92	0.5692	0.1267
Pleasant weather	28.47	0.002023	0.009356
Light airs	40.21	0.07163	0.07141
Fine weather	48.52	0.01012	1.219E-06
Snow	59.35	0.001661	0.1308
Hail	54.04	0.06290	0.006233
Rain	35.38	0.3945	0.9566
Fog	48.81	6.142E-04	1.978E-04
Haze	29.84	0.1317	0.003052
Clouds	34.89	0.5568	0.7492
Thick weather	44.17	0.002634	0.05745
High seas	36.94	0.2126	0.7000
Saw or interacted with another vessel	45.21	1.836E-08	2.857E-09

Source: 2516 eligible records in author's database. See appendix for more details

Table 2.13 offers the mean course changes on all days exhibiting each weather condition. Changes in course above the mean suggest more dramatic turns, while those below the mean suggest less dramatic turns. As one might expect, snow, hail, and fog top the list for dramatic course changes. Fair weather, pleasant weather, clear weather, and breezes are also understandably associated with more consistent courses. Lightning, on the other hand, corresponded to shockingly small course changes, while fine weather surprisingly had the opposite correlation. These unexpected results are puzzling, but they could have been the results of chance. The entire collection of course change angles shows some variation, so there is always a chance that even a randomly pulled sample might also have an unusually high or low mean.

The student's t-test is a statistical tool designed to determine how likely it is that a given difference in means would occur by chance. Table 2.13 includes probabilities derived from t-tests comparing course changes for days with each weather condition to the course changes for the overall course-change collection of 2516 eligible days. A high probability (near one) means that the same difference between the sets' means would frequently occur by chance in a random sample; a low value (near 0) means that the same difference in means would occur very rarely by chance. Probabilities lower than the standard cutoff value of 0.05 (α <0.05) are deemed to be statistical significant, because the difference in means would occur only 5 percent of the time by chance. In other words, one can be 95 percent confident that the difference in the means is a real difference in the events rather than a chance occurrence. Probabilities above 0.05 do not mean that the difference in means between the groups necessarily occurred by chance but that the difference is more likely to have occurred by chance, so the relationship is less credible. The F-test measures differences in variance (a reflection of the spread of the data) rather than in means, and the probability value is read in the same way.[58]

These statistics suggest that many of the weather events corresponded to statistically significant differences in course-change behavior. Pleasant weather, fair weather, and breezes were friends of consistent sailing. Snow was decidedly not. Fog and thick weather also corresponded to increased course changes, but they raise an important point. These course-change calculations are based on logbooks' reported latitudes and longitudes. Weather events like fog may have changed vessels' courses in a direct way if, for instance, their captains became

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[58] These statistical tests were performed in Microsoft Excel using the two-tailed t-test function for unpaired samples without assuming equal variances. The set of course-change angles for each weather condition was compared to the set of course-change angles for all days. In the future I hope to apply more advanced statistics to investigate cross-effects within the data (for instance, high seas do not appear to have been very problematic for sailing in general, but did the effects differ based on what else occurred that day – perhaps rain vs. breezes?).

wary of running aground; however, they may also have changed where navigators thought they were by, for instance, obscuring the sun for the noontime observations that enabled latitude calculations.[59] The distinction may have been immaterial in some cases, but it is still important to recognize that the statistics in Table 2.13 reflect the conditions in which the original logbooks were produced.

These statistical tests confirm some hypotheses about the influences of pleasant weather and fog, but they also raise new questions. Lightning's relationship to a lower mean change in course than the overall set shockingly appears to be statistically significant. Fine weather's relationship to large course changes also bears up as significant. An explanation of these relationships is elusive. Perhaps lightning-bearing storms were relatively brief or involved relatively weak winds and seas. Perhaps fine weather and clear, pleasant, and fair weather were not actually similar nautical conditions, even though their descriptors sound very alike to the modern landlubber's ear. One could imagine, for instance, that fine weather specifically described the resolution of a storm and therefore often appeared on days with strange storm-induced courses. On the other hand, fine weather may have been correlated with days with calm winds, which were likewise tied to more extreme course changes than average. Perhaps the influences of lightning and fine weather were confounded by the influences of non-weather events. In any case, these unexpected results suggest avenues for further study into the relationships between maritime weather and ships' behavior.

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[59] The *Henrietta* demonstrated the first case shortly after a member of its convoy ran aground on March 15, 1797: "Stud to sea for aboute 2 hours then Were [wore] & Stud in until we heard the surf ashore, but could not see the Land for the fogg." Logbook of the ship *Henrietta* (1796-1797), G. W. Blunt White Library at Mystic Seaport, Vol 44 of the Scoresby Family Papers, Coll. 55. The *Polly* demonstrated a combination of the cases: "Not Having and Obs for this 2 Day Past we Cannt Depend on our Reckoning there fore we think it imprudent for To Run Down for turks Island till we Have an Obs." The next day, the logbook keeper of the *Polly* discovered the extent of the error: "We found by out Obs that w were are To the N.ward agood Deale Sopose To be a Strong Current Setting to the N.ward." Borden, Logbook of the *Polly*, May 9-10, 1795.

While local weather can explain the jogs in individual tracks, long-term weather variations had larger-scale impacts. Most historians would agree that Atlantic traffic responded to the seasons. Spending long stretches in low latitudes during warm months exposed crews to diseases and the vessels to wood-eating worms. Wintering in New England often locked vessels into frozen harbors, so some ship-owners tried to keep their wooden investments active farther south. Agricultural patterns also encouraged traders to aim for specific target dates so that they could acquire and sell cargo at the best rates. [60] Ian Steele's *English Atlantic* covers these seasonal variations very thoroughly with twenty pages of tables of ships' entries and exits from British and British colonial ports. The general trend was for ships to leave southern American colonies and the West Indies colonies for Great Britain in the spring and summer. Ships traveling the other direction tended to arrive in the colonies from autumn through early spring. Nevertheless, this pattern was not restrictive; nearly every month saw at least a few ship arrivals and exits in major ports. Boston's pattern was less pronounced, indicating an avoidance of winter months but little preference otherwise.[61]

By way of confirming the seasonality of Atlantic shipping, I have used a degree-by-degree grid in Figure 2.14 to represent the most common months of travel within the combined database (my database and CLIWOC).[62] As expected, vessels more often sailed in higher latitudes during warmer months and in lower latitudes during cooler months. Correlating the likely directions of these voyages with Figure 2.6 confirms Steele's findings that summer months

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[60] Steele, *English Atlantic*, 41-44.

[61] Steele, *English Atlantic*, 283-303, Tables 1.1-5.2.

[62] For each degree-by-degree square, the mode of the months of intersecting voyages is represented. Note of course that this representation necessarily reflects any biases within the datasets, so the over- or under-representation of different types of voyages would influence the mode.

Figure 2.14: Most Common Months of Log Entries, 1769-1800 (by square degrees)

Sources: Author's Database, CLIWOC database, ESRI Basemap
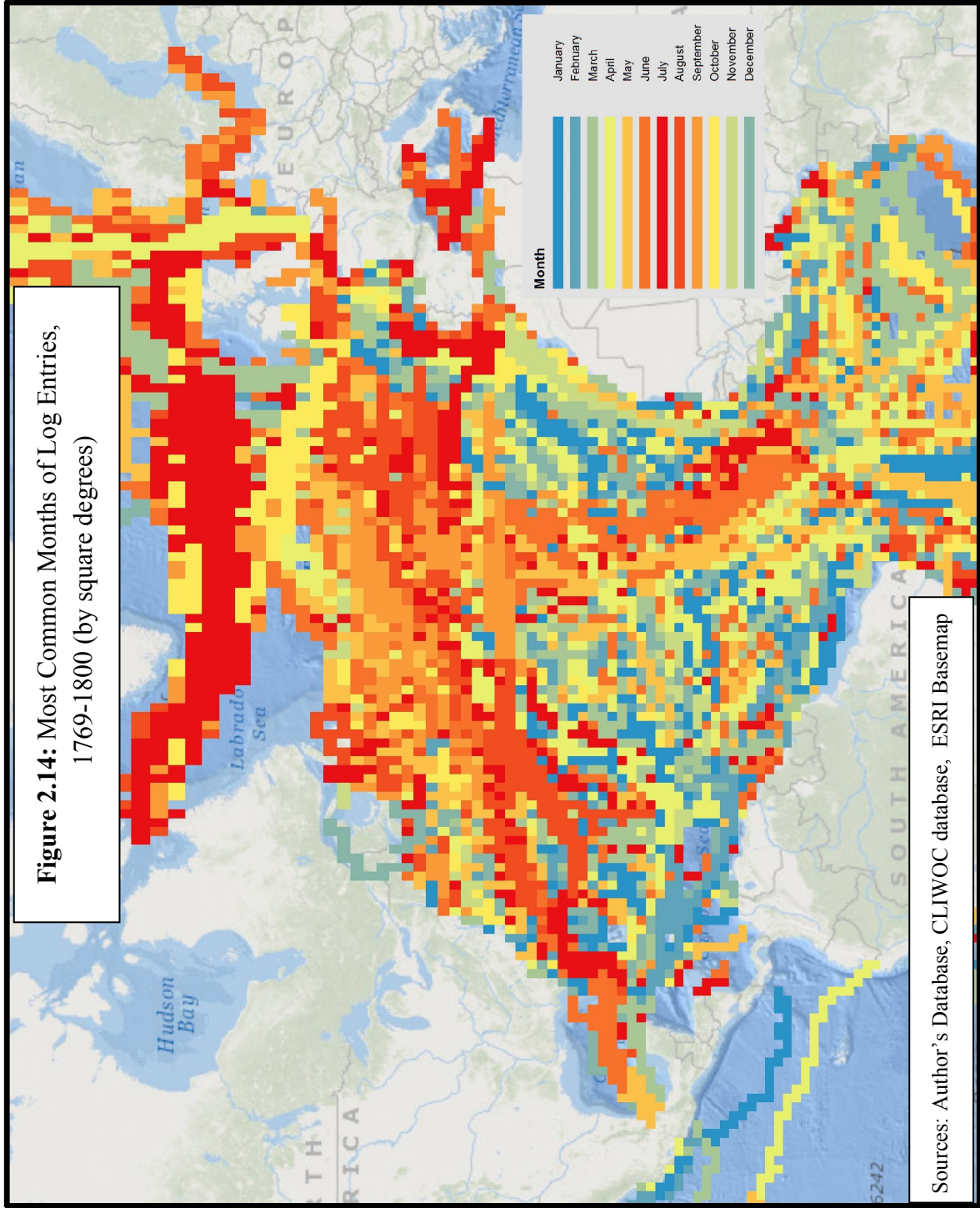
were the time for eastward Atlantic crossings and winter months for westward crossings. The most notable exception to this pattern is the large north-south stripe in the middle of the ocean where voyages most commonly appeared during warmer months. This stripe reflects a collection of voyages sailing northward from South America, having left the mouth of the Rio de la Plata in April. These voyages followed similar seasonal logic to the other voyages, but instead of mitigating a winter by simply heading toward the equator, they exchanged winter for summer outright. They came from the autumn of the southern hemisphere, so they exchanged a southern-hemisphere winter for a northern-hemisphere summer. This trans-hemispheric seasonal swap put these northward voyages out of context with the traffic of the north Atlantic that emphasized eastward voyages from the Caribbean and North America to Europe during the same months. As a result, those sailing northward from the southern hemisphere might not have seen many ships crossing the Atlantic on a westward course. They also would have experienced the weather of the trade winds region differently (likely encountering it slightly farther north) than sailors passing through that region during the winter months of the northern hemisphere.

As with Steele's records, my database and the CLIWOC database together show ships going both east and west during all months. If these voyages are a representative sample, no major stretches of water in the central gyre of the North Atlantic would have been empty during local off-months, but they would have been less populous. On the other hand, some voyages far to the north, like the sealing and whaling voyages from Scotland to the Arctic Sea ice, appear to have been limited to summer months.

Together, this chapter's collection of maps demonstrates that a few, limited routes cannot fully encompass the paths of ships on the 18th-century Atlantic Ocean. Contrary to the expectations historians have derived from contemporary maps and publications, routes were not

strictly bounded, nor were mariners limited to following the predominant currents and winds. The ocean was full of tracks. Courses exhibited some grouping tendencies, but they easily flowed into each other.

If it is appropriate to call them routes at all, shipping routes were so broad that they cannot be represented linearly. Distinguishing routes from one another is therefore less important than asking questions about what it meant to travel within a given region of the ocean, how the experiences differed by region, and what the tangible or intangible advantages and disadvantages were. This chapter has started that process in general terms with a static view of the last thirty years of the 18th century. The following chapters will delve deeper into spatially-specific experiences as well as sailing experiences that changed over time in response to political disturbances in the Atlantic World.

Chapter 3: "Continual Torment"

The American Revolution at Sea

The human geography of the eighteenth-century Atlantic Ocean was anything but static. Seasonal weather patterns and agricultural production kept ships moving in recognizable cyclical traffic, but the place of the sea was also replete with historical change. The Atlantic Ocean played host to major disjunctions and developments from year to year in the lives of individuals and nations. For William Almy, already known to the reader for his navigational judgment, and for Philip Thrash, captain of the privateer *Success*, the American Revolutionary War exemplified all of the above.

Almy's merchant career paralleled the birth of the United States as he, like those fellow British colonists who followed a revolutionary path, was transformed into an American citizen. War conditioned his choices of where and how to sail. Almy gained from new commercial opportunities and wartime scarcity, but he also had to contend with new human threats that enhanced the natural dangers of the sea. Thrash's brief privateer log illustrates the other side of the picture. Naval vessels and the hundreds of privateers like Thrash's were the predators the merchant prey sought to avoid. Formerly merchants themselves, privateers' commercial incentives to capture vessels for profit aligned with their countries' goals of discouraging enemy shipping. Whether merchants or privateers, seafarers were in a unique position to influence personal and national fortunes during wartime. Indeed, wartime conditions uniquely required them to do so.

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A self-identified Rhode Islander, William Almy began his recorded career with a tour of the British Atlantic in England. On May 20, 1776, two days after buying a new logbook in a

London shop, he left for Barbados in the snow *Peggy*.[1] The *Peggy* arrived in Barbados on July 3, 1776 and set off three weeks later toward Quebec, where it remained for three months before completing the round-trip to London at the end of the year. Although the snow was away from London for seven months, from May 20 to December 22, its London-based owners Lane & Co. could have read about the *Peggy* in *Lloyd's List*, a long-running London-based periodical that published shipping news twice weekly.[2] The *Peggy* and its commander, Captain Cornell, made four appearances over the year, including their safe arrivals in both Barbados and Quebec. The news made its way to London at least six weeks after the *Peggy's* arrival in either port, but of course news could only travel as fast as the ships carrying it. In fact, despite a slow daily pace, the *Peggy* had nearly completed the second leg of its journey before Lloyd's reported that it had arrived in Barbados, the end of the first leg. Even though the information was outdated, the *Peggy's* owners would nevertheless have found it reassuring to see that their vessel had made at least part of its journey in safety, especially considering the growing rebellion in the American colonies.[3]

After returning to London, Almy left the crew of the *Peggy* and joined the *Calvert*, commanded by William Sewell. The *Calvert* sailed from London to St. Petersburg from May 17 to May 28, 1777. Like the *Peggy*, the *Calvert* also made an appearance in *Lloyd's List*. In addition, both vessels graced the pages of *Lloyd's Register,* an annual publication that followed

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[1] William Almy, Logbook of the *Calvert*, schooner/sloop *Chance,* sloop *Eclipse,* brig *Kitty,* snow *Peggy,* and *Three Friends*, Rhode Island Historical Society Library, Providence, RI: MSS # 9001-A, box 6. Rhi# 1953.5.9. The primary narrative of this paper is drawn from Almy's remarks, and the maps are similarly based on the latitude and longitude coordinates Almy recorded in every entry. On the first page of the book, Almy noted the purchase location, price, and date as well as identifying himself as "William Almy of Rhode Island."

[2] Paul Butel, *Histoire De l'Atlantique. English; the Atlantic* (New York: Routledge, 1999), 169.

[3] *Lloyd's List and Shipping Gazette* (London), May 24, 1776, August 20, 1776, November 8, 1776, and December 31, 1776. Accessed online through the Hathi Trust Digital Library.

ships through time rather than space. According to *Lloyd's Register*, the ship *Calvert* boasted over twice the tonnage of the snow *Peggy* and was equipped with a handful of three and four-pound guns. Other details, like ratings of the vessels and reports of recent repairs or upgrades (the *Calvert* had been sheathed with copper in 1776), made *Lloyd's Register* an especially useful resource for would-be buyers, insurers, or investors.[4]

The fact that their owners could track the *Peggy* and *Calvert* over the ocean and through time using London-based publications reflected the impressive reach of Lloyd's knowledge-gathering service in the British metropole, but that reach was acutely limited in the late 1770s. There was a war on. After his St. Petersburg voyage on the *Calvert*, the William Almy began to stray away from ports friendly to the British Empire, and his ships no longer appeared in *Lloyd's List* or *Lloyd's Register*. The onset of the American Revolution also meant that Almy's voyages to American ports escaped British customs records. As a result Almy fell into a gap in the historical record that stretched from the end of British colonial customs to the beginning of the United States Customs Service, from 1776-1789. Historians have been able to address the military and political developments of the war years in detail, but economic historians John McCusker and Russell Menard observed that this gap in evidence has limited studies of Atlantic economies during the same period. The revolutionary war was a period of economic transition, but the character of the transition has proven harder to access due to spotty or missing historical sources. Even though Almy's logbook did not include lading lists to describe his cargo, logbooks like his provide windows into the changing trade patterns during the war, filling the 1776-1789 gap on a vessel-by-vessel basis.[5]

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[4] *Lloyd's Register of British and Foreign Shipping*, (London), 1776 and 1778.

[5] John J. McCusker and Russell R. Menard, *The Economy of British America, 1607-1789, with Supplementary Bibliography* (Chapel Hill, N.C.: Published for the Omohundro Institute of Early American History and Culture by

Almy's transition away from British ports and beyond the reach of British customs and commercial publications was not an end to his sailing career but rather a redirection. Following his St. Petersburg voyage, the next full voyage Almy recorded was not until April 1778, when he sailed from Rochelle Roads, France, to Boston in an unnamed vessel. That Almy's voyage led from a French port to an American port held by Continental forces was unequivocal evidence that his loyalty lay with the revolutionaries. His choice mirrored a larger development in the Atlantic World; France had openly entered the Revolutionary War as an ally of the United States in February of 1778. Neutral France had already welcomed American vessels before entering the war, but its alliance with the young United States enhanced this relationship. Curtis Nettels has argued that the period from the middle of 1778 to 1782 constituted a high point in American foreign trade during the war, because allied ports remained open and the addition of several cobelligerents (first France, then Spain and the Netherlands) made it more difficult for the British navy to allocate ships to blockades of American ports.[6] By sailing from a French port to an American port in April 1778, rather than among British ports or between British and neutral ports, Almy contributed to and partook of the broad trend Nettels observed in American commerce.

Of course, sailing during the war was more than a trend; it was a personal, often harrowing experience. William Almy began to feel the consequences of his allegiance to the revolutionary cause immediately after he stopped sailing under the protective mantle of the

the University of North Carolina Press, 1991), 359-360; McCusker and Menard's frustration was reiterated by John Tyler, who traced a similar call for research on the war years to Samuel Eliot Morison. John W. Tyler, "Persistence and Change within the Boston Business Community, 1775-1790," in *Entrepreneurs: The Boston Business Community, 1700-1850*, ed. Conrad Edick Wright and Katheryn P. Viens (Boston: Massachusetts Historical Society, 1997), 97.

[6] Curtis P. Nettels, *The Emergence of a National Economy, 1775-1815*, vol. 2 of *The Economic History of the United States*, ed. Henry David et al. (New York: Holt, Rinehart and Winston, 1962), 14.

British Empire. Just one day after leaving Rochelle Roads, he worried, "at 8PM Lost Sight of Our Convoy which gives Us some Oneasiness." As was common during wartime, Almy's vessel had joined a convoy with other merchants for mutual protection in case they encountered an enemy naval vessel or privateer. After entering the war the French began improving convoys by grouping merchants with armed frigates in strategically-defined patterns, which decreased the losses to English predation dramatically.[7] Unfortunately for Almy, he lost sight of his convoy as night began to fall. Although he saw a sail ahead of him twice over the next two days, he did not mention recognizing either as a friend. Losing the convoy when they were only one day out from Rochelle Roads meant that the crew of Almy's vessel would face the entire voyage across the Atlantic without reliable assistance in case of an attack or any other emergency.

Despite his initial uneasiness Almy did not run into any trouble on this passage. He made the voyage to Boston without encountering an enemy, although he did see a handful of sails on the horizon and spoke with a friendly French ship bound in for Bordeaux.[8] Almy had opted for a nearly straight east-to-west route and covered the distance quickly despite sailing against the predominantly clockwise flow of winds and currents in the North Atlantic (Figure 3.1).[9] Six weeks after his arrival from France, Almy sailed from Boston to North Carolina in late June and July, 1778. Sailing along the American coast allowed him to travel in company with the American sloop *Independence* for one day and to help guide a lost French snow from Bordeaux on its way to Carolina.[10] These friendly meetings were not entirely reassuring, as Almy's

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[7] Butel, *Atlantic*, 207.

[8] Almy, Logbook, April 15, 1778.

[9] Ian K. Steele, *The English Atlantic, 1675-1740: an Exploration of Communication and Community* (New York: Oxford University Press, 1986), 8; Butel, *Atlantic,* xv.

[10] Almy, Logbook, June 28, 1778 and July 8, 1778.

Figure 3.1: William Almy's Voyages and Rates of Travel

Sources: Author's Database, ESRI Basemap
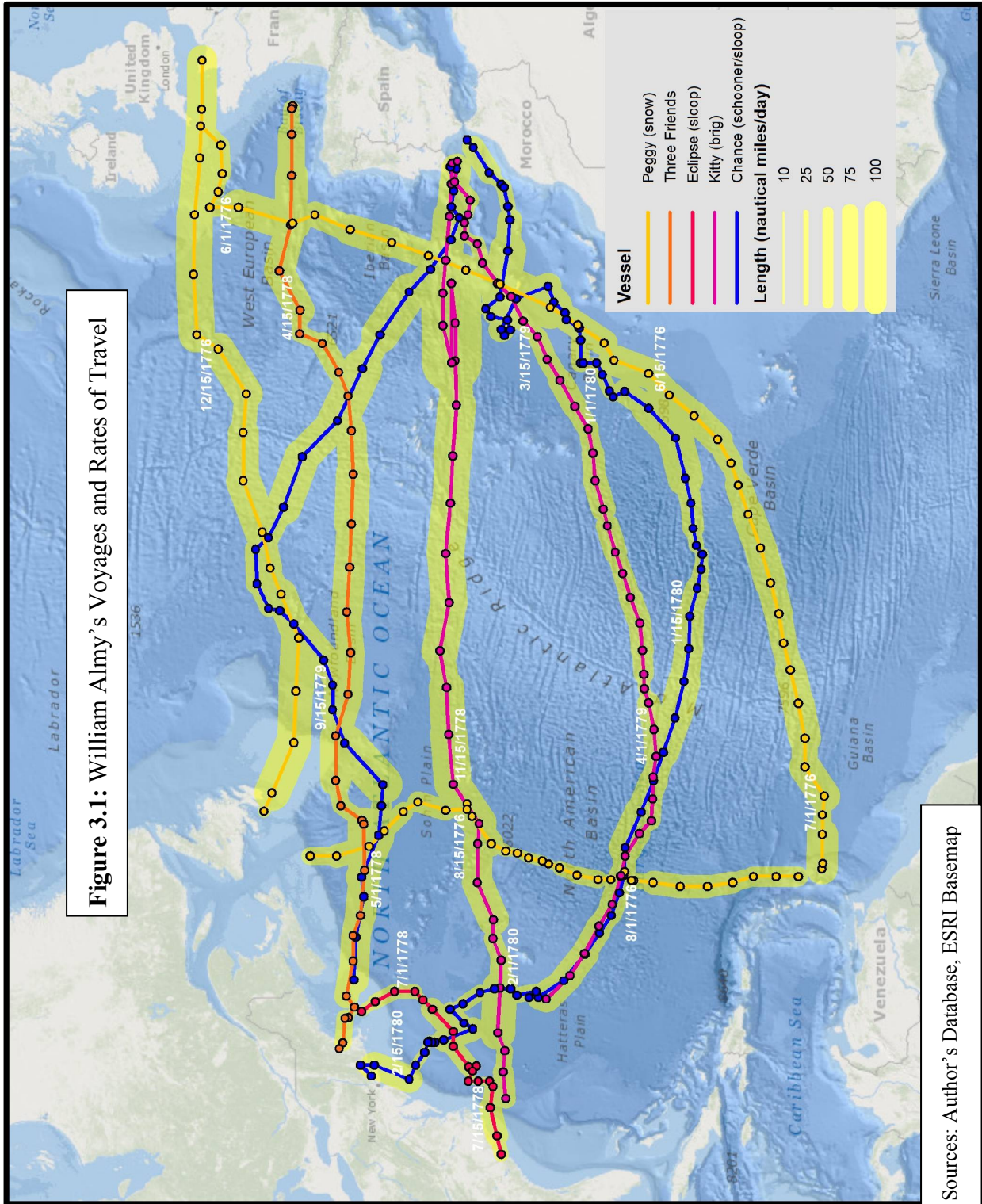
proximity to the American warzone kept him on his toes. On July 6, 1778, Almy "Saw a Sail Standing To the westward, which, I thought was An Enemy." What led him to suspect the vessel Almy did not say, but sighting enemies, or at least suspected enemies, was to become a prominent feature of his wartime voyages.

Concern about possible enemies might have weighed particularly heavily on Almy's mind during his voyage from Boston to North Carolina because he had become the master of his vessel, the sloop *Eclipse*. Almy's connection to the *Eclipse* lasted for just one, short voyage, but he retained his promotion when he took command of the brig *Kitty*, which he sailed from Cape Fear, North Carolina, to Cadiz, arriving in early December, 1779. Almy met only a few others vessels during the voyage, none of which actively chased him. He felt strained nevertheless. He wrote upon entering port, "I must Acknowledge I am Very, happy to think that I am Safe in, for the sake of the boisterousness of the weather and Continual Fear of Our Enemies which at Sea is Continual Torment So Ends day & Journal it being somthing Late at Night & I am somthing Fateged."[11]

Almy's "Continual Torment" grew from the possibility that any sail on the horizon might be an enemy. Wartime shipping demanded discretion about potential meetings that peacetime shipping did not. As he neared Cadiz on December 5, 1779, Almy saw a number of fishing boats and, able to identify their activity from afar, considered them nonthreatening enough to approach. He even acquired some fish from one of them. On the other hand, a sail Almy spotted later in the afternoon alarmed his crew very much.[12] Most sailing maneuvers produced recognizable changes in the sails or appearance of the unknown vessel, so captains could

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[11] Almy, Logbook of the *Kitty*, December 8, 1778.

[12] Almy, Logbook of the *Kitty*, December 5, 1779.

estimate threats based on the type of vessel they saw and its body language. Something in this vessel's behavior must have worried Almy's men even though they did not actually know whether it was an enemy or not. Indeed they would never know its identity, because the ship bore away. If it was an enemy naval vessel or privateer it was not a very confident one, but it could just as easily have been a fishing or merchant ship from any of the belligerent or neutral nations in Europe or the Americas.

The crew of the *Kitty* was probably better off not knowing. Investigating would have brought the *Kitty* so close to the unknown vessel as to risk capture if it did turn out to be an enemy. Even seeing a ship run up a friendly flag was no guarantee of safety; the Continental ship *Ranger* carried three bags of pennants and flags, mostly not Continental. All told, the *Ranger's* wardrobe included twenty-one French, Dutch, Union, English, Swedish, Merchantmen's, and St. Georges' colors in comparison to nine Continental and signal colors.[13] Flags were often deceptions, but sail configurations and momentum were impossible to fake. For an individual captain like Almy, the safest plan was to avoid every ship that took even a slightly threatening posture. In the aggregate, by classifying every unknown vessel as an enemy, eighteenth-century merchants' prudent paranoia effectively multiplied dispersed but viable enemy privateering and naval threats until they included ships that may not have been enemies at all. Only genuine enemies would take prizes, but "Continual Fear" of enemies could cause merchants from all belligerent nations to expend valuable resources and time to avoid them.

Figure 3.2 represents the nationalities of the vessels Almy encountered and the natures of their interactions. Aside from the French snow Almy joined every day on a long transatlantic crossing, most of the ships on the map passed through Almy's log without a recognizable

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[13] Logbook of the Continental sloop-of-war *Ranger* (1778-1780), Capt. Thomas Simpson master, United States National Archives, Washington, DC: RG 45, entry 608 (4), October 23, 1778.

Figure 3.2: William Almy's Encounters with other Ships
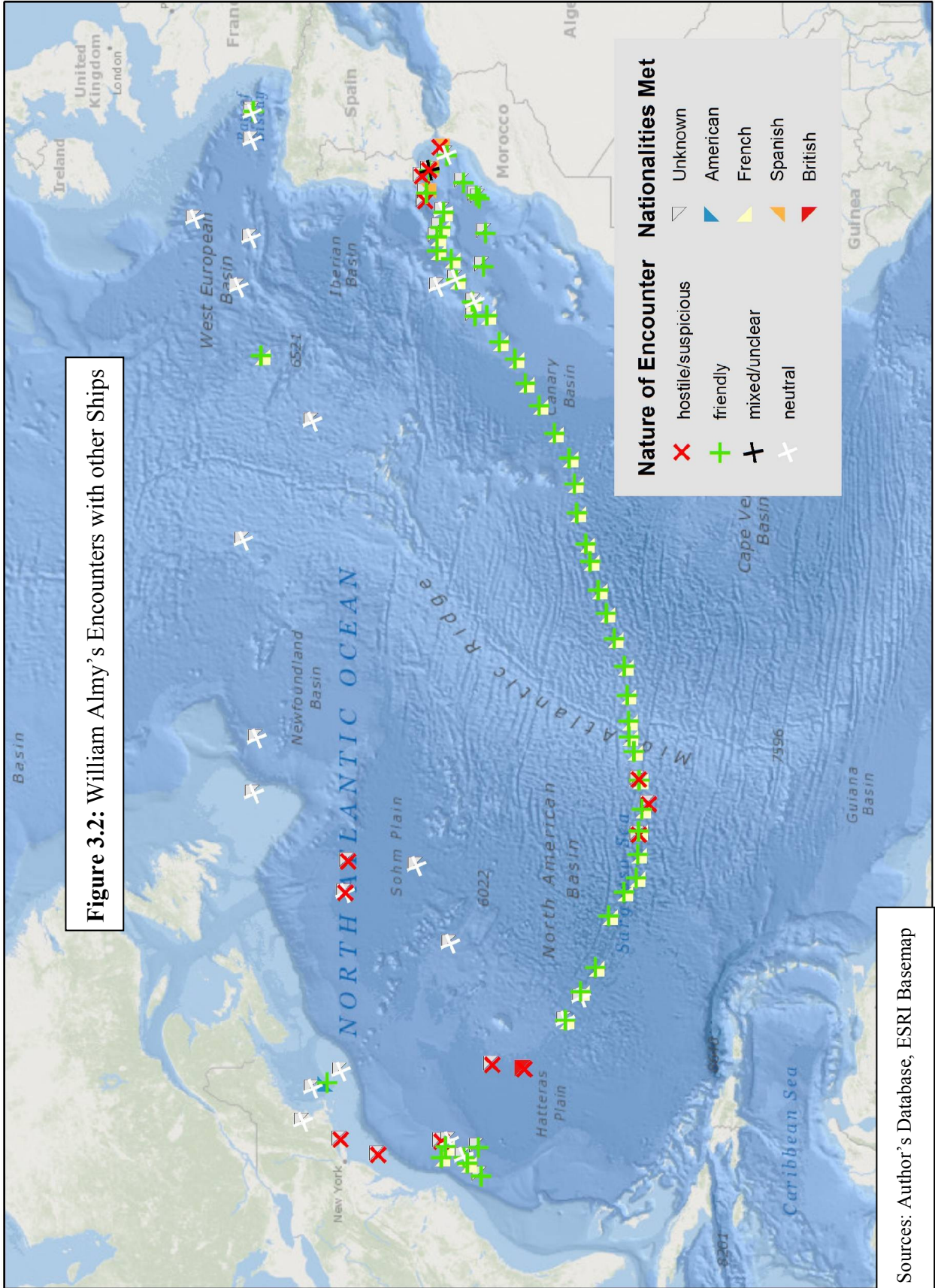
Sources: Author's Database, ESRI Basemap

nationality. If he gave any description of such vessels, Almy noted their rigging (schooner, brig, ship, snow, etc.) and their behavior. Even though he met only one group of ships he could identify as British, Almy saw many vessels of unknown nationality that began to chase him or, by their positions and directions of travel relative to his own, caused him enough concern that he avoided them and prepared for a possible fight. It may have been true that the hostile ships chasing Almy were always British, but some of them instead may have been American or allied ships that had mistaken him for a British merchant. For instance, Philip Brown of the American naval brig *Diligence* met what he presumed to be a Loyalist refugee transport in June 1779, exchanged two or three broadsides with it, and only then discovered that it was an ally.[14] No one was killed, but both ships wasted munitions, repair materials, and time they could have spent seeking real enemies. Thus the strategy of harassing enemy shipping was incredibly complicated in practice. Friendly ships spent valuable resources harassing each other, and even neutral vessels might appear to be enemies if they did something as innocuous as heading toward another vessel to ask for assistance.

Able to set his worries aside while on land, William Almy stayed in Cadiz through the winter before leaving in early March 1779 to return to Cape Fear. As he had when leaving Rochelle Roads, he took the precaution of joining a fleet of merchant ships accompanied by several frigates. Almost immediately after leaving Cadiz, Almy's convoy saw three vessels. The escort frigates took off after them but soon discovered that the presumed enemies were really friends. After waiting for the Commodore in command of the fleet to speak with one of the vessels, the convoy began moving again. Almy set all sail to keep up. As the convoy began to

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[14] Logbook of the brig *Diligence* (1779), Rhode Island Historical Society Library, Providence, RI: MSS# 828, box 3, folder 6, June 2, 1779.

disperse, some for the West Indies and others for America, Almy continued in company with a French snow. [15]

Ships traveled in company for protection against enemies during wartime but also for mutual assistance and camaraderie. For instance, Samuel Tucker of the Continental frigate *Boston* spent three days in company with Alexander Murray, another American, in June 1778. Tucker wrote in his log that he "went on board Captain Murray, with Mr. Reed, my first lieutenant. Captain Murray sent me some American papers to peruse, which I am obliged to him for."[16] The following day one of Murray's men was injured by a fall, and Tucker sent the *Boston's* doctor to assist. One-time favors like sharing newspapers and medical personnel sometimes stretched into regular social engagements. While traveling for a month with the *Ranger* and *Providence*, Tucker enjoyed several meals with the commanders of his companion vessels.[17]

In Almy's case, although he sailed together with the French snow for over a month, he did not mention boarding it to socialize. Perhaps the captains of the two vessels could have become close friends if they had shared the same language. Nevertheless, they did make a connection. At one point the French vessel ran afoul of the *Kitty* and damaged it. The *Kitty's* consort promptly apologized in a form that needed no translation: "To day the french Captain, gave us a Quarter of mutton, To make amends for the damages," Almy wrote. The Frenchman repeated the friendly gesture with a second gift of mutton a month later.[18]

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[15] Almy, Logbook of the *Kitty*, March 3-5, 1779.

[16] Samuel Tucker, Logbook of the frigate *Boston*, transcribed in J. H Sheppard, *The Life of Samuel Tucker, Commodore in the American Revolution* (Boston: Mudge, 1868), June 27-28, 1778.

[17] Tucker, Logbook of the *Boston*, August 26, 1778, August 31, 1778, September 6, 1778, September 7, 1778, September 22, 1778, September 30, 1778.

[18] Almy, Logbook of the *Kitty*, March 9, 1779 and April 3, 1779.

Having reconciled after their accident, the American brig and French snow passed north of the Madeira archipelago and crossed the ocean together in a long, swooping curve toward North Carolina. Their drop southward suggests that they were trying to catch the trade winds, but they did not have to descend as far south as they might have during wintertime. As a result the two vessels skirted the northern edge of the most popular path from Europe and Africa toward the Caribbean.[19] After a six-week passage with only one potential alarm, Almy moved out of this relatively barren stretch of high sea and into the corridor of dense north-south traffic along the American coast.

Unfortunately for Almy, privateers and naval vessels stalked densely-trafficked areas during wartime. He never completed his voyage to North Carolina. On April 13, 1779 Almy had the misfortune of encountering a British fleet roughly 700 nautical miles northeast of the Bahamas. In his own words: "Att [blank]AM Saw a fleet of ships which was from Jamaica bound To London And presently I had three Fregates in Chance [sic] of me and they presently Came with me which Obliged me To Strike To them and Carried me to Jamaica." The *Kitty* had been captured.

Running afoul of a convoy and its three escorts was bad luck for Almy, but ships could also be captured in one-on-one scenarios. One logbook-keeper, Nathaniel Cutting, described in detail the lengthy encounter leading to his ship's capture in 1782:

> ...At 15 minutes past 12 discover'd a Sail bearing N.W. 1 League dist __ haul'd up Miz. & lay ahull. [sic] Could distinguish her to be a Ship standing to the N.Ew[d]. At 2 A.M. lost sight of the Ship...[rigging adjustments].... At ½ past 5 saw a Ship / suppose the same seen in the Night / bearing ESE. A leag. dist. __ Ship Gives us Chace. At 10 perciev'd she gaind [sic] on us very fast. __ very light airs __ flawr catch us aback while the ship in Chace brings down a steady breeze.
>
> [next entry, but no new date given]

[19] Steele, *English Atlantic*, 45-47. See also chapter 2 in this dissertation.

Light Airs of Wind & Clear. Ship in Chace Gains very considerably on us. ___ appears to be a Frigate. At about ½ past 3 P.M. finding in vain longer to attempt getting clear shortend sail, & rounded to. At 55 min[ts]. past 3 ship gave us a shot which went far over us, on which though proper to strike our Colours; plainly percieving [sic] her Tier of Guns. She immediately sent her Boat on boar us, and proves His Brittanic Majesty's Frigate the Southampton, of 32 Carriage Guns & 4 Carronades, commanded by William Affleck Esq[r].[20]

The captures show a few key similarities. First, Cutting's *Elizabeth*, bound from Cape Ann to Havana, had been caught slightly northeast of Grand Turk. This spot was near where the *Kitty* was captured but arguably a more dangerous location because it was closer to the islands. Second, both captures began with chases in the morning hours. Almy spotted his antagonists sometime in the "AM," and they began chasing him "presently." Cutting saw a ship, responded stealthily by taking down all sails, lost sight of the ship overnight, and saw it again early the next morning, at which point the would-be captor started chasing. Early morning was a common time to spot new vessels or rediscover those lost overnight, and sometimes the nighttime shuffle put ships closer together or farther apart than they wanted to be. Third, both chases ended without bloodshed. Each captive ship was obviously outmatched, and it was in neither party's interest to risk life and limb for property that would doubtless be damaged in a battle, anyway. The carpenter on the *Elizabeth* had even "cut out Ports for Stern Chaces" (guns intended precisely to fend off pursuers) five days earlier, but Cutting did not mention his vessel firing at all during the ten-hour chase.[21] The *Southampton*'s shot simply indicated the ability to engage if needed, a sufficient threat of violence to make bloodshed unnecessary. Both captures ended with a ritualized striking of colors that marked the end of any effort to escape or resist.

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[20] Nathaniel Cutting, Logbook of the ship *Elizabeth* (1782), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1782 E2 (B2), March 4,1782.

[21] Cutting, Logbook of the *Elizabeth,* February 27, 1782.

Despite losing his vessel and cargo, Almy took the capture surprisingly well. Almy did not describe his experience after he struck his colors, nor did he mention the fate of his French companion, but he considered the personal consequences of his capture to be a delay rather than an end to his career.[22] In the same logbook entry where he described his capture he noted, "Now I think it Time To Lay this Journal by untill [sic] A fairer opportunity Or when I get another Vessel."[23]

Sure enough, by September of the same year he found himself back in Boston, ready to set sail in the schooner *Chance*. The same day that he put his local pilot off of the ship he suspected that he saw an enemy. Almy hauled his wind but, finding "her to be no Enemy," carried on toward Holland.[24] Five days later, in the early morning light of September 10, 1779, Almy encountered what he thought to be a fleet of large enemy ships. This time they played the part, chasing him into the wind for ten hours before giving up the chase.

Over the next few days the *Chance* did not meet any other ships, but it did meet threats of a different kind: high seas, strong winds, and dangerous weather (Figures 3.3-3.4). On September 16, the *Chance* "Shiped A great deal of water On deck," and on the following day "A man John hutton fell from the mainmast head Upon the Quarter deck, and Rebounded over board." The crew prepared to save him from the water but found that Hutton had been killed by the fall.[25] The crew's own situation was not much better, because the weather and dangerous seas continued to

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[22] For a description of the experience of a captured sailor during the Quasi War, see Richard C. Malley, "Daniel Caulkins's Voyage: An Incident of the Quasi-War," in *The Early Republic and the Sea: Essays on the Naval and Maritime History of the Early United States*, eds. William S. Dudley and Michael J. Crawford (Washington, D.C.: Brassey's, Inc, 2001), 101-114.

[23] Almy, Logbook of the *Kitty*, April 13, 1779.

[24] Almy, Logbook of the *Chance*, September 5, 1779.

[25] Almy, Logbook of the *Chance*, September 16-17, 1779.

Figure 3.3: Wind Strengths and William Almy's Rates of Travel

Sources: Author's Database, ESRI Basemap

Figure 3.4: William Almy's Weather Conditions

Sources: Author's Database, ESRI Basemap
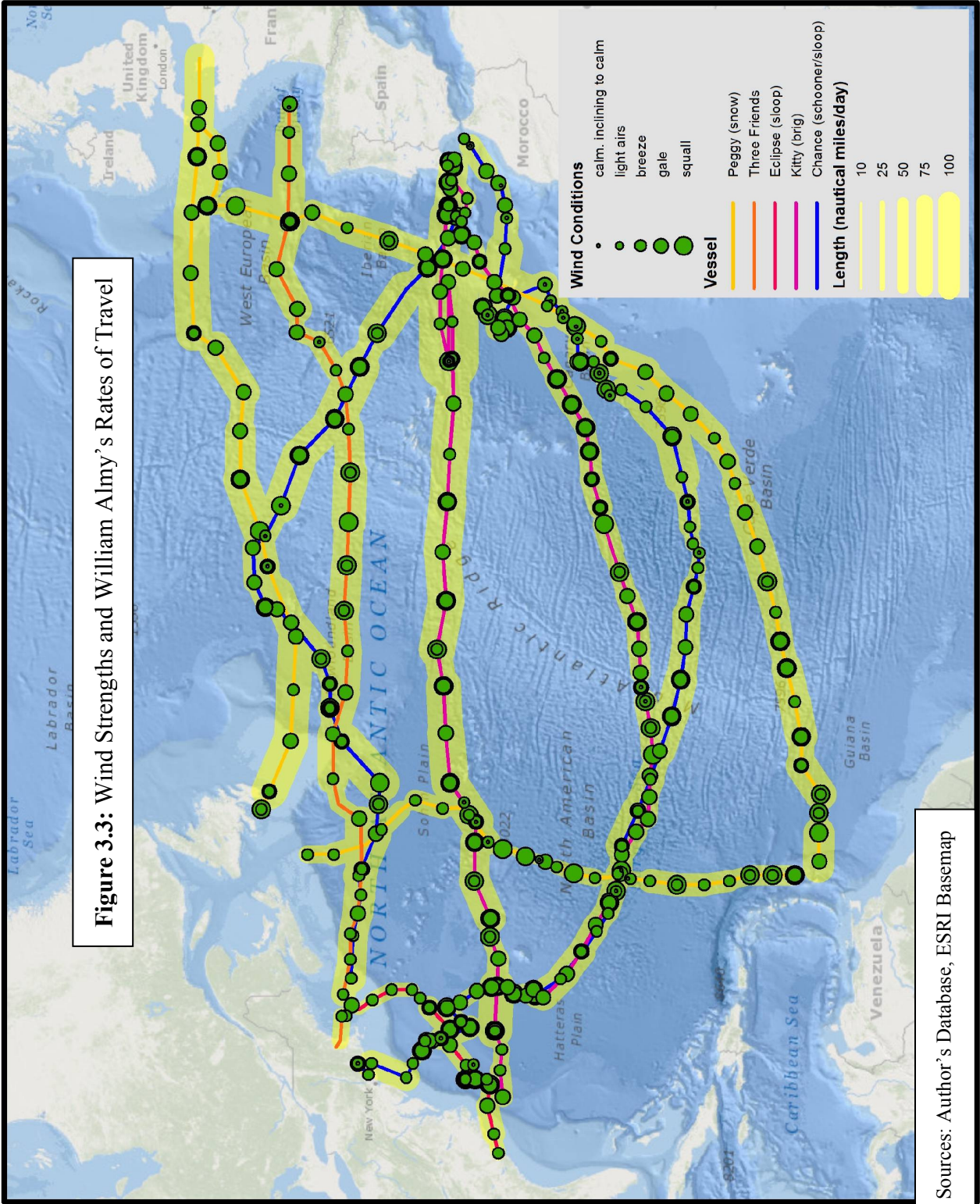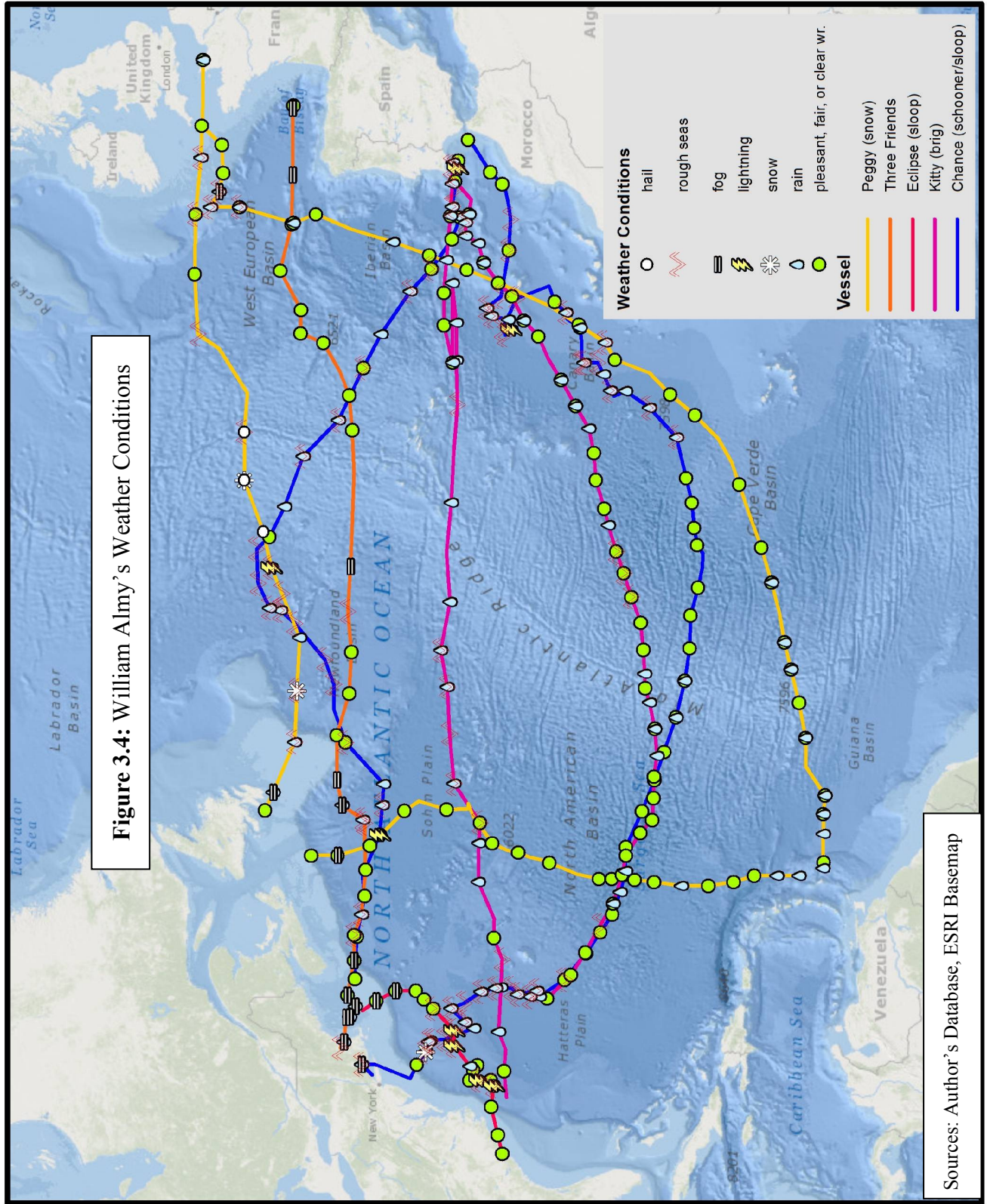
threaten. Scudding without any sails set, the crew of the *Chance* tried to ride out the storm. Almy described their situation on September 20:

> Blowing Strong gales of a wind as p[r] Logg. at 1 PM Shiped a great deal of water on deck, at ½ past One Shiped A large sea in the mainsail which came half mast high Over us, hove her down On her beam Ends, presently she Rited again got her before the wind. carried away Our boom of mainsail. washed One man Over board, but got him in again. Cut all away went to work cleaning Our deck. hove Every thing off deck water & all, at 2 ditto shipt Another sea which Over Set us masts heads in the water. she Rited again. Got the helm Up and Got her before it again still faused [?]. she made bad weather. cut away the main mast & all belonging To it. Riging & all went. fell[d] the Caban and Steerage half full of water. damaged most of Our bread papers and boates. Lost the caboose, & stove the boat. one man Received a Very bad Cut, in his face, which I fear will prove mortal, Still Scudding under bair poles[26]

The weather abated the next day, "which gave us great Joy from [Our] great deliverance," but the damage was done. With the food ruined, the boats damaged, the fresh water barrels stored on deck washed away, and the mainmast lost entirely, Almy decided to make an emergency landing. He "bore away for the Nighest port which was Cadiz knowing it was in Vain To proceed for [Holland] being Short of bread and water and the Vessel nothing better than Teasack."[27]

The men quickly began making repairs to the *Chance* in an effort to keep their "Teasack" afloat. They improvised a replacement for their lost mast by lashing together three oars to make a boom (a horizontal piece of wood that held part of the sail) and converted an existing boom into a jury mainmast.[28] The weather worsened again, but with continued repairs the schooner made steady progress on its voyage, which Almy now titled "From Sea Towards Cadiz" in his logbook headings. As it approached the Gulf of Cadiz, the *Chance* encountered a hostile ship and was

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[26] Almy, Logbook of the *Chance*, September 20, 1779. Periods added to improve readability; other spelling, capitalization, and punctuation maintained.

[27] Almy, Logbook of the *Chance*, September 21, 1779.

[28] Almy, Logbook of the *Chance*, September 23, 1779.

forced to backtrack to the northwest in order to avoid it. The *Chance* "Carried Sail Very hard [which] drove the Schooner Almost Under water," but it was able to escape the pursuer and tack back to the east. Four days later, on October 8, 1779, Almy's crew spotted another vessel that they perceived to be an enemy cruising for prizes. Almy and his men "Ran as fast as we could, and presently came on and we Lost sight of her."[29] Later that day they met with six Spanish ships-of-the-line and took a guard onboard. The guard welcomed them with the news that Spain had entered the war against Great Britain.

By the time Almy took to the water again on December 6th, his vessel had been transformed. The crew had rerigged the damaged schooner to carry only one mast, thereby converting it into a sloop. Changing the sail plan of a vessel was not unheard of, but Almy must have been pleased to find that the *Chance* performed well despite losing a mast and the corresponding sail area. When Almy sailed from Cadiz in company with Captain Alexander Mackey in the Brigantine George, Almy's crew kept busy "Often shortening And making sail for Our Consort which we beat Very much."[30] Almy remained with Mackey for several days, personally going onboard the brig on two occasions, but lost him as a storm cropped up near Madeira. Maps of Almy's voyage show his vessel looping confusedly, which may be an indication of its actual behavior during the storm or an indication of his limited ability to keep an accurate estimate of his position in the high seas and strong winds. In either case, Almy corrected his reckoning as he passed Porto Santo a few days later. He did not, however, stop for

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[29] Almy, Logbook of the *Chance*, October 8, 1779.

[30] Almy, Logbook of the *Chance,* December 7, 1779.

provisions. He did not want to linger near the Portuguese island. He instead carefully chose a route around it "by Reason of its being wartime."[31]

The following day he became worried about the weakening wind and predicted, "we have Every Appearance of A Long passage."[32] He had expected to catch the trade winds, which blow predominantly from the east in the lower part of the North Atlantic, but he found the wind continuing to blow against him from the west. Although sailing vessels could move slowly into a headwind by tacking back and forth, it was not optimal for a transatlantic crossing. Finding that the wind remained against him after he passed the Canaries, Almy decided to put his men on a limited allowance of food and water.[33]

The trade winds were only part of the story, though. Almy was correct to predict a long voyage, but the length of the voyage was most strongly influenced by the weather he had already faced on the way to the Canaries, not the contrary winds he faced afterward (Figures 3.3-3.4). Almy's previous voyage from Cadiz in the brig *Kitty* affords a convenient comparison. From comparable longitudes near the Canaries, the *Kitty* reached the point of its capture in 29 days, and the *Chance* reached a similar point in 31 days. Almy had not mentioned running out of food on the *Kitty,* and a two-day difference would not have explained the dire situation on the *Chance*.[34] On the other hand, the portion of the voyage between Cadiz and the longitude of the Canaries accounted for a 9 day difference. By the day that Almy lost sight of Tenerife, the *Chance* had already been at sea for 22 days; by a similar point on its voyage, the *Kitty* had

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[31] Almy, Logbook of the *Chance,* December 22-23, 1779.

[32] Almy, Logbook of the *Chance*, December 24, 1779.

[33] Almy, Logbook of the *Chance,* December 28, 1779.

[34] He did make frequent notes about food, but his concerns were relatively minor: he suspected that one of the barrels of beef was actually horse meat, and rats had eaten the almonds. Almy, Logbook of the *Chance,* March 23 and 26, 1779.

traveled only 13 days. Losing time to the storm and to days with little or no wind, the crew of the *Chance* had already consumed a sizable portion of their stores before losing sight of land. If Almy had felt safe stopping at Madeira or the Canaries to restock after the storm, he would not have needed to begin cutting rations so soon, if at all.

It was a calculated risk. As Almy noted, he chose his path through the islands carefully "by Reason of its being wartime."[35] The American captain had made a conscious choice to exchange time (and food) for safety from attack. From a British perspective, this was harassing enemy shipping at its best. Despite the fact that Almy did not actually meet any hostile ships in the region, he could reasonably expect that British ships were using the English-friendly Portuguese archipelago of Madeira as a base to raid American, French, and Spanish shipping in and around the Canaries.[36] By discouraging the *Chance* from resupplying, the mere threat of ambush near the islands enhanced the natural risks of Almy's southerly transatlantic passage. The very condition of war made the sea, itself, more dangerous.

Unwilling to resupply in the Madeira and Canary Islands, Almy and his men found other ways to compensate for their low stores. They tried to replenish their water by collecting rain with the mainsail on New Year's Day, 1780.[37] On January 7th, Almy broke into the cargo of wine and raisins to give his crew more food to eat. He nevertheless had to reduce the allowance three days later "To 3 pints [of water] pʳ day and one pint of wine with a few raisins and a Little meat," lamenting, "The wind altho we are in the Trades Still Inclines To the westward [as] if it Raily

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[35] Almy, Logbook of the *Chance,* December 22-23, 1779.

[36] David Hancock, "Self-Organized Complexity and the Emergence of an Atlantic Market Economy, 1651-1815: The Case of Madeira," in *The Atlantic Economy during the Seventeenth and Eighteenth Centuries: Organization, Operation, Practice, and Personnel*, ed. Peter A. Coclanis (Columbia, SC: University of South Carolina Press, 2005), 59.

[37] Almy, Logbook of the *Chance*, January 1, 1780.

Intended To Starve Us."[38] The crew's luck improved slightly a few days later when they began

catching dolphins to eat, but by the 21st the pantry was nearly bare, with "A Very short

allowance for 20 days." Little did they know that they had a full month left to sail.[39]

Almy's decision to pull wine and raisins from the hold was one of the few hints he gave

as to the cargo he was carrying. In his studies of the eighteenth-century wine trade, David

Hancock observed that Madeira wine had been by far the most popular wine imported into

British North American colonial ports prior to the revolution. Between 1700 and 1775, 58

percent of wine imports came from Madeira, with the Azores and Canaries adding 7 and 9

percent respectively. On the other hand, wines from the Spanish mainland represented only 1

percent. Limited by the same shortage of historical sources covering the war itself that McCusker

and Menard had described, Hancock found a five percent drop in Madeira imports between the

period immediately prior to the war and 1789. He cited the increasing importance of French and

Spanish mainland wines to account for this change.[40] In the big-picture, Hancock argued that the

economic developments of this period can be understood best in terms of self-organized

complexity among individual actors, emphasizing the ways in which large-scale forces created

the conditions for individuals' actions rather than determining them.[41]

Almy's voyage fits well with both aspects of Hancock's interpretation. Not only did

Almy acquire wine and dried fruit in Spain instead of the Wine Islands, thereby contributing to

the statistical importance of the mainland in the wine trade, he also did so as an individual

responding directly to a combination of natural, personal, and political influences rather than a

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[38] Almy, Logbook of the *Chance*, January 10, 1780.

[39] Almy, Logbook of the *Chance*, January 13-15, 1780 and January 21 – February 23, 1780.

[40] Hancock, "Self-Organized Complexity," 43.

[41] Hancock, "Self-Organized Complexity," 30-31.

single determinant. British North Americans had not engaged in substantial trade with the Netherlands prior to the American Revolution so Almy's initial plan to sail to the Netherlands reflected the larger political reorientation.[42] Then it was weather rather than politics that pushed him to choose another landfall. Instead of making an emergency landing in the Azores, which were geographically closer, Almy opted for the familiar port of Cadiz. Cadiz was controlled by an American-friendly nation, and Almy could also rely on the business connections he had made during his first three-month stay in the city. These connections would have been particularly important for a vessel in need of repairs and carrying a cargo originally intended for a different market. After he had acquired wine and raisins from Spain and continued on his way, Almy's decision to share some of the cargo with the crew grew both from the poor weather conditions and his concerns about making landfall in the Wine Islands during wartime. In this way, the wine-and-raisins episode gestures toward the entanglement of economic, political, natural, and even psychological conditions in wartime shipping.

While many complex factors created the situation in which Almy decided to distribute wine and raisins for his crew to eat, his vessel's performance did not seem to be among them. The rerigged *Chance* continued to move well relative to other vessels facing the same headwinds. By steering close to the headwind, Almy outsailed the would-be captors who chased him on two occasions before he reached land. He also encountered three other ships shortly before ending his log and carefully avoided them, even though they did not chase him. Almy's behavior continued to reflect his fear of potential enemies, but it also indicated that he relied on the speed of his ship to avoid capture in the open ocean. Rather than choosing a more careful overall route, as he had done near the Wine Islands, Almy passed less than 30 nautical miles

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[42] McCusker and Menard, *Economy of British America,* 370.

from the spot where he was captured in the *Kitty* the previous year. As Almy faced the prospect of starvation he may have decided to sail the fastest route possible despite his previous experience in the area, but his decision also reflects the common reliance on speed in open-ocean warfare.

Sam Willis has found in his recent investigations of sailing warfare that the outcome of a chase, one of the most common hostile encounters at sea, depended on a ship's ability to flee at least as much as its ability to fight. [43] The open ocean lacked the stable obstacles and objectives that often helped instigate pitched battles near land, so control of the high seas was a matter of speed for naval vessels and privateers. Ordinary merchants (those without letters of marque or commissions allowing them to take prizes) had little interest in fighting, so they also emphasized speed as a better safeguard than the few small guns they may have carried. Whatever Almy's reasons may have been for taking his *Chance* through the same waters that had doomed the *Kitty*, his gamble paid off because his ship was fast enough to avoid capture.

Almy's logbook ended on February 3, 1780, before he made it to port, but his story was not finished. On April 10, 1780, a William Almy petitioned for and received a commission as commander of the privateer *Chance,* a 50 ton sloop with 12 men and 6 guns.[44] Whether the *Chance* in particular proved to be a successful privateer or not, Almy's investors generally made good returns from their shares in Boston privateers. On July 11, 1781, Samuel Dunn, Jr., one of the primary owners of the *Chance,* purchased a Dorchester mansion house that had been confiscated from the loyalist Nathaniel Hatch. Another owner of the *Chance,* Mungo Mackay,

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[43] Sam Willis, *Fighting at Sea in the Eighteenth Century: The Art of Sailing Warfare* (Woodbridge, Suffolk, UK: Boydell Press, 2008), especially chapters 1-2.

[44] Massachusetts Office of the Secretary of State. *Massachusetts Soldiers and Sailors in the Revolutionary War* (Boston: Wright and Potter Printing Co., State Printers 1896-1908) 1: 206 ; Gardner Weld Allen, *Massachusetts Privateers of the Revolution*, vol. 77 of the *Massachusetts Historical Society Collections Series* (Boston: Massachusetts Historical Society, 1927), 96.

followed suit with his own property acquisitions in 1783.[45] The war marked a swing in fortune

for Mackay, a distiller who became incredibly rich investing in privateers during the war. His

assessed wealth placed him in the bottom ten percent of the Boston tax list in 1771, but he had

risen to the top ten percent by 1780 and continued to hold his high position on the list (alongside

merchants like John Hancock and the Amorys) into the 1790s.[46]

William Almy's logbook ended when his privateering began, so another privateer's

career will continue the story. Philip Thrash was captain of the *Success* in October 1778. The

logbook of the confidently-named vessel described it as a letter of marque schooner, meaning

that it was authorized to take prizes but likely also carried cargo. On October 4, Thrash took his

schooner from Cape Ann toward Cape Portugal. He saw three ships on the first day he logged for

the voyage. One might have expected Thrash to be aggressive, but he reacted noncommittally to

the first two. The third ship caused quite a stir: "At 6.[AM] Saw a Sail on our Weather Quarter

which gave us Chace_ Almost Calm._ All hands employ'd in Rowing." Although Thrash's

schooner was authorized to take prizes, he had chosen to flee the chasing ship; perhaps he had

been able to size it up and guessed it was too strong, or perhaps he had heard rumors that made

him fear ships in this part of the ocean. Whatever led to this particular decision, it was common

for privateers to turn tail if the foe proved any threat. Privateers and captains of ships with letters

of marque were opportunists looking for easy money, so unlike naval captains, they generally

avoided pitched fights. Without the wind to aid them, the men of the *Success* relied on their

physical strength, using oars (likely towing the ship from its boats) to stay ahead of their

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[45] John T. Hassam, "Confiscated Estates of Boston Loyalists," *Proceedings of the Massachusetts Historical Society* Second Series, 10 (Boston: Massachusetts Historical Society, 1895 - 1896): 168-169, 174-175, and 180-181.

[46] Tyler, "Persistence and Change," 110-116.

pursuers. Fog and a fine breeze joined the effort the following day and helped the men complete their escape.[47]

After a week of sailing and catching a fine parcel of fish on the Grand Bank, the *Success* finally struck pay water. Thrash's crew saw a sail at 5 PM on October 12. Rather than keeping their distance, this time they immediately gave chase... only to lose sight of the sail at 7 AM. They had spied another sail at 5 AM and began chasing it, bringing out the oars again at 11 AM to augment their speed in the small winds. Their effort paid off four hours later, when they came up with the chase and fired two shots at it, upon which it hove to. The vessel they had been chasing proved to be a British snow bound from Newfoundland to Naples laden with dry fish.[48] Thrash took ownership by putting a prize master and crew on the snow.

The prize crew was the equivalent of valet parking staff for a captured vessel. The crew's purpose was to take the ship to be condemned in the nearest friendly port while Thrash and the remaining crew continued on their way. Edward Sargent kept a logbook that gives a slightly more detailed description from the perspective of a ship that had been captured. His *Sally* was sailing the Grenada to Halifax leg of its British-Atlantic circuit when it was captured by two American privateers from Rhode Island. He wrote:

> at 6.P,M, two American Privateers from Providence Rhode Island came up with us and Took us, Virt. Sloop Joseph John Fields [or "Field"] Master and Sloop Polly Joseph Tillinghast Master Put a Prize Master & 5 Men On board and Oddered [sic] her to providence R, Island ____
> Left me and One passenger on board ^and boy Took out Rest of Passengers and all the people[49]

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[47] Logbook of the schooner *Success* (1778-1779), Philip Thrash master, Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1778S (B24), October 4-5, 1778.

[48] Logbook of the *Success*, October 12-13, 1778. The stretch between Newfoundland and Europe was an ideal place to capture ships with cargos of fish. Samuel Tucker captured two brigs loaded with fish earlier that year; Tucker, Logbook of the *Boston*, June 23-25, 1778.

[49] Edward Sargent, Logbook of the schooner *Sally* (1776), New Hampshire Historical Society, Concord, NH, August 23, 1776.

Prize crews were usually small, as few men as could be spared to safely bring the prize into port, in this case a mere six men total. The privateers sometimes took the prize's original crew, "the people," onboard so that they could not try to retake the ship. Privateers carried unusually large crews so that they could man prizes and overcome resistance when boarding. As a result, they could be very crowded places, especially after taking on the passengers and crew from one or more prizes.[50]

Numbers were an important consideration, as the privateer sloop *Providence* found. In 1779 the American *Providence* happened across a British soldier transport ship that was destined for New York. Its capture would have been a great boon to the patriot cause. The transport carried only four guns, so it was not enough of a threat to deter the privateer. Still, after the vessels had engaged and the *Providence* had fired 24 shot at its opponent, the *Providence* abandoned the battle. It simply left. It was not the fighting that limited the *Providence*, but the jail-keeping. The officers gave up on capturing the transport because they "thought that she would hurt our Cruize because it would take [too] many men to mann her and look after the Prisoners." Although totaling 67 volunteers, a sizeable crew for a sloop (so sizable in fact that the officers were literally falling over one another), the crew was too small to waste men on a prize that would demand careful supervision.[51] Things might have turned out differently if they

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[50] Nettels, *Emergence of a National Economy,* 11. Prisoner management varied; for instance one privateering inventory noted the transfer of 23 prisoners to one of the captured ships, perhaps in order to reduce overcrowding on the privateer. Revolutionary War Military Records collection (Mss 673 SG2), box 3 folder 173. Rhode Island Historical Society Library, Providence, RI.

[51] Zuriel Waterman, Logbook of the sloop *Providence* (1779), James Godfrey master, Rhode Island Historical Society Library, Providence, RI: MSS # 789, box 1, folders 21-22, September 18, 1779. Perhaps a symptom of overall overcrowding or local overcrowding and a large sea swell, the entry for October 4, 1779 relates, "at 11 at Night as Mr. Smith & I lay in a hammock together thead & point his End of the Hammock broke down but did not hurt him much we lay upon the floor & little after Mr. Allen's hammock at the head broke down & he fell 'pon my feet it hurt him considerable." Zuriel Waterman was the surgeon aboard the sloop. He, the four prize masters, and similar extra officers not normally present on a merchant sloop would have made the officers' quarters unusually snug.

had had consorts. While cruising for prizes the naval vessels *Providence, Ranger,* and *Boston* carefully distributed and redistributed their prisoners among the three vessels, simultaneously managing their own people to break up mutinies and to share the contributions to prize crews of five to ten men each.[52]

After capturing the fish-laden snow, the *Success* soon reached land along the Bay of Biscay. The crew set out again after two months in port to assault British shipping on Britain's own side of the pond. First, they chased a sail that proved to be a Dutch brig headed from Amsterdam to Barcelona. It was not a viable prize, because the Dutch were not at war with the United States, so they let it go. The next day they chased another brig for two and a half hours. They must have been disappointed to find that it was the very same Dutch vessel as the day before! The next day presented two more chances; the first outran them, and the second was a Swedish brig bound from Seville to Amsterdam – yet another miss. The next day offered an odd occurrence. Thrash hailed a nearby ship but the strangers would not identify themselves. Soon they hailed back, demanding the *Success* shorten sail. Thrash had none of it, the other vessel chased, and they lost sight of each other a few hours later. The next few days repeated the pattern, with several more sails spotted, more invalid prizes, and more escapes. Christmas day was particularly disappointing: "At 3PM came up with our Chace which prov'd a Portuguese Ship, from Lisbon , bound to London, laden with Oranges: went twice on Board her but could not find Papers sufficient to make a Prize of her." Ships trading with the enemy had to rely on papers to prove that their connection to a neutral country; otherwise, they too could be captured.[53]

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[52] Tucker, Logbook of the *Boston*, September 11 and 16, 1778.

[53] Logbook of the *Success,* December 18-27, 1778.

New Year's Day, 1779 finally brought another success:

> At 10 P.M. came up with our Chace, whh [sic] prov'd a Scotch Sloop from Aberdeen bound to Leghorn laden with Fish ___ went on board and took Command of her ____ At 12 made Sail, and stood as pr Logg. At ½ past 2 A.M. Saw a Sail bearing EBS wore Ship_ At past 3 wore Ship At 7 Saw two Ships to Windward: bore away_ At 8 spoke the Success, wore Ship, and stood as pr Logg[54]

For an officer of the *Success* to speak with the *Success* would have been very strange, but this confusingly self-referential entry meant that it was the logbook-keeper, specifically, who took command of the sloop from Aberdeen. Several officers often kept logs for the same vessel, and although this multiplicity was more pronounced aboard naval ships (one collective logbook for the *Ranger*, for instance, exhibited six rows of daily navigation calculations kept by six different officers), this logbook-keeper's transfer implies that the *Success* had been sailing with redundant navigators and logs.[55] The keeper of this particular logbook for the *Success* had become the prize master of a new vessel, the *Peggy*. The *Peggy* parted from the *Success* and sailed on. The logbook-keeper subsequently commented on several other vessels, but his privateering attacks had ended. His new goal was to deliver the prize to a friendly port where it could be condemned.

Privateers devoured merchants, but naval ships were peak predators in the wartime nautical food chain. Better-armed than privateers and equally interested in the financial windfalls of good prizes, navies captured a wider range of vessels. For example, South Carolina leased a frigate for its state navy in the Low Countries in 1781. The eponymous *South Carolina* and its commander Commodore Gillon happened across a brig while sailing around Scotland on their way back toward the United States. After an overnight chase, the *South Carolina* caught up with the brig, which fired a lee gun and hoisted English colors. This was a non-threatening signal,

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[54] Logbook of the sloop Peggy (1779), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1778S (B24), January 1, 1779.

[55] Logbook of the *Ranger*.

suggesting that the master of the brig thought he was being chased by an English frigate. Gillon played coy. The *South Carolina* replied with a lee gun and its own English colors. From all appearances the crisis was averted. Both vessels lowered their flags, but the *South Carolina* soon took up the chase again. By 3 o'clock that afternoon the *South Carolina* had come close enough to fire several bow chases (guns pointed forward for just this purpose) and to bring the brig to (the equivalent of pulling it over). It turned out that the brig was an English privateer, not a merchant. Its sixteen 6-pound guns and crew of sixty men would have intimidated merchants and discouraged privateers from what would have been a more-or-less even fight, but the brig was no match for a frigate armed with 36-pound guns. Gillon brought the prisoners onto the *South Carolnia* and sent a prize crew aboard. What the privateer *Providence* could not do against a weakly armed soldier-transport, the frigate *South Carolina* easily managed against a more heavily armed privateer.

Of course, naval captains were required to engage in risky battles that privateers would have avoided. Naval officers could not focus solely on capturing merchants, because they were also bound by their instructions to prevent enemy depredations of their own shipping and to pursue other national goals. These instructions could direct navy ships to join particular fleets or convoys, to patrol for particularly troublesome enemy privateers, or to serve as armored transports carrying important passengers or cargo in their own holds. The *South Carolina*'s mission was its own delivery, but even without knowing that, a historian can recognize from its path across the ocean that the frigate was not actively hunting prizes (Figure 3.5). Ironically, following the popular course across the ocean mean that the ship was not trying to capture prizes. Philip Thrash's letter-of-marque *Success* demonstrated similar behavior, crossing the ocean rapidly without notable action but later taking prizes in a tight loop very close to land. It may

114

Figure 3.5: American Revolution Predation Patterns

Sources: Author's Database, ESRI Basemap
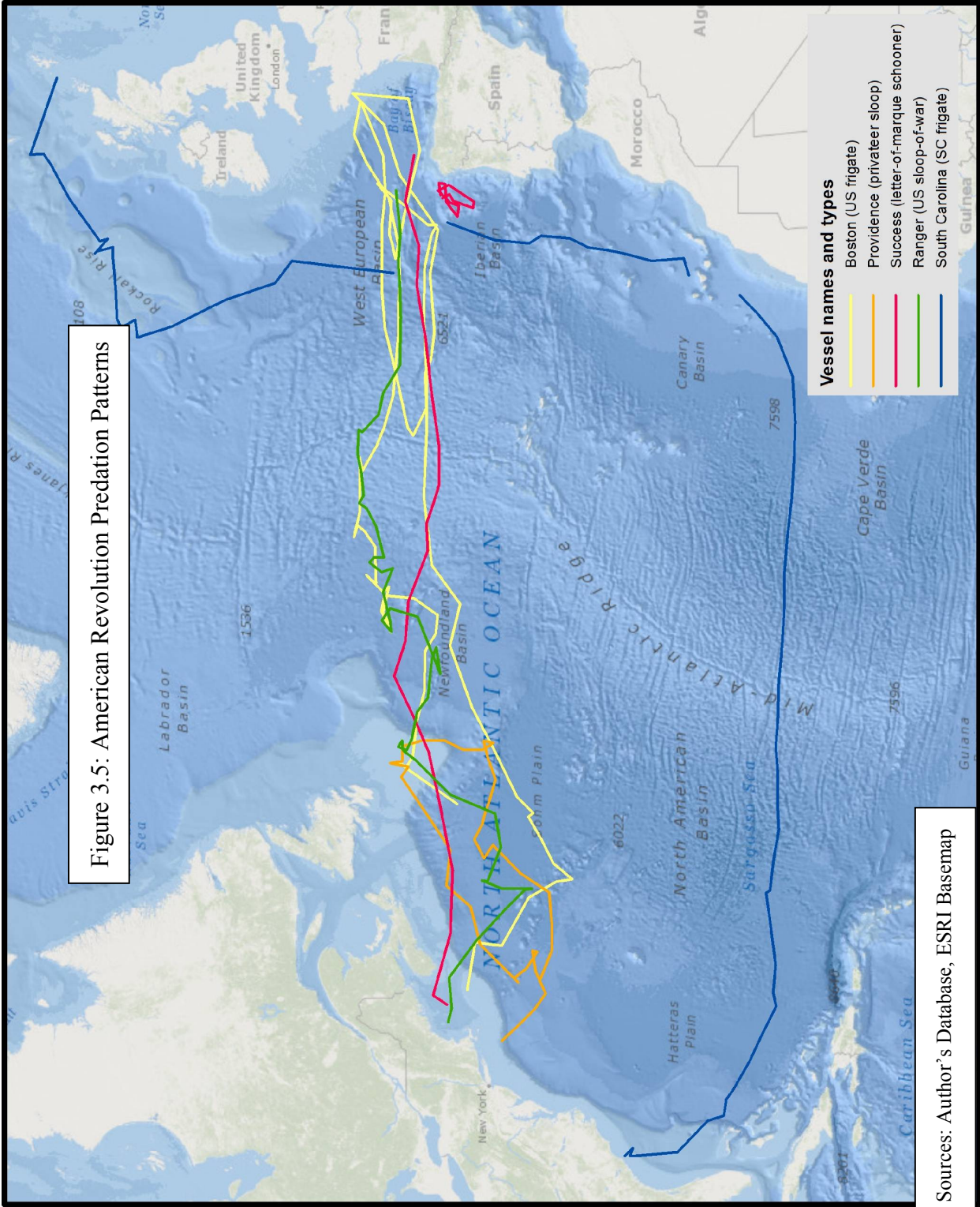
have been carrying cargo on the crossing in anticipation of privateering only after it reached the opposite coast.

In contrast, the Continental frigate *Boston* traveled hundreds of miles out of its way in order to pursue sails on its 1778 transatlantic crossing – this despite carrying an important delegate to France, and his son, both future presidents. The Navy Board had instructed Captain Samuel Tucker to deliver John Adams safely to France but allowed Tucker some freedom. "If, however, in the course of your voyage, a favorable opportunity should offer of doing service to the States by taking or destroying any of the enemy's ships, you are not to omit taking advantage of it, but may go out of your course to effect so good a purpose. In this we trust to your zeal and discretion." However, some of the zeal and discretion shown on this voyage must have belonged to Adams, as the letter also instructed Tucker "to consult him on all occasions with respect to your passage and general conduct."[56] Just as Almy had to weigh changing international political conditions when considering his destinations and courses, so too did naval commanders shape their courses in response to diplomatic needs, indeed *diplomats'* needs.

Tucker set sail again on a dedicated predatory voyage, a cruise, after he had deposited Adams in France. "[I] consulted this day with my officers about our cruising. They all seemed to be for cruising on the banks of Newfoundland, to which I agreed."[57] This cruise quickly proved more fruitful than the transatlantic voyage. In roughly two weeks, the *Boston* captured four prizes, which Captain Tucker sent to be redeemed in Boston and the French port of Lorient. Well before reaching the Grand Banks of Newfoundland, Tucker returned to France, resupplied, and put out for a third voyage in company with Commodore Abraham Whipple of the Continental

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[56] Sheppard's *Life of Samuel Tucker* includes transcripts of Tucker's original instructions from the Navy Board, 72-73.

[57] Tucker, Logbook of the *Boston*, June 17, 1778.

Navy and the sloop-of-war *Ranger*. The *Boston*, the *Ranger*, and the *Providence* (the Commodore's ship) traveled together for the duration of the Boston's third voyage. The three ships made three more captures, encountered a handful of other ships, and briefly became separated in a patch of fog before arriving together at the Grand Banks. Figure 3.5 represents this voyage from the perspective of the *Boston* and the *Ranger*, both of which have extant logbooks.[58]

Jagged and looped, these were the paths of hunters. The *Providence, Ranger,* and *Boston*, albeit a small pack, were easily the most powerful force locally as they passed westward through this stretch of water. This was their water, the sovereign maritory of the United States. Columbia ruled these waves. A few days later ownership might pass to a different country's fishermen, merchants, or navy, but American influence would linger. Captured British captains would, mirroring Almy, think twice about the American threat as the war continued. Those who escaped, Americans possibly among them, would take their wariness with them. They might choose to avoid the area in the future, to risk other dangers instead, or to arm themselves more heavily. Some might even develop the inclination to turn privateer, themselves, and to continue the cycle of continual torment.

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[58] Tucker, Logbook of the *Boston,* June 13 - July 1, 1778.

Chapter 4: Many More of Them Live Next Door:

Peacetime Meetings at Sea

Just as the American Revolution had drawn Western Europe and hence the Atlantic

Ocean into war, the revolution's end brought about a brief but widespread peace. The war's end

realigned economic opportunities for the newly formed United States. They had already lost their

advantageous trade position within the British Empire, but access to allied ports propped up

American shipping while the conflict endured. After the war, most of these former allies began

to see the States as competitors to their own colonies and returned to mercantilist policies that

excluded the United States from their Atlantic ports. In response, American mariners broadened

their horizons. The monopoly of the British East India Company no longer applied to the United

States, so the 1780s saw the opening of American trade with China.[1] American whalers

overcame the extreme setbacks of the Revolutionary War and continued to expand their hunting

grounds, much as they had done over the course of the century. While Americans continued to

sail traditional Atlantic courses and to trade in Europe and the Caribbean during the 1780s, these

trades represented the broader geographic role the United States was to play in the coming

century. Finally, the slave trade that Thomas Jefferson had once counted among the justifications

for the revolution continued to include American ships, both because Americans chose to partake

and because European powers could not effectively restrict their access to African markets.[2]

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[1] Jonathan Chu, *Stumbling Toward the Constitution: The Economic Consequences of Freedom in the Atlantic World*, (New York: Palgrave Macmillan, 2012); James R. Fichter, *So Great a Proffit: How the East Indies Trade Transformed Anglo-American Capitalism* (Cambridge, MA: Harvard University Press, 2010).

[2] For Jefferson and slavery in the Declaration of Independence, see David Armitage, *The Declaration of Independence: A Global History* (Cambridge, MA: Harvard University Press, 2007), 57-60.

Peace brought more than new economic opportunities. It also brought sociability. Between the close of the American Revolution and the beginning of the French and Haitian Revolutions, the Atlantic Ocean lost much of its bite. Ships no longer needed to travel in escorted convoys for safety, nor did fear of enemies shape their courses. Peacetime not only removed the dangers posed by sails on the horizon but reversed them. Rather than enhancing the risks of weather and isolation, unknown vessels offered camaraderie and assistance. Mariners could always expect social and material benefits from traveling in company with other vessels they met in port, but during peacetime they could expect similar benefits from strangers they met at sea. This sea change probably impacted officers more keenly than ordinary crewmen, who still faced the internal violence of shipboard life, yet even ordinary sailors benefitted from improved interactions with other seafaring vessels.

The vastness of the ocean did not make it socially isolating. Instead, it crafted communities with characteristics different from those on land. Sailors crammed together in tight quarters quickly developed strong bonds of friendship. The sailors on any given ship faced the same rough seas, the same bad food, the same poor pay, and the same demanding officers.[3] They were literally in the same boat. Historians have established that these shared circumstances forged a bond of fraternity that frequently spread from sea to land and back to sea again as sailors dispersed to sign the articles on new ships.[4] The tight-knit camaraderie of a given group of sailors extended into an ocean-wide society of men similar in age, experiences, and economic condition. Most men who went to sea spent only one phase of their lives as sailors, but that phase

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[3] Paul Gilje, *Liberty on the Waterfront: American Maritime Culture in the Age of Revolution* (Philadelphia: University of Pennsylvania Press, 2004), 80-82.

[4] Marcus Rediker, *Between the Devil and the Deep Blue Sea: Merchant Seamen, Pirates, and the Anglo-American Maritime World, 1700-1750* (Cambridge: Cambridge University Press, 1987); Gilje, *Liberty on the Waterfront*.

was still a formative experience that followed them through life. Their subsequent employment

on land often kept them in connection with the sea as stevedores or suppliers of ships'

equipment.[5] Former sailors also carried physical and temperamental characteristics they had

developed during their seafaring days.

The similarities among sailors had their limits, as frequent conflicts over racial, national,

and town loyalties attested, but even running up against these limits contributed to the formation

of an identifiable and persistent community throughout the Atlantic World. For instance,

multinational crews brought multiple cultures into the forecastle. This doubtless led to confusion

and confrontation, but sailors could also use it to their advantage. In one case over a hundred

American prisoners of war secured their release from prison because they knew enough French

to pass themselves off as French subjects.[6] In another case knowledge of American sailors'

clothing and hairstyles helped a captured sailor from the British navy transform into an American

and subsequently fight for the navy that had once injured and killed his shipmates.[7] Going to sea

did not so much remove sailors from society as embed them in a unique international

community, a community centered on the ship at sea.[8]

While ordinary sailors forged their fraternity in the forecastle, ships' officers built

community from ship to ship. The relationship between sailors and officers was an extreme

example of the confrontational employee vs. boss relationship. Officers violently disciplined

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[5] Daniel Vickers, *Young Men and the Sea: Yankee Seafarers in the Age of Sail*, New Haven: Yale University Press, 2005).

[6] Gilje, *Liberty on the Waterfront,* 182-183.

[7] Gilje, *Liberty on the Waterfront,* 166.

[8] Rediker, *Between the Devil and the Deep Blue Sea.*

their men and relied on intimidation to maintain authority over their wooden worlds.[9] They could hardly look to their men for friendship. Captains and mates could bond with one another on the same ship, but a handful of men on opposite watches was a small pool for socializing. The dense human population of the ocean, at this time, gave the solution.

After navigational, weather, and rigging notes, the most common observations to enter ships' logs were about other ships. These comments ranged in detail and tone as encounters ranged from simple sightings to lengthy visits. Changing interactions marked the most obvious difference between peacetime and wartime logbooks. Wartime ships generally kept to themselves or with convoys they had already met in port, so first meetings at sea carried a dose of suspicion or blatant hostility. Peacetime ships had little to worry about when they saw unknown sails on the horizon. They either ignored one another or made the course adjustments and time needed to meet. The peacetime sea turned today's parents' advice on its head; *do talk to strangers*.

Sightings were usually the first step in an at-sea encounter. Each sighting entered the logbook with a different degree of specificity ranging from the simple "Saw many Sail"[10] to the extremely detailed "at 8 AM Saw a Squadron To the windward Consisting of Five Sail of Large Ships Standing To the Nward."[11] This more detailed observation described not just the presence of the ships but their relative position (to windward), their type (large ships), their relationship to each other (squadron), and the course they were sailing (northward). Some variations in

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[9] Rediker, *Between the Devil and the Deep Blue Sea*, 207-227.

[10] Elias Davis, Journal, (1781-1800), Houghton Library, Harvard University, Cambridge, MA: f MS Am 449.1, May 16, 1785.

[11] Logbook of the schooner *Polly* (1795), Thomas Borden master, Rhode Island Historical Society Library, Providence, RI: MSS # 828, box 8, folder 6, May 3, 1795.

descriptive detail reflected the different interests and personalities of the logbook-keepers, but sighting conditions could also influence how much or little information the viewer could glean. Closer vessels were easier to read than others, and some activities were more obvious than others (e.g. "at 6am Saw A Number Schonars fishing").[12] Other ships already known to the viewers carried additional information that would have been inaccessible from sight alone. Francis Boardman of the *Hind* passed a schooner sailing to the northward, and this basic sighting was enough for him to identify the schooner, "wich I take to be Capt Forster that saild the Evening before ous." Boardman knew that Forster had sailed for Cape Anne two days earlier, so based on the schooner's course and location he presumed that this was the same vessel.[13]

In peacetime the simple presence of a sail was not much to make a fuss about. Passing vessels could easily ignore one another and go on their ways. On the other hand, a wartime sighting generated more concern and often more description. For instance, when the armed ship *Protector* was pursuing a prize during the American Revolution, the *Protector's* men "perceivd [sic] her to be a Ship of Force [and] TKd [Tacked] Ship in order to take a better view of her." Seeing the intended prize well offered additional information over the course of the subsequent battle, including the number of the ship's guns and the likelihood that it had allies nearby. The *Protector* was overmatched and fled. It escaped when darkness fell. It could no longer see its enemies, nor they it.[14]

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[12] Gilbert Howland, Logbook, (1791-1805), Houghton Library, Harvard University, Cambridge, MA: f MS Am 448.15, September 14, 1791.

[13] Francis Boardman, Logbook of the brigantine *Hind* (1784-1786), Francis Boardman master, Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1774A, December 10-12, 1784.

[14] Logbook of the ship *Protector* (1780), John Foster Williams master, New England Historic Genealogical Society, Boston, MA: Mss 853, July 2, 1780.

When two ships came within sight of each other during peacetime, the event escalated in a different way; they spoke with each other. Likely aided by a conical, megaphone-like speaking trumpet, the master of each ship would hail the other across the water.[15] Logbook-keepers recorded the information shared by the people they met. This information might include the type of vessel, its name, its nationality, its port of origin, its destination, and the name of its captain. Although of little practical value to the voyage at the time, these recorded details allowed the officers to track their meetings at sea and carry the news back to port or to other ships they met later. This line of communication would have been primarily informal, passed along among acquaintances if at all, but some logbook-keepers made explicit arrangements to have their meetings published. Richard Wheatland "spook a Ship from greenland bound to Hull had been out 5 months Desired him to Put the ship in the Papers."[16] John Hamilton made the same request that the *Dispatch* of Boston "mention us in the Papers on his Arival[sic]."[17] Published reports of ships spoken eventually joined news about lost or captured ships to populate marine lists and ships news in port-city periodicals. These reports included the date the ship was spoken and the

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[15] None of the logbooks I have found mention using a speaking trumpet, but speaking trumpets appeared for sale in colonial newspapers as early as the 1740s and may have been so widespread as to merit no attention. Most maritime museums include a few speaking trumpets in their collection (although usually undated), and speaking trumpets often appeared in paintings or on maritime decorative objects. For instance, in 1797 Benjamin Henry Latrobe depicted "A Conversation at Sea" in which both parties held speaking trumpets. See Toby Finnegan, "The Ordeal of Portsmouth's *Victory*: The First American Ship Seized and Condemned under Napoleon's Berlin Decree of 1806," *Historical New Hampshire* 66 no. 1 (2012), 8. Commemoratives figures of Vice-Admiral Horatio Nelson put a speaking trumpet in his hand as a symbol of his authority. "Figure of Horatio Nelson," National Maritime Museum, Greenwich, London: Walter Collection Object ID AAA5990. Online image available at http://collections.rmg.co.uk/collections/objects/5714.html (accessed March 15, 2014)

[16] Richard Wheatland, Logbook of the ship *Perseverance* (1798), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1793V (OS), July 7, 1798.

[17] John Hamilton, Logbook (1798-1799), New England Historic Genealogical Society, Boston, MA: Mss C 1215, May 21, 1798.

latitude and longitude coordinates, making it possible for interested parties to gauge its progress.[18]

Some logbook-keepers recorded more information about the instances of speaking, such as helpful navigational information (see Chapter 1), but many stopped with identification. This does not mean that the conversation was limited to identification but just that whatever else they said escaped note in the logbooks. Speaking was, after all, primarily an opportunity to socialize.[19] Logbook-keepers' manner of recording simply whom they met and when they met them should not be surprising, because this style paralleled contemporary diarists' practices of describing their social visits on land. As Laurel Thatcher Ulrich has demonstrated with respect to midwife Martha Ballard, diarists often distilled complicated realities into concise records. Ballard's itineraries from house to house might make her diary appear to be a trivial list of names and visit dates, but in Ulrich's words, "The problem is not that the diary is trivial but that it introduced more stories than can easily be recovered and absorbed."[20] Lisa Norling likewise used whalers' wives' diaries to dig into Nantucket community life even though these diaries, too, often mentioned little more than who went where and when. Visits were so important to the community on the island that J. Hector St. John de Crevecoeur remarked on Nantucket women's "custom of incessant visiting."[21]

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[18] See *Lloyd's List* or port newspapers, particularly issues during peacetime years. For example, the *New Lloyd's List* for December 20, 1785 (no. 1735) listed when and where Captain Ford of the *Good Intent* spoke the *Knight* and the *Fonseca*. Accessed on March 9, 2014 via Hathi Trust (http://hdl.handle.net/2027/mdp.39015020212893).

[19] Daniel Vickers, "Nantucket Whalemen in the Deep-Sea Fishery: The Changing Anatomy of an Early American Labor Force," *Journal of American History*, 72 no. 2 (Sept. 1985), 278.

[20] Laurel Thatcher Ulrich, *A Midwife's Tale: The Life of Martha Ballard Based on her Diary, 1785-1812*, (New York: Knopf, 1990), 20-25.

[21] Lisa Norling, *Captain Ahab had a Wife: New England Women and the Whalefishery, 1720-1870*, (Chapel Hill: The University of North Carolina Press, 2000), 72-74, Crevecoeur quoted in Norling, 39. Lest this practice of

Meeting at sea and recording those meetings in concise fashion was an extension of community-building practices employed on land. Visits on land constituted local communities by creating and maintaining social links among neighbors. Visits with passersby at sea constituted a lasting maritime community in the same way. Due to the potential for meetings at sea among vessels from far-flung places, international sociability behaved at sea like local sociability did on land. Indeed, when a ship's nearest neighbor was a ship from a faraway land, the international *was* the local and vice-versa.

Of course, sightings did not necessarily lead to speakings. Like trying to catch up with an acquaintance spotted on the other side of a large, busy plaza, it was not always feasible to speak with a ship spotted across miles of ocean. Isaac Gorham of the *Beaumont* saw a sail during the peaceful year of 1785 but was disappointed: "I my being to luerd [leeward] of then I Could not Speak with them I Juged them to be from the windword islands."[22] Other logbook-keepers echoed Gorham's disappointment. Winds, nightfall, or opposite directions of travel could make it impractical to approach close enough to speak.[23] Even when ships came together, they could still be stymied by language. Levi Mills of the ship *Diana* logged, "Spock with a Portegee Ship but

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concisely reporting visits appear limited to women, one could pull Thomas Thistlewood's listing of his social engagements and sexual conquests into the fray. See Trevor Burnard, *Mastery, Tyranny, and Desire: Thomas Thistlewood and his Slaves in the Anglo-Jamaican World,* (Chapel Hill: The University of North Carolina Press, 2004).

[22] Isaac Gorham, Logbook of the ship *Beaumont* (1785), Isaac Gorham master, Rhode Island Historical Society Library, Providence, RI: MSS # 9001-G, box 4, April 10, 1785.

[23] Isaac Gorham, Logbook of the brig *Enterprise* (1787-1789), John DeWolf master, Rhode Island Historical Society Library, Providence, RI: MSS # 9001-G, box 4, October 8, 1787; Silvanus Coffin, Logbook of the brig *Nancy* (1797-1798), Silvanus Coffin master, Nantucket Historical Association Library, Nantucket, MA: LOG 161, February 10 and 22, 1798.

Could not understand them."[24] The *Dundee* "had 3 Russians off at the Ship" while whaling, "but as we none of us could speak their Language could get little information from them."[25] Details were usually more forthcoming when vessels' officers shared the same language, but Anglophone logbook-keepers still managed to learn some information about most vessels from non-Anglophone countries.[26]

Sometimes an effort to speak failed because one of the ships was simply uninterested. Evidently the *Two Friends* already had friends enough; its logbook-keeper had "a Sail in Sight," but despite knowing that it "intended to speak me I bore away."[27] The *Enterprise* was on the receiving end of such a snub when a nearby ship did not incline to speak with it.[28] Intentionally avoiding conversation during peacetime was unusual, and these exceptions proved the rule.

Being ignored could be the first sign that the ocean was not at peace, after all. After the oriental-trader *Susan* rounded Cape Horn on March 16, 1798, it began sailing to the Northwest on a remarkably straight and dull course through a relatively poorly populated stretch of water. The crew of the *Susan* spent the week after rounding the Horn without much more excitement than making ropes, but early in the morning on March 24th they spotted a ship sailing in their wake. Bored after months at sea, they decided to have a chat: "at Noon took in all Stq Sails and

[24] Levi Mills, Logbook of the ship *Diana* (1783-1785), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 656 1783/85 D, 1/18/1785 ; see also Reuban Pinkham, Logbook of the schooner *Fortune* (1785-1786), James Coullaur master, Peabody Essex Museum's Phillips Library, Salem, MA: LOG M 656 1755E, January 17, 1786.

[25] William Scoresby, Logbook of the ship *Dundee* (1798), G. W. Blunt White Library at Mystic Seaport, Vol 45 of the Scoresby Family Papers, Coll. 55, May 7, 1798.

[26] A brief review of logbook entries in my database suggests that multilingual speakings occurred among English speakers and French, Dutch, Danish, Portuguese, Spanish, and even Swedish vessels. For multilingual encounters the most common details recorded beyond the types of ships were the ports of origin and destination, and few went into the same depth (captain's name, vessel's name, days out, etc.) as with American or British ships.

[27] Davis, Journal, April 19, 1785.

[28] Gorham, Logbook of the *Enterprise*, May 31, 1788.

hauled to the Wind to Speak the Ship in Sight but it appearing by the Course she steered she did not wish to speak us we continued our course."[29] Rebuffed in their first friendly overture after entering the Atlantic Ocean, the people of the *Susan* continued on their way in this lonely expanse. They occupied themselves about the usual ship's activities: drawing yarns, making ropes, managing provisions and cargo, repairing what needed repairing, and catching water when it rained.

Strangely, even though were not to see another ship for five weeks, the sailors also prepared for conflict. The day after leaving the cold-shouldered ship behind, the carpenter was busy making new trucks for the gun carriages. April 18th was cleaning day for the small arms. On April 28th, the men "got the guns on Deck and Mounted them." Thus armed, the crew of the *Susan* nevertheless sought friendship with the next vessel they saw. At 6am on May 1, 1798, they spotted a sail from the masthead and later "Spoke a brig the Charlotte of Providence Tho[s] Holden Master out 15 days. Bought of him 200 feet of Boards for a Bulwark to our Waste." Adding bulwarks put the ship in a defensive posture and echoed the *Susan*'s suspicious response to the first attempted meeting. At 9am the next morning the *Susan* "saw 3 Sail to Windward bearing down on us at 11 D[o] Spoke them. They proved to be the Ships John and Christopher & Brig Grace of Liverpool from Demerado. They behaved in a very friendly manner tendering us any Service in their power acquainting us that Les Hommes sans Suu had Commenced hostilities with the United States."[30] Returning from a long voyage, the *Susan* was fortunate to run across another American and a small band of English ships before encountering any of the "Hommes

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[29] This narrative has been drawn from the logbook of the snow *Susan,* March 15-16, 1798. Logbook of the snow *Susan* (1797-1798), Rhode Island Historical Society Library, Providence, RI: MSS # 828, box 10 folder 1.

[30] Logbook of the *Susan*, May 2, 1798. Note that the logbook-keeping convention of recording days from noon to noon means that comments referring to the afternoon of May 1 were recorded within the entry dated May 2.

sans Suu," a reference to the French Republic which had engaged the United States in the Quasi War while the *Susan* had been away.

The *Susan* became less gregarious in the days after it learned about the war. On May 4 the logbook-keeper noted, "at 2 AM Saw a Schooner to Windard Standing to the Westward at 11 D^o she Crossed our Hawse very nigh but did not speak us." Rather than reducing sail and hauling into the wind to speak with this vessel, as they had with the ship they spied in March, the officers of the *Susan* now left it to the other ship to initiate the conversation. The logbook-keeper's tone suggested relief not to have made contact with the schooner that passed "very nigh." The time for friendship was over, and the next day the men were "Employ'd Some tinning wooden Guns others staving up empty Casks for to make some show of Defense." Perhaps they made a strong showing, because shortly before the end of the voyage the logbook-keeper noted, "at Day Break Saw a Brig Standing to the Eastward who halled her wind to Keep off." The result was the same as the *Susan*'s first encounter in the Atlantic, but now that he knew it was wartime, the logbook-keeper no longer felt the need to explain why a passerby would keep its distance.

Speaking with other ships in populous parts of the ocean was a frequent occurrence that maintained the links of the Atlantic world. The snubs in the stories of the *Susan*, *Enterprise,* and *Two Friends* reveal the expectation that ships would speak one another if given the opportunity. Numerous examples of speaking across nationalities demonstrate that this expectation was shared throughout the Atlantic; all understood the convention of speaking, if not the words spoken. In turn, all would have understood the political resonance of the eerie silences the *Susan* found upon reentering the Atlantic Ocean after a long voyage to the East.

When two ships did speak and the conversation from ship to ship proved favorable, some men from one ship might even go aboard the other ship to continue the social engagement in

person. Sometimes these meetings lasted for hours. For example Samuel Tucker sailed in

company with two other Continental naval vessels during the American Revolution, and he and

the other commanders often dined together. On one day Tucker went aboard the Commodore's

ship at 8am to dine and did not return until 5pm. At noon the next day the Commodore returned

the favor by dining on Tucker's *Boston*.[31] Going aboard the other vessel offered the opportunity

to exchange other objects in addition to food. On another occasion Tucker boarded a different

friendly ship and returned with newspapers: "went on board Captain Murray, with Mr. Reed, my

first lieutenant. Captain Murray sent me some American papers to peruse, which I am obliged to

him for."[32] Exchanging news over a meal or through papers deepened the communication that

began when the ships spoke at a distance.

Notably, the names of ordinary crewmen rarely appear among those who boarded

friendly vessels. Captains, mates, surgeons, pilots, and the logbook-keepers (usually officers

themselves) were by far the most likely characters to appear in logbooks as having visited other

ships. This does not mean that crewmen always remained on their own ships. Officers made the

transfer by boat, so one or more crewmen probably rowed them across for every visit. These

crewmen might have been able to talk with the other ship's crew while waiting to return the

officer, thereby extending their own social connections in the middle of the ocean, just as the

officers did. Crewmen could also benefit from these meetings directly even if they did not make

the crossing. Captain Tucker spoke with Captain Murray the day after he had received the papers

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[31] Samuel Tucker, Logbook of the frigate *Boston*, transcribed in J. H Sheppard, *The Life of Samuel Tucker, Commodore in the American Revolution* (Boston: Mudge, 1868), September 6-7, 1778. Some meetings may have lasted too long, as when "Captain Jones came on board, and tarried a considerable time." Tucker, Logbook of the *Boston,* June 21, 1778.

[32] Tucker, Logbook of the *Boston*, June 27, 1778.

and discovered that one of Murray's men had been injured falling from the yard. Tucker sent his doctor over to help.[33]

It is worth pointing out that, although friendly encounters with unknown vessels may have been more likely during peacetime, friendly encounters with already known vessels may have been more likely during wartime due to the organization of convoys and fleets. In addition, gaining access to a doctor may have been easier during wartime, when privateers and naval vessels carried surgeons and actively pursued meetings with almost every ship they saw. For example, after a day of chasing and firing several bow guns the American privateer *Providence* finally brought its quarry to. The sloop was American and sailing to France without any contraband, so the initially hostile meeting turned into an opportunity for assistance. The other ship "brought no news," surgeon Zuriel Waterman recorded, but "One of her hands came on board to have his hand dress'd which was mash'd the day before."[34] Wartime boardings like this could end very differently – capture by an enemy or impressment by one's own navy – but in either case a surgeon was probably available on the other end.

Life aboard ship was influenced by the geography of these meetings; some parts of the ocean were friendlier than others. Figure 4.1 represents where ships interacted with one another ship during the peaceful years between the American and French Revolutionary Wars. Each location represents an entry when at least one encounter of some kind occurred, and multiple overlapping markers stand for interactions with different vessels on the same day. The color of the marker indicates the type of interaction.

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[33] Tucker, Logbook of the *Boston*, June 28, 1778. See also Logbook of the sloop *Independent* (1776), Jabez Whipple master, Rhode Island Historical Society Library, Providence, RI: MSS # 828, box 5, folder 6, August 29, 1776.

[34] Zuriel Waterman, Logbook of the sloop *Providence* (1779), James Godfrey master, Rhode Island Historical Society Library, Providence, RI: MSS # 789, box 1, folders 21-22, November 19, 1779.

Figure 4.1: Locations and Types of Ship Encounters at Sea, 1784-1796

Nature of Encounter

✗ hostile/suspicious

✚ friendly

✚ mixed/unclear

✗ neutral

Sources: Author's Database, ESRI Basemap
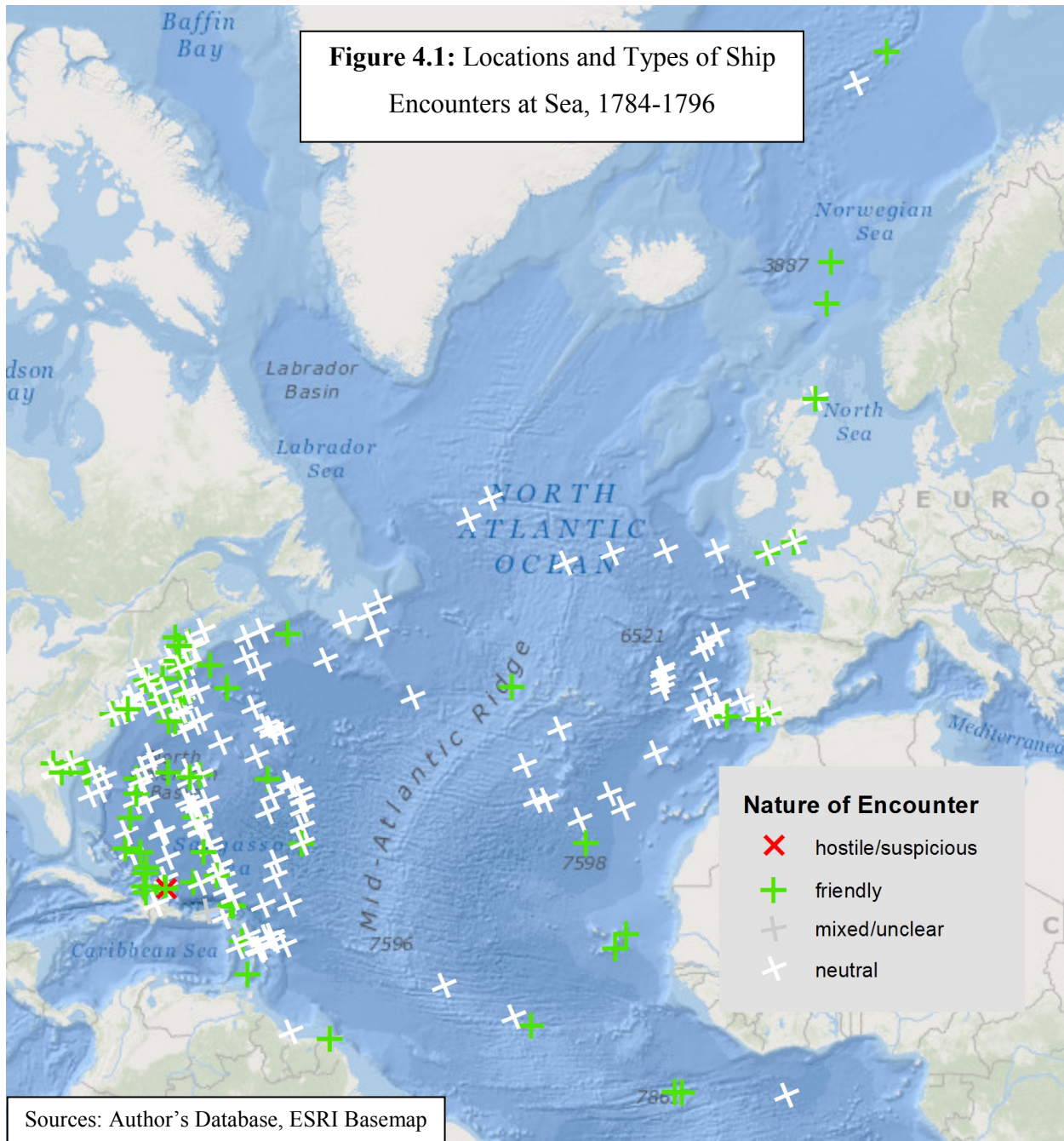
Out of a total of 351 peacetime encounters represented here, the vast majority (270

events) were neutral, meaning that the logbook-keeper simply noted the presence of another ship

that he saw. The next most common meetings (76 events) were friendly. These included anything

from speaking with a vessel to traveling in company with it or going onboard. During what was

for the United States a peacetime period, only one encounter recorded in the logbooks in my study was hostile: the *General Greene* was chased in 1795 by an unknown vessel and fled. This timing was consistent with the French Revolutionary Wars, so the pursuer could have been a naval ship or privateer from one of several European countries engaged in the War of the First Coalition.

In this peacetime sea both neutral and friendly interactions were common, with a greater frequency of friendly encounters nearer to the coasts. Areas in the far north and near Africa had fewer meetings overall, but more of these involved conversations or other positive interactions between vessels. This behavior makes sense, as these ocean regions were less populated, raising the potential importance of each interaction. For comparison, the reader may recall a radically different geography for William Almy's wartime interactions (Chapter 3). Almy had multiple hostile encounters within the span of a single voyage, and he enjoyed a string of friendly experiences while sailing in company with another vessel. No such strings of friendly travel were apparent during peacetime because convoys were responses to the threat of hostile encounters. Thus the change from wartime to peacetime restructured the geographies of both unfriendly and friendly meetings at sea.

Within the overall experience of the ocean, the geographies of specific trades created very different conditions on ship and when ships met. The transatlantic slave trade stands out as one area that demands specific attention. The horrors of the slave trade coalesced in the deadly Middle Passage. This segment of travel by sail across the Atlantic Ocean terminated the chain of warfare, kidnapping, overland passage, and traditional African slavery that had drawn slaves from inland Africa to the coast. The ultimate act of separation by a thousands-miles moat was not just psychologically devastating but, as has been well documented, physically devastating.

Hundreds of thousands of slaves crammed tightly into dank holds died from disease, malnutrition/starvation, and direct physical violence, all at the hands of European and American slave traders. This three-and-a-half century transatlantic slave trade would soon begin to decline as abolitionists' arguments finally overcame those of slavery's proponents, but in the meantime the 1780s and 1790s were the height of the trade.[35]

The Middle Passage was deadly. Most seafaring was deadly in one way or another, but the Middle Passage was remarkable for its high mortality rate for both crew and cargo. Many, possibly most, deaths occurred before ships left port. Violent wars and raids first generated slaves far inland, then many died on the long journey to the coast, and many more perished while being held for sale or waiting for their purchasers to begin the voyage. Recent estimates from the *Trans-Atlantic Slave Trade Database* show mortality rates ranging from 30 percent in the sixteenth century to about 15 percent at the end of the trade in the nineteenth century. During the 18th century the average was 13.6 percent, meaning that slightly more than one in eight slaves did not survive the passage.[36] These numbers varied greatly from voyage to voyage, with epidemics or uprisings resulting in substantially higher deaths on one ship than another. Sailors also died in droves in the West African trade. Officers could expect to lose about one out of every five men. The raw numbers of crew deaths were much lower than slave deaths, but the proportions were generally higher. Crew deaths also allow some comparison to other trades.

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[35] Billy G. Smith, *Ship of Death: A Voyage that Changed the Atlantic World* (New Haven: Yale University Press, 2013), 33; Philip D. Curtin, *The Atlantic Slave Trade: A Census*, (Madison: University of Wisconsin Press, 1969), Figure 26, p. 266.

[36] *Voyages: The Trans-Atlantic Slave Trade Database*, query: http://slavevoyages.org/tast/assessment/estimates.faces?yearFrom=1501&yearTo=1866 accessed March 10, 2014. These newer estimates roughly agree with and add precision to earlier estimates: Curtin, *Atlantic Slave Trade,* 275-278.

When Thomas Clarkson reported to the British Privy Council on the African trade, he found 219 deaths per thousand sailors per year in comparison to 41 for the next most deadly trade, the East Indies trade.[37]

Vincent Brown's *Reaper's Garden* has admirably reminded historians that these deaths were more than numbers on pages. Every death that a slave trader accounted merely as a number was first and foremost the end of a life. Perhaps expiring after weeks of illness or drowning in a moment of rebellious suicide, each deceased slave experienced death differently. Every individual's passing then became an event in the lives of the other slaves who remained alive in the hold. Brown has pointed out that although it may be impossible to trace the effects of each individual death directly, collectively these deaths contributed to the meanings of death in slave societies replete with it.[38]

It is further important to remember that these deaths were not just situated in time but also in place. The Middle Passage was both an experience and a place, a crossing of a particular stretch of ocean with particular natural and human characteristics that contributed to the misery of the experience. Very few if any of the captive African men, women, and children would have known where on the ocean they were (most of the sailors would have had only the roughest idea), but that does not mean that the places and paths of the voyages were irrelevant to their lives. The geography of the Middle Passage shaped the experience that the people would have onboard, from the amount of food and water they received to their chances of survival. For slavers headed to the West Indies or North America, the course from the African coast crossed

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[37] Curtin, *Atlantic Slave Trade,* 282-286.

[38] Vincent Brown, *The Reaper's Garden* (Cambridge, MA: Harvard University Press, 2008), especially 28-29, 43-48, 158-160.

from the gyre of the South Atlantic to that of the North Atlantic. Both sets of rotating winds and currents encouraged westward travel near the equator, but between them laid dangerous calms. Delays due to these calms cut into food and water supplies and increased mortality.[39] Near the Guinea coast, winds and currents pushing predominantly to the east also made it difficult for ships to reach the high seas in the first place. Thus, depending on where along the coast the slavers had completed their purchasing, they could find it difficult to break away from the leeward coast and then to make the transition from the southern to the northern Atlantic circuit at the right point in the crossing. Being driven forward by favorable winds and currents once in the gyres could also push ships beyond their dead reckonings, leading to navigational confusion. Surviving the Middle Passage was not simply a numbers game of cargo size and disease rates; seamanship still had a role to play.[40]

The mass killing that may be the best-known single travesty of the slave trade was due, in part, to the oceanic space of the Middle Passage. The *Zong* sailed from Africa in 1781 with 440 slaves tightly packed into its hold. It was commanded by Luke Collingwood, who had been the surgeon on another slave ship prior to reaching Africa. When his original ship's captain happened to find the *Zong* for sale in Africa and snapped it up, Collingwood was promoted to command the new vessel. The voyage to the West Indies did not go well for Collingwood. His human cargo took ill, and his ship made the voyage at an unusually slow pace. After losing over sixty slaves and seven members of his seventeen-man crew to disease, Collingwood neared an island in the West Indies. At this point in the voyage, Collingwood's mortality rate was not

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[39] Curtin, *Atlantic Slave Trade,* 281-282, Table 81.

[40] Curtin, *Atlantic Slave Trade,* 278-279.

unusually high for a tightly-packed slaver, perhaps 15 percent. These dozens of deaths were not what later shocked the British public. [41]

Rather than putting into port and selling his surviving slaves, Collingwood turned back to sea. Two possible reasons came to light during the court case that was to follow. The first explanation was geographical: the captain had mistaken an island he had spotted for Hispaniola. Hispaniola was held by one of Britain's enemies during the American Revolution, and it was also short of the *Zong*'s destination, so Collingwood turned back to sea. It eventually appeared that the island had been Jamaica, the *Zong*'s intended destination, but by then the ship had overshot the island and was running low on water.

The second explanation for not putting into port at the island was economic: sick slaves would fetch very low prices, and sickness onboard the ship might lead to a quarantine that would protect the islanders but allow the disease to further ravage the *Zong*'s confines. Collingwood had offered a brutal solution that depended on the ship turning back out to sea. The captain thought the crew should throw the sick slaves overboard. This, he reasoned, would preserve the other slaves from the epidemic and would save the profitability of the voyage by shifting the losses to the insurers before the ship made landfall.

Whether Collingwood really misrecognized the island of Jamaica for Hispaniola was up for debate, but what he did subsequently was not. All of the crew and officers eventually complied with his solution to the ship's low water stores and high disease. They threw overboard 54 sick adults and children, all with their hands and feet bound. That was the first day. Then it was 43 more. That was the second day. On the third, Collingwood and his men selected another

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[41] This account of the *Zong* has been drawn from Brown, *Reaper's Garden*, 158-160; Smith, *Ship of Death*, 29-31; Marcus Rediker, *Slave Ship: A Human History*, (New York: Viking, 2007), 240-241; and James Walvin, *The Zong: A Massacre, the Law and the End of Slavery* (New Haven: Yale University Press, 2011).

36 living sacrifices to their account books, ten of whom managed to leap overboard before being

fettered but drowned nonetheless. By the time the *Zong* made it into port 30 more African

captives had died in the hold due to disease or other causes.[42]

The moral blame for this tragedy fell on many shoulders. The case highlighted the

culpability of the British Empire in the brutality of the entire system of the transatlantic slave

trade even as it pointed directly to Collingwood's heartless decision to drown 132 Africans.[43]

Less obviously, the case was also an example of the way that the Middle Passage as a place

contributed both to the horrors of the Middle Passage experience and to justifications of those

horrors. When the case came to court, it came in the form of a lawsuit. The owners of the vessel

sought for their underwriters to compensate them for the drowned slaves, because the owners

agreed with Collingwood that the drownings had been necessary for the preservation of the rest

of the cargo. The underwriters contended that they were not responsible for the slaves the crew

had intentionally killed but only for those who died accidentally. Key to the underwriters' case

was the documentation of the events as recorded on the ship. The underwriters' attorney

complained that the owners of the *Zong* failed to supply the logbook and other papers of the

voyage, "I inquired for the Log Book, there was none; Reckoning, none; Compass [readings],

none." The logbook should have been in possession of the owners of the ship, and its absence

looked suspicious. The underwriters worried that the owners might have had the log and other

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[42] Brown, *Reaper's Garden,* 158-160; Smith, *Ship of Death*, 29-31, Rediker, *Slave Ship,* 240-241.

[43] The numbers here are based on the numbers accepted by the court that later heard the case. Depending on the witness, estimates were as high as 150 people thrown into the sea. Also, the daily and total numbers do not add up because one man managed to clamber back aboard. Brown points out that this man's strength was evidence that not all of the slaves killed were terminally ill. Walvin, *Zong*, 98; Brown, *Reaper's Garden,*158.

ship's papers "altered, obliterated, defaced, torn, burnt, or otherwise destroyed" so that the underwriters would be "unable to make any effective defense at Law."[44]

Ian Baucom has read this conflict over the recovery of the accounts as a proxy conflict for recovering the events, themselves. When the testimony-based account had failed them in the trial, the underwriters sought in the appeal to recover the log and hence the account they perceived to be more original.[45] I would suggest, though, that this conflict over the logbook was rooted in a larger geographical legal claim. A logbook would have listed not only when the slaves were killed but where. The attorney also demanded records of the reckoning and compass readings, another geographical request. What mattered to the underwriters was not simply whether the slaves had been killed but whether the killings made sense in the geographical context where they occurred. Presumably the logic was that drowning over a hundred sick slaves in the middle of the Atlantic with several weeks still to go on the voyage could have been considered necessary, but drowning them shortly after sighting the ship's destination was fraudulent. The logbook would have shown where the *Zong*'s officers reckoned they were, possibly giving the underwriters some leverage against the owners. The underwriters still worried that the log could have been altered, but at least it might have shown some evidence of deception that spoken testimony would not show. From a modern moral perspective the place of the deaths matters little, but from a contemporary legal perspective it mattered quite a lot.

Another geographically-related legal issue was the amount of water on the ship. A leak had unexpectedly dropped the *Zong*'s water stores to a low level, and the heat of the tropical

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[44] Quoted in Ian Baucom, *Specters of the Atlantic: Finance, Capital, Slavery, and the Philosophy of History* (Durham, NC; Duke University Press, 2005), 127-128.

[45] Baucom, *Specters*, 127-129.

latitudes made the shortage particularly dangerous.[46] Thus, when Collingwood threw the sick

men, women, and children into the sea, he could plausibly use the water shortage in addition to

their sickness to justify his decision. He had claimed his actions would preserve the health and

hydration of some slaves at the cost of the lives of others who probably would have died

anyway.[47] Here the climate of the Middle Passage region provided first a justification and later a

test of that justification. Ships could often catch rainwater in their sails in these latitudes, and

indeed it rained on the third day of the culling. The crew of the *Zong* managed to catch three

weeks worth of water *before* they committed the last group of people to the sea. The fact that the

crew killed the slaves anyway emphasizes Collingwood's financial reasoning over his water-

shortage reasoning.[48] From the *Zong*'s misnavigation, itself, to Collingwood's justifications for

murdering well over a hundred shackled slaves, to the counterarguments of the *Zong*'s

underwriters, the circumstances of the killings and the arguments in the case that followed were

shaped directly by the geography of the passage.

The *Zong* case was a murderously extreme way to contend with illness on a slave ship.

Less extreme options relied on the sociability of the ocean in this stretch of water. Of all of the

logbooks I have encountered, the only log to mention receiving drugs from another ship was the

log of a slaver, the *Enterprise* commanded by John DeWolf. On May 4, 1788, men from a ship

from London came onboard the *Enterprise* bearing gifts. The logbook-keeper observed that in

addition to letters, "theay Gave us 2 Larg Chesses one Sack of bread one duzen of porter and

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[46] Walvin, *Zong*, 95-97.

[47] Smith, *Ship of Death*, 29.

[48] Brown, *Reaper's Garden*, 159.

sum Docters drugs."[49] DeWolf needed the drugs because he had sick slaves onboard and one

who had already died. On May 18th he recorded that two women had died a day apart "theay [sic]

have been sick about 5 Weakes."[50] Two days later "died one boy slave," perhaps of the same

illness or perhaps due to some other cause. The death of another boy, Manyea, a week and a half

later brought the count to five. No other slaves died on the voyage, making for a low toll.[51]

Perhaps the drugs did their work, in which case John DeWolf had a chance encounter to thank

for his human cargo's preservation.[52]

　　　　Where records are available, it may be usefully sobering to map where and when deaths

occurred on slave ships. In recent years the United Nations has emphasized the need to

remember the slave trade. The United Nations Educational, Scientific, and Cultural Organization

(UNESCO) recently concluded a competition to design a fitting memorial.[53] However, even the

best single memorial on land hardly seems sufficient when so much of the ocean was the site of

the tragedy. Perhaps we also need a virtual graveyard of the sea. Beyond helping to illustrate

where death fit into the overall voyage of a slave ship, maps of slave deaths could serve as visual

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[49] Gorham, Logbook of the *Enterprise*, May 4, 1788.

[50] Gorham, Logbook of the *Enterprise*, May 18, 1788.

[51] The Trans-Atlantic Slave Trade Database has no record of this particular voyage, but two previous voyages of DeWolf's *Enterprise* (in the database D'Wolf and *Enterprize*) carried 130 and 80 slaves, with 24 and 9 dying during the passage. Unless DeWolf had acquired fewer than fifty slaves or had a high number die on the African coast before he began his logbook, this voyage had a relatively low mortality rate.

[52] Those familiar with the DeWolf family may note the irony that John's brother James made a *Zong*-like choice a few years later. He coldly solved his shipboard smallpox problem by isolating and then drowning the infected female slave. His case followed the *Zong* backlash, so he was charged with murder and had to go on the lam (for a while... he eventually moved back to Rhode Island, built a mansion, and became a senator, all without having to answer for the murder). Rediker, *Slave Ship*, 343-347.

[53] United Nations Educational, Scientific, and Cultural Organization (UNESCO), "UNVEILING OF THE WINNING DESIGN - International Competition for a Permanent Memorial to the Honour Victims of Slavery," http://www.unesco.org/new/en/culture/themes/dialogue/the-slave-route/right-box/related-information/international-competition-for-the-permanent-memorial/ accessed on March 14, 2014.

reminders of the lives lost. Imagine seeing these places marked on Google Maps. Figure 4.2

represents the slave deaths on John DeWolf's *Enterprise* alongside those of the vessels that

appear in the *Climatological Database for the World's Oceans 1750-1850* (CLIWOC).[54] Each

marker on the map represents a day when one or more slaves died. Out of the many thousands of

vessels that carried millions of slaves across the ocean, this image represents only 27 Dutch ships

(all of the eighteenth-century ships in the CLIWOC database that mentioned slave deaths) and

one American ship (DeWolf's *Enterprise)* for a total of 223 days on which slave deaths were

Figure 4.2: Locations of Slaves' Deaths aboard 28 Eighteenth-Century Slave Ships

Sources: Author's Database, CLIWOC Database, ESRI Basemap

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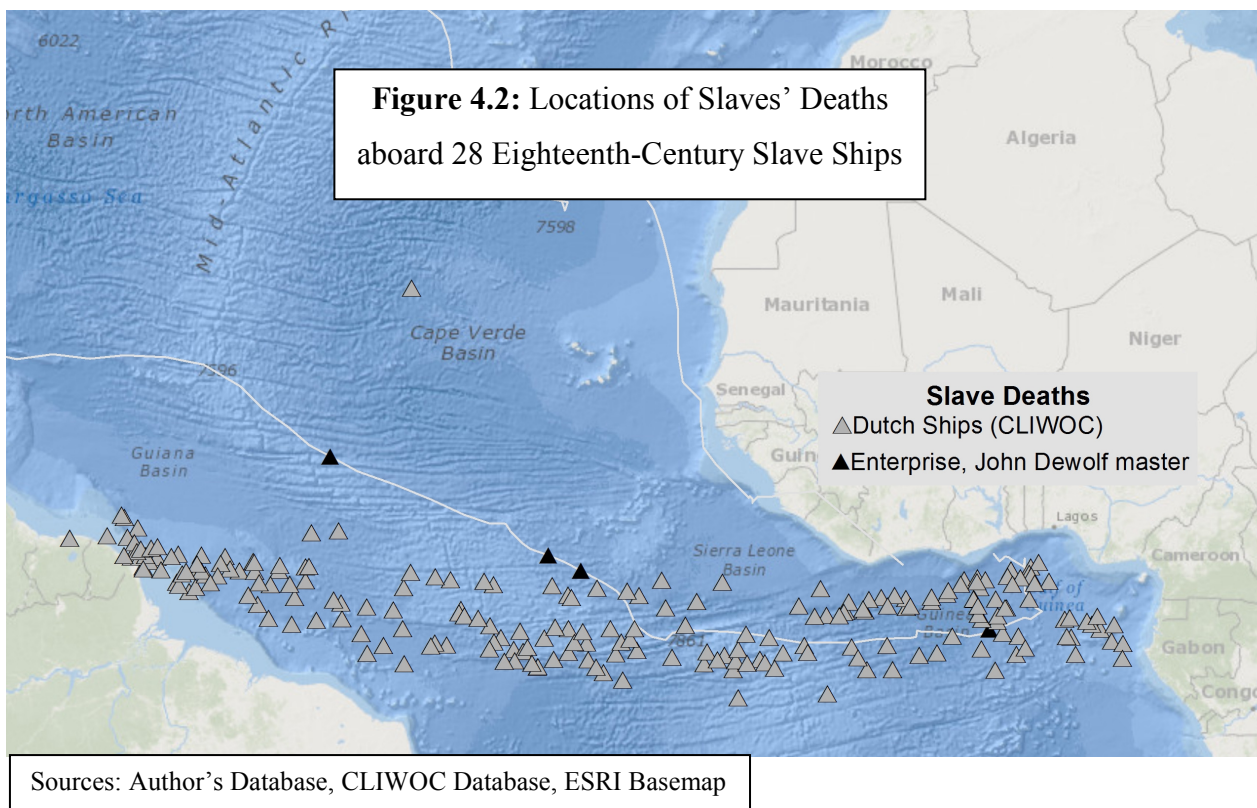
[54] See appendix for more details about these databases. The only logs that appeared to mention slave deaths in CLIWOC were Dutch. Entries drawn from CLIWOC were those that mentioned either "slaaf" (slave) or "slaven" (slaves) and either "overleden" (deceased) or "dood" (death) in the same day. These words appeared to be those most often associated with slaves' deaths, although those entries describing causes more precisely (drowning, a specific illness, etc.) could be overlooked in this blanket approach. The method used to select the entries was a simple search for the appearance of these strings of characters, so it also recognized compound words such as "manslaaf" or "vrouwslaaf." The search did not include a grammar component, so some entries may be misidentified as slave deaths if they include these words, but an eye-check of selected entries suggests that these cases are very few.

mentioned. Needless to say, these 28 voyages are a drop in the ocean when it comes to describing the slave trade. Many slaves died on these ships, and many, many more died on others. Most of these other vessels were British slave ships bound to the West Indies rather than the South American continent. Still, the map is evocative. Every mark stands for a place where a captive person died... at sea... thousands of miles from home... on his or her way to what would have been a life of forced labor.

If John DeWolf's voyage in Figure 4.2 seems to underrepresent the deadliness of the slave trade, it is because it does. As previously mentioned, John DeWolf's ship had an unusually high survival rate. This may have been due in part to his ability to secure doctor's drugs at sea. In other ways he also showed a remarkable dependence on resources available to him at sea during the Middle Passage. He fished frequently to augment his food stores. He also acquired food from other ships on three occasions out of fifteen sightings that he had on his passage back from Africa. He received porter, cheese, and bread from the unknown Londoner, onions and news from Captain "Dursee" of Rhode Island (DeWolf's home state), and a bucket of potatoes from a ship from Boston. DeWolf was even disappointed with Captain Collins of the Boston ship, commenting, "we Could not git aney suppies out of him Except on buckit of potatos." Cleary DeWolf had hoped for more despite Collins' having been out of port for 63 days and DeWolf's having been at sea for fewer than 40.[55] Food shortages generated conflicts and contributed to unhealthy conditions onboard, so DeWolf had reason to value these food-acquisition opportunities to augment stores that had been consumed since leaving Africa or that had never been plentiful in the first place.[56] What is more noteworthy is that he had come to depend on

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[55] Gorham, Logbook of the *Enterprise*, May 4, 1788, May 6, 1788, and July 29, 1788.

[56] Rediker, *Slave Ship*, 58, 205-206, 234-238.

them, a luxury that was afforded by the peacetime sea and that had not been available to Collingwood of the *Zong*.

From an epidemiological perspective it is also worth remembering that DeWolf's meetings included a ship known to carry several sick slaves. Billy G. Smith has recently pointed out how meetings among ships advanced yellow fever throughout the Atlantic and created a pandemic in 1793. The *Hankey* (decidedly *not* engaged in slave trading) set sail from Bolama, an island on the West African coast, with a very ill crew and passengers. Beset by disease, these abolition-minded British colonists had abandoned their effort to set up a colony at Bolama operated with non-slave labor. The *Hankey*'s few mariners were sick and soon died, many passengers died, and the captain proved to be an inept navigator. These conditions brought the *Hankey* into contact with several other vessels and mariners as it crawled from port to port. Naval officers on the *Charon* and *Scorpion* even sent men onboard to assist the distressed vessel. "But," Smith explains, "tragedy repaid their generosity when the men caught yellow fever and carried the pestilence back to their own ships. Within a week, thirty people died of fever on the *Charon* and fifteen on the *Scorpion*."[57] The captains had also sent a few men to stay on the *Hankey* and to help sail it home, but they quickly became infected. The *Hankey* carried yellow fever, a disease so deadly and transmissible that infected ships were expected to fly yellow flags (or "jacks") to signal other ships to stay away. Instead, as Smith tracks, the *Hankey* continued infecting new ships all the while that it crept around the Atlantic. Providing assistance brought new victims to perpetuate the infection and allowed the disease to spread much farther than it could have in a less connected Atlantic.

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[57] Smith, *Ship of Death*, 162.

More often than not, though, highly virulent diseases were not an issue, and meetings brought needed support. Other Atlantic merchants outside of the African trade relied on chance encounters for food and aid. Fish (caught or bought), beef, flour, bread, and general provisions from other ships supplemented rations as they began to run low. Captains also looked to other ships for the equipment needed to maintain their vast wooden contraptions. When he intercepted a prize already belonging to another American privateer during the Revolutionary War, John Foster Williams "Received out of her 8 Casks of Flour 8 firkins of Butter & some Cordage for the use of the Ship."[58] Other friendly ships delivered sail needles, staves, boards, empty casks, and wood.[59] Derelicts could be just as useful, assuming no one had already salvaged them. Isaac Gorham reported coming across a dismasted lumber-loaded sloop, but it had been "borded before and streped So that Got nothing out of hur worth menchening Except one smol anker."[60] One ship even caught a drifting canoe in port and cut it up for its wood.[61] Perhaps most importantly, ships that met at sea could find specific spare parts to keep them moving to the next port. The *North America* was sailing in company with several other ships when it needed a replacement, so it "got a spare yard from the Ship Tobago and got it out for a Sprissil yard."[62] The same

[58] Logbook of the *Protector*, 7/26/1780.

[59] Tucker, Logbook of the *Boston*, February 15, 1778; Logbook of the *Polly*, June 22, 1796; Logbook of the ship *Henrietta* (1796-1797), William Scoresby master, G. W. Blunt White Library at Mystic Seaport, Vol 44 of the Scoresby Family Papers, Coll. 55, June 9, 1797 and June 19, 1797; Logbook of the sloop *Neptune* (1776), Ephraim Briggs master, Rhode Island Historical Society Library, Providence, RI: MSS # 828, July 27, 1776.

[60] Gorham, Logbook of the *Beaumont*, March 21, 1785.

[61] Logbook of the *Polly*, July 1, 1796.

[62] Charles Gardner, Logbook of the *North America* (1797-1799), Nantucket Historical Association Library, Nantucket, MA: LOG 128, October 13, 1797.

merchant fleet ran across the *Young William* with its mast gone a few days later, and one of the

Indiamen supplied a spar for the repairs.[63]

Mariners also performed outright rescues at sea. On the morning of February 15, 1798 the

Federal George "Saw a Schooner To the Norworth appeard to Be In Distres We hove our

TopSales to the Mast and hove to for her She Bore Down and Spoke with us and twas the

Schooner Deborah of Newbury Poart She had Lost her Capt. 5 Days after She Saild and boath

masts and Boat Split we took out 3 men and a boy & Some Things." The logbook-keeper noted

that the *Deborah* "saild the 17 of December From Newbury Poart Bound for Surinam," so by the

time they were rescued the remaining crew had been adrift for two months without captain or

masts.[64] These men could have been doomed without airplanes or radio-coordinated coastguard

searches to help find them. Instead, they were lucky to drift into the middle of the populous west-

east swath of North Atlantic travel where they eventually found a good Samaritan.

As much as merchant mariners drew resources from the ocean and depended on its

community for support, they did so to a lesser degree than other seafarers. If anyone truly

occupied the sea as a space and incorporated that space into community life, it was whalers.

American whaling by both American Indians and Europeans had begun as a shore-based

endeavor. Residents harvested beached whales and killed distressed whales that came into

harbors or otherwise drifted too close to land. As early as the 1650s some Northeastern coastal

towns began sending out boats to hunt whales seen from tall lookout posts. Successful hunters

towed the carcasses back to shore for processing. Sometime in the early eighteenth century these

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[63] Gardner, Logbook of the *North America,* October 21, 1797.

[64] Henry B. Arnold, Logbook of the schooner *Federal George* (1798), Job Samson master, G. W. Blunt White Library at Mystic Seaport: Log 102, February 15, 1798.

land-bound whalers found the riches of deep-sea whaling and began pursuing sperm whales in addition to the right whales that often came near land. Over the course of the century American whalers sailed continually farther afield in search of their quarries.[65] By the 1790s Europeans and Americans whaled regularly in the North and South Atlantic Ocean, North Sea, and connected Arctic waters.[66] These whalers had also recently expanded their operations to the Pacific in the first of the *Moby-Dick*-style voyages that would become common during the nineteenth-century.[67]

For the American whale fishery the 1780s and 1790s were a time of reconstruction. The leading American whaling town of Nantucket had been hit hard during the Revolution. Nantucket stood out as an island isolated from the rest of Massachusetts, but this same isolated position that originally encouraged the whaling industry made the island impossible to defend during the war. Nantucketers tried to remain neutral between the rebellious colonies and the crown. They argued that the whaling industry was of great benefit to either party should they win, so it was to neither side's advantage to disrupt that industry. This middle course generally failed, because Parliament favored the development of English and Scottish whaling at the expense of the Americans (a sensible choice as it turned out), while American revolutionaries suspected Nantucket of directly aiding their enemies. Nantucket was at a low point when the war ended, having lost 83 percent of its fleet. At the same time foreign markets closed or imposed

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[65] Margaret S. Creighton, *Rites and Passages: The Experience of American Whaling, 1830-1870,* (Cambridge: Cambridge University Press, 1995),16-21. Eric Jay Dolin, *Leviathan: The History of Whaling in America*, (New York: W. W. Norton & Co., 2007), 37-47; Daniel Vickers, "The First Whalemen of Nantucket," *The William and Mary Quarterly* 40 no. 4 (Oct. 1983): 560-583.

[66] Creighton, *Rites and Passages*, 21.

[67] Lynette Russell, *Roving Mariners: Australian Aboriginal Whalers and Sealers in the Southern Oceans, 1790-1870*, (Albany: State University of New York Press, 2012), 30.

high taxes.[68] Nevertheless, whalers took advantage of the lull in warfare to revitalize their trade. Whaling was a way of life in Nantucket, New Bedford, and similar communities. Reinvesting kept them abreast of the trade that would only become more valuable as industrial facilities grew the demand for oil for lighting and lubrication.

Whaling and sealing brought together abnormally high concentrations of ships on the ocean. Whereas whalers encountered on average nine and a half ships (9.55) per day that they recorded longitude and latitude information, non-whaling vessels averaged slightly more than two meetings a day (2.08). Figure 4.3 represents the number of vessels seen by all kinds of ships in different parts of the ocean overlaid onto the routes of those ships.[69] Whalers in the arctic may not have consistently seen other ships as they approached the ice, but once there they tended to see more ships on a given day than was typical of vessels in the rest of the ocean. In other areas of the ocean, interactions with one or two vessels at a time were common, but large groups were unusual. In Figure 4.3 the more intense colors in the main basin of the Atlantic most often represent convoys rather than large collections of ships operating independently. For instance, the slightly more saturated colors in the northern swath of east-west travel represent the Revolutionary War grouping of the *Ranger, Providence,* and *Boston*.[70] The dark strip of markers from Europe southward off of the coast of Africa stands for the whaler *North America* on a

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[68] Dolin, *Leviathan*, 149-164; Norman Watson, *The Dundee Whalers*, (East Linton, UK: Tuckwell Press, 2003), 18; Creighton, *Rites and Passages,* 23. Norling, *Ahab had a Wife,* 92-96, 122.

[69] Figure 3 and the average numbers of ships met are based on my database of logbook entries but do not include the CLIWOC ships due to differences in transcription practices (the CLIWOC database does not uniformly provide counts of ships encountered). The limitation to days when ships recorded latitude and longitude is intended as a proxy for days at sea in order to exclude vessels described in port. Unfortunately, this method also excludes a number of whaling entries on the Arctic ice or in soundings off the coast of South America, because whalers often let their navigation records lapse in these areas.

[70] Tucker, Logbook of the *Boston;* Logbook of the Continental sloop-of-war *Ranger* (1778-1780), Capt. Thomas Simpson master, United States National Archives, Washington, DC: RG 45, entry 608 (4).

"Voyage to the South Whale Fishry" with around twenty other ships in 1797. The *North America* lost contact with the fleet of whalers and East Indiamen partway across the ocean. It then landed in Rio where it met up with the *Liberty* and rejoined the *Tobago*, a member of the original fleet. The three ships sailed south in hunt of whales together where they happened across "Several Ships," but not the tens of vessels commonly seen by their Arctic counterparts.[71]

Figure 4.3: Frequency of Encounters among Ships at Sea, 1769-1800

Ships Mentioned (count)
- 20 - 82
- 8 - 19
- 6 - 7
- 5
- 4
- 3
- 2
- 1

Sources: Author's Database, ESRI Basemap

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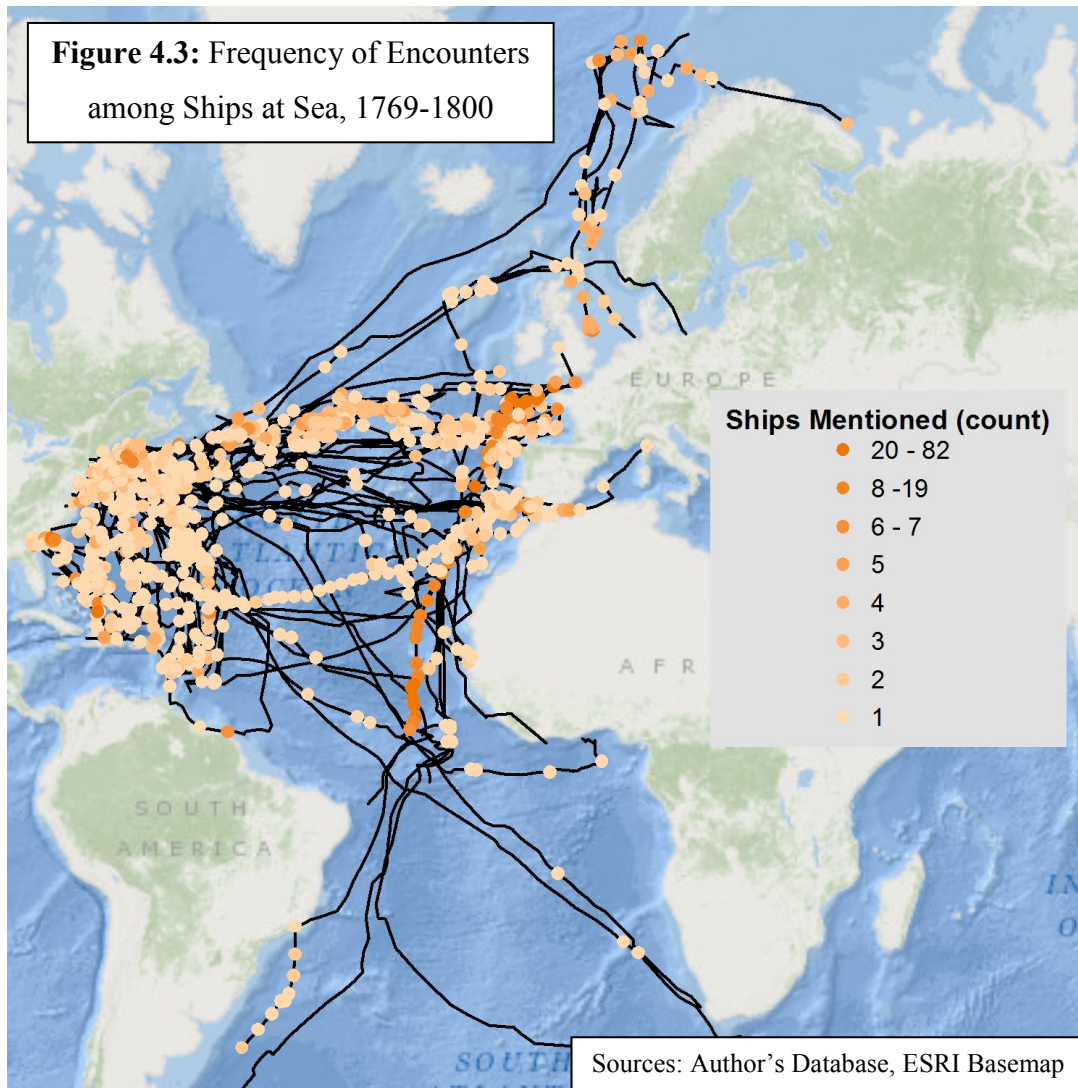
[71] Note that the day with several meetings does not appear in Figure 1, because the logbook keeper on the *North America* did not record his longitude that day. He was somewhere between the points of the last two meetings marked in Figure 1 and was "on the bank" in water between fifty and seventy fathoms deep. Gardner, Logbook of the *North America*. For comparison to Arctic waters see Richard Wheatland, Logbook of the ship *Perseverance*

Not only did Arctic whaling draw many ships close together, but the people on the

vessels were more likely to know each other than were the people on vessels that met in other

trades. William Scoresby of the *Dundee* impressively named all twenty captains in his Arctic

fishery fleet and noted their vessels' names and ports of origin in his log.[72] This sort of detail was

unnecessary in a fleet of merchantmen that might disperse in a few days never to see one another

again, but Scoresby's interest demonstrated the cohesion of the whaling community. Coming

from the same few ports and pursuing their sealing and whaling in the same seasons, many of

these men knew each other either from land or from meetings along the ice in a prior year.

Whalers built on the stability of their communities by working together. Whereas whalers

traveled in convoys during wartime to preserve themselves from attack, whaling in company

during peacetime had different effects.[73] On one hand, it allowed ships to support one another

when either had a windfall of multiple whales. When an entire pod passed by, two ships could

harpoon more whales than one ship, and they could collectively process the whales faster,

leaving less opportunity for spoilage. On the other hand, whaling together meant that the ships

had to share their profits. This could preserve both ships from coming back to port "clean,"

without any oil, but it also meant that the best turn of luck was only half as lucky.

Captain William Scoresby of the English whaler *Henrietta* made a scheme to work

together with Captain Wilkinson of the *Maria* in 1796. On June 6th Wilkinson's men were

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(1798), Peabody Essex Museum's Phillips Library, Salem, MA: LOG 1793V (OS) (not a whaler, but in the same waters); or Scoresby, Logbook of the *Dundee*. At one point the logbook keeper for the *Henrietta* counted "upwards of 50 sail in sight" along the Arctic ice. Logbook of the *Henrietta*, June 1, 1797.

[72] Scoresby, Logbook of the *Dundee,* March 13, 1798.

[73] The *Henrietta* log includes an agreement with four other whalers that they would sail in company for defense. Disobeying orders from the commodore would result in a £50 fine, and should any of the ships be captured the others would pay that captain £50 each. The agreement served as both a minor form of insurance and an incentive to fight off attackers. Logbook of the *Henrietta*, March 16, 1797.

flinching (cutting the blubber from) a whale that they expected would boil 90 tons of oil and fill

their remaining casks.[74] Presumably because Wilkinson had run out of casks, he and Scoresby

made a deal to split the gains of later whales. It failed miserably at the first test. Scoresby

recorded on June 9th:

> At Mer[dn] y[e] Maria struck a fish we called all hands sent 5 Boats to Kill y[e] fish –
> according to agreement Made the 6th Inst. between Capt. Wilkinson & Self that let
> wheather ship would strike, y[e] other ship should assist & y[e] Maria was to have y[e]
> ffin & Lips, & us y[e] Henrietta her Blubber, but he had not acquainted his
> Harpooners with y[e] agreement & they turnd mutanus & would not let her come
> alongside of us, saying that there Master should not give away there property but
> Capt. Wilkinson behaved Honourable & would have had the people to have
> concented to let us have y[e] Blubber[75]

The harpooners won the day, and perhaps they contrived some extra casks to store the remaining

oil. The next day brought a renegotiation to compensate Scoresby for his trouble:

> At Noon one of y[e] Marriah Men saw a fish Dead & as I clamed part of the fish
> they got Yesterday they Offered us the dead fish if I would give their people a
> present of twenty five Ginueas, [sic] however I concented to Give them fifteen, as
> it was no object for to get such a fish as she appeared to be, also that part we
> where likely to get of y[e] other fish was not to be depended upon except y[e] Law
> would give it & that I could not be sure off altho I had two Witnesses I thote it
> best to take a little & have done. she was 8 feet 8 I. Bone[76]

This final plan ended the dispute with Wilkinson taking the entire first whale and Scoresby

buying a second whale that a man on the *Maria* had found dead. This was not an insignificant

transaction. When Scoresby tallied his total haul for the voyage, he counted nine whales of his

own plus the whale he had purchased from the Maria, so it proved to be a substantial part of the

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[74] Logbook of the *Henrietta*, June 6, 1796.

[75] Logbook of the *Henrietta*, June 9, 1796.

[76] Logbook of the *Henrietta*, June 10, 1796.

season's yield.[77] The harpooners and Scoresby each felt that they had the stronger legal claim, but they were also thirteen degrees of latitude farther north than the nearest piece of British soil and even farther from the nearest British court. It would have been particularly difficult to take the case to court after they returned, because the *Henrietta* was from Whitby, the *Maria* was from Hull, and their men (who may have joined in other stops along the way) were paid according to fractions of the overall yield.[78] Relying on land-based courts would have only muddied the waters, so the parties settled at sea.

Other types of vessels showed similar efforts at coordination, but different incentives in different trades made for different outcomes. When Francis Boardman of Salem came into the harbor at Cape Francis he commented, "this place full of Amaricains /beloing to Salem & Beverly." Rather than being pleased to find familiar faces from his homeport, Boardman complained that the markets were "Very Loe."[79] He had been beaten to market and would sell his cargo with difficulty, if at all. He soon hopped islands to Hispaniola, where he put in at Port-au-Prince only to find more Americans there. He got along well with one of them, Captain John Palmer from Salem in the appropriately-named *Friendship*. The two sailed in company to another port where they went on land together and sent a boat ashore to get salt and beef. Palmer sailed again a few days later to acquire the rest of his salt, leaving Boardman alone for a time,

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[77] Logbook of the *Henrietta*, June 27, 1796: "at 8 AM arrived in Whitby Road[s] with Whales of our own Killing & one of 8 feet Bone Bought of the Marria of Hull for 15 Gunieas___ [next line] 9 Whales boiled 113 tons of one Paid for [next line] 110 Tons"

[78] The following season, for instance, the *Henrietta* and several other vessels picked up crewmen in the Shetland Islands. Many of these men agreed to contracts paid only by the month spent at sea rather than by a combination of time and oil obtained. This made sense, because whalers did not always finish processing the oil before returning to port, so the *Henrietta* had to discharge several Shetland men before paying the wages calculated by the ton. Logbook of the *Henrietta*, March 24-29, 1797 and June 14-19, 1797.

[79] Boardman, Logbook of the *Hind*, March 13, 1785.

but the two had made plans to meet again. In two days Boardman "stood for the River Artibonito for to guit water allso to meet Cap[t]. Palmer acording to agreement." Boardman's boat returned with two barrels of water and some bad news. Boardman wryly logged, "Cap[t]. Palmer had Saild Last evening a true truth of a Salem Man for not 1 to 10 of them stand to there word – maid sail."[80]

Palmer was rude but shrewd. Boardman had observed that the influx of Salem and Beverly ships had depressed West Indian markets, and the return of these ships with similar West Indian cargoes would do the same in Massachusetts. Palmer's head start would have helped him secure slightly higher prices, albeit at Boardman's expense. It would have helped, that is, if Palmer had stayed ahead. Instead, three days after their missed connection at the river, Boardman spotted a schooner "wich I take to be Capt Palmer."[81] The two eventually returned to Salem on the same day.[82] Palmer had lost what little edge he had gained by leaving the river early, and he probably had some explaining to do.

Whalers also saw advantages in returning home sooner than the competition, but returning quickly with an empty hold was no help. Profit depended on the number of animals they could kill and the amount of oil they could render. More time usually meant more oil. In addition to tracking their own gains, sealers kept an eye on each other to gauge the fishery's yield. The *Henrietta* and the *James* were at sea together on two occasions almost exactly a year

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[80] Boardman, Logbook of the *Hind*, March 19 – April 28, 1785

[81] Boardman had already noticed that his brig outsailed Palmer's schooner when they had been sailing together. Why Boardman did not make it back to Salem well ahead of Palmer is a bit of a mystery but may have something to do with the time he spent dawdling with other vessels after seeing Palmer. Boardman, Logbook of the *Hind*, April 22 – May 6, 1785.

[82] The marine list in the May 24, 1785 issue of *The Salem Gazette* reported that both Palmer's *Friendship* and Boardman's *Hind* entered on May 23. Accessed through America's Historical Newspapers on March 4, 2014

apart, but the yield starkly differed. On April 6, 1796 the *James* had 130 seals and some nearby

ships from Hamburg and Denmark had 200-250 seals apiece. The next year, on April 8, 1797 the

Henrietta "Spoke the James of Liverpool which has been amongst the Ice ever since 10 March &

only got one seal he says the Hull Ships is to the Eastward & the Deans to the NW of us the

former he left ye 6 Inst. ye latter we saw past part of them yesterday none of which had any seals.

also ye Venus of D^o with one Seal."[83] The *James* had been collecting information from other

ships just as the *Henrietta* was collecting information from the *James*. Rather than finding

themselves isolated after they put out to sea, these men relied on and perpetuated an Arctic ice

sealing community that lasted from year to year and extended from port to port.

The Arctic sea ice was hardly a stable geography, but it was a place where ships

congregated, unable to penetrate deeper and farther north. American long-haul whalers found

themselves in a different situation. They came to depend on broader stretches of ocean extending

first off the coast of North America, then past the Caribbean and along the eastern continental

shelf of South America, and eventually into the Pacific. In comparison to the Arctic ice, these

whaling grounds were vast and did not have the edge of the ice to concentrate predators and

prey. This meant that American whalers dispersed on the surface of the ocean more than their

Arctic whaling and sealing contemporaries.

Instead of staying in sight of one another all season, this community maintained

connections at sea through intermittent mail delivery. Lisa Norling has explained that whalers

and their loved ones at home kept in touch by sending letters on outbound or inbound ships.

These letters relieved some of the pain of separation for husbands and wives or for mothers and

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[83] Logbook of the *Henrietta*, April 6, 1796 and April 8, 1797.

153

sons. Both the whaler at sea and his family at home expected the other to write whenever possible.[84] Receiving and sending letters at sea was not limited to whalers, but it was uncommon. Of over 3300 logbook entries at sea in my database, only one mentions sending a letter via another ship spoken in the middle of the ocean; Thomas Nicolson put a letter for his wife on a Plymouth-bound ship he spoke about 500 nautical miles north of Hispaniola.[85] Putting letters directly on other vessels was common, but it usually happened in or near port and therefore matched the normal posting process for people living on land.[86] That whalers were able to deliver letters from ship to ship in their vast domains was a testament to the coherence of their community. It also helped keep that community whole.

<center>~</center>

In some ways, this chapter could appear to be a collection of unrelated anecdotes of ships meeting at sea. What do these evocative meetings at sea have to do with one another and with Atlantic History writ large? Simply put, these meetings occurred only because the ocean was full of ships and the people on those ships sought to engage with one another. These meetings could not have happened had the Atlantic been less full, and they were more likely to happen in those areas where it was fullest. Mariners knew this. Rather than being isolated at sea every time they

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[84] Norling, *Ahab had a Wife*, 76-79.

[85] Thomas Nicolson Logbooks, (1766-1813), Massachusetts Historical Society Library, Boston, MA: Ms. N-590, January 17, 1779. The closest similar situation was when the *South Carolina*'s logbook keeper had been transferred to a prize brig that the *South Carolina* had in tow. He wrote a letter to the captain of the *South Carolina* to describe the condition of the brig and contrived an ingenious way to deliver it: "we Got them to Vear A Line A Starn and we had the Letters Corked up in a Junk Bottel & we Maide the Line fast & tha Halle[^]d. the Bottel on Board." Logbook of the frigate *South Carolina* (1781-1782), United States National Archives, Washington, DC: RG 45, entry 609, October 22, 1781.

[86] Edward Sargent, Logbook of the ship *Dispatch* (1775-1776), New Hampshire Historical Society, Concord, NH, Logbook & Accounts, 1771-1802. 1972-30, January 25, 1775; John Hamilton, Logbook, July 6, 1798; Boardman, Logbook of the *Hind*, March 11-15, 1785.

sailed, they reentered an international world with conventions for friendly communication and expectations for assistance. Sometimes specific trades added extra layers of sociability to the general conventions. All in all, these shared conventions and the meetings they spawned constituted a society in much the same way that greetings on the street and prolonged visits constituted societies on land. The major difference was that chance meetings on land were local, limited to people who lived in the same town or neighborhood, while those at sea were both local and hemispheric, limited to whomever was sailing in the same region, which often meant people from ports thousands of miles apart.

The society of the peacetime Atlantic had its ups and downs. Nearby ships spoke or gave the cold shoulder. Conversations yielded useful information or nothing at all due to language differences. Whalers coordinated their hunts or bickered over whale ownership. Captains exchanged goods and services from ship to ship, though not always to the full satisfaction of one of the parties. Efforts to communicate and work together were balanced by the competing needs of individual vessels. This should sound familiar. Far out on the ocean, thousands of miles and several weeks from land, seafarers on different vessels lived in a single Atlantic community. It was this community that carried the passengers, slaves, goods, letters, and ideas that united (and divided) the larger Atlantic World. It was this community at sea that gave the peoples around the Atlantic common ground.

Chapter 5: The Costs of a Quasi-War

On the floor of the Senate, March 3, 1891:

Mr. REAGAN: I want to say that this section of the bill is an illustration of the idea that generations may come and generations may go, but the lobbyist and the claim agent live on forever. There are claims coming up a hundred years old. The people who originally had them have been dead for generations, but still the thing goes on from time to time, and I presume nobody is interested in these claims now but lawyers and claim agents. The claims ought not to be allowed.

Mr. HOAR: Mr. President, justice lives more than one generation in this world. Honor is permanent; the public faith of the Government is permanent; and if ever there were anything to which justice, honor, and the public faith of the Government have been pledged, the payment of these claims, as declared by the great statesmen of this country ever since the claims arose, including the great statesmen and leaders of the South, the Democracy, has been pledged.

Mr. REAGAN: Mr. President, all I desire to say is that it does not seem to me that a claim which involves the honor and justice of the United States could stand unadjusted for a hundred years.[1]

By the 1890s, the very age of the claims had become an argument against them. Senator John H. Reagan's skepticism was justifiable: what claims that involved the honor, justice, and public faith of the nation could have gone for so long without a response? Then again, his own argument was showing its age, too. Decades before, on April 4, 1864, Charles Sumner had reported, "It is said that the claims are ancient and stale, and, therefore, should not be entertained. It is true that these claims are the most ancient of any now pending, and that they date from the very origin of our existence as a nation.... But as, from the beginning of the century they have occupied the attention of congress and have been sustained by speeches, reports, and

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[1] Comments of Senators George Frisbie Hoar and John Henniger Reagan as reported in the *Congressional Records* vol. 22, 51st congress 2nd session (March 3, 1891), 3833.

votes, it is impossible to say that they have been allowed to sleep."[2] Ever ancient yet never stale, these were the French Spoliation Claims, multi-million-dollar maritime legacies of a war long-since forgotten, if it was a war at all.

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The story begins a century earlier than Senators Reagan and Hoar's debate, with the French Revolution of 1789. As the revolution became more violent, internal attacks on the French nobility soon translated into larger threats to the European order. France declared war on Austria and Prussia. By April 1793 nearly all of Europe arrayed itself against France in the War of the First Coalition, the first of the French Revolutionary Wars.[3] The French Revolutionary Wars and the subsequent Napoleonic Wars dominated European affairs for decades and likewise spilled over the Atlantic where the warring nations had colonies or interests.

For the United States, 1793 marked its first occasion to define its position in a war other than that of its own independence. The statesmen of this country with a long coastline, strong British trade connections, and a nonexistent navy opted to avoid entering the war despite treaty obligations to France dating to 1778.[4] In his neutrality proclamation (that for constitutional and diplomatic reasons studiously avoided the word *neutrality)* President George Washington observed that "the duty and interest of the United States require, that they should with sincerity

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[2] Quoted in 51st Congress, 2nd session Report No. 2320, February 18, 1891, 19.

[3] Owen Connelly, *The Wars of the French Revolution and Napoleon, 1792-1815* (London: Routledge, 2006), 21-34.

[4] On the condition of the American navy, see Michael J. Crawford and Christine F. Hughes, *The Reestablishment of the Navy, 1787-1801: Historical Overview and Select Bibliography* (Washington, D.C.: Naval Historical Center, 1995), 4-9.

and good faith adopt and pursue a conduct friendly and impartial toward the belligerant [sic]

Powers."[5] French officials may have expected aid from their allied republic, but it was not to be.

The proclamation was intended for a European audience, but it emphasized regulating the

actions of American citizens. In order to maintain a friendly diplomatic disposition toward all

warring powers, Washington saw fit to "exhort and warn the citizens of the United States

carefully to avoid all acts and proceedings whatsoever, which may in any manner tend to

contravene such disposition." The proclamation explained that the United States would not

protect Americans who aided the belligerents by any means, including carrying contraband, and

that federal officers would prosecute violations of the law of nations that fell within American

jurisdiction. Washington's emphasis on the American citizenry implied that individual citizens'

actions could lead the country into war even though his administration desired peace. The safety

of the nation as a whole demanded that it distance itself from rogue American smugglers.

The proclamation was necessarily a one-sided means of defining neutral status.

Washington was able to encourage American citizens to limit their actions, but questions

remained as to how belligerent nations would relate to non-belligerent Americans. Most of these

questions related to commitments at sea: If Americans were not supposed to carry contraband,

what counted as contraband? Who would make sure they carried only acceptable articles? France

had treaty rights with the United States following the two nations' alliance during the American

Revolutionary War, but how far did those rights extend? Did France have the right to use

American ports to outfit privateers, for instance? On the other hand, did the United States have

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[5] George Washington, "The Proclamation of Neutrality 1793," April 22, 1793, accessed through the Avalon Project, http://avalon.law.yale.edu/18th_century/neutra93.asp , October 17, 2013.

the responsibility to protect foreign merchants from capture in its territorial waters? For that matter, where were its territorial waters?[6]

These and other questions that arose in 1793 were important because eighteenth-century warfare incorporated capture on the high seas, "spoliation," as an essential element of overall military strategies. Capturing an enemy's merchant ships was productive on multiple accounts: it generated income for the capturing country, starved the enemy's economy, and encouraged the enemy to spread its naval resources more thinly in order to defend its merchants. Needless to say, it became dangerous and expensive for belligerent countries to carry their own goods using their own ships during wartime. Neutral carriers like the United States in the 1790s could make great profits because their ships and goods were, in theory, not subject to capture. Maximizing the rights of neutral carriers enabled American merchants to make the most of this opportunity, but minimizing neutral rights in targeted ways helped belligerents like France and Great Britain to continue to starve one another of resources.

Manipulating neutral trade became an indirect way for France and Great Britain to wage war. In February 1793 France enticed more neutral trade by opening its ports to American vessels on the same favorable terms as French vessels. In May France augmented this pull tactic with a push. In order to discourage neutral trade with Great Britain, the French National Convention decreed that neutral vessels loaded with provisions (not just contraband or enemy property) and bound to enemy ports could be seized by armed French ships. Contraband and enemy property would be confiscated, as would the provisions, but the neutral ships' masters would be compensated for the sale of the provisions. This May 9, 1793, decree was an important

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[6] Charles Marion Thomas, *American Neutrality in 1793: A Study in Cabinet Government* (New York: Columbia University Press, 1931).

innovation, because it dramatically limited the freedom of neutral ships to trade wherever they wished. Significantly, the United States was quickly excluded from this decree in recognition of the 1778 Treaty of Amity and Commerce.[7]

Of course, two could play that game. Great Britain applied a similar policy on June 8th with an Order-in-Council to its naval commanders. Unlike France, Great Britain was not bound by a commercial alliance with the United States, so its policy did not exclude American vessels from capture and redirection.[8] Spain, a British ally, took a similar position with its *ordenanza de corso* on May 1, 1794. Like the British policy, the *ordenanza de corso* allowed armed vessels to redirect American ships headed to French ports. Captors would bring these American vessels to Spanish ports where their non-contraband goods would be sold and their owners compensated for the goods' appraised value.[9] Such obtrusions into American trade limited the potential for profit by diverting goods from ports where they were in high demand. More importantly, they brought the United States directly into the fray, making it difficult for the country to appear neutral.

Taken together, policies of this kind demonstrated that the United States could not expect other countries to respect customary rights to neutral shipping without having a treaty in place. Only France had a treaty with the U.S., and only France made exceptions for American merchants. The Jay Treaty of 1794 between the United States and Great Britain was a timid first

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[7] Samuel Flagg Bemis, *Jay's Treaty, a Study in Commerce and Diplomacy* (New York: Macmillan, 1923), 154-155. For the texts of these decrees, see *American State Papers: Documents, Legislative and Executive, of the Congress of the United States. Class I.: Foreign Relations,* (Washington, DC: Gales and Seaton, 1832-1861), 244.

[8] Bemis, *Jay's Treaty*, 154-159.

[9] Samuel Flagg Bemis, *Pinckney's Treaty: A Study of America's Advantage from Europe's Distress, 1783-1800* (Baltimore: The Johns Hopkins Press, 1926), 297-301.

step in securing American neutral rights. The dual-purpose treaty both resolved long-lasting

conflicts regarding the American frontier and set the rules to protect American merchants from

depredations by British ships. In return for frontier concessions, it officially allowed British

agents the right to confiscate French property on American ships and contraband items that

Americans were carrying to French ports. Article XVIII of the treaty defined contraband fairly

narrowly as weapons, implements of war, and materials for the equipment of ships, but it also

allowed for the possibility that other items might come to be considered contraband later. These

prospective types of contraband, a tacit reference to the basic provisions and foodstuffs that were

already being seized, could be confiscated as long as the neutral merchants were paid the full

value of the items plus reasonable profit, freight costs, and demurrage (compensation for

delaying them on their voyage). Other articles of the treaty established the infrastructure to

resolve disputes over captured goods and vessels.[10]

The Jay Treaty limited British depredation to some extent, but it was hardly a favorable

outcome for American merchants. By allowing British inspection, confiscation, and redirection

of American vessels, the United States submitted to existing practices that it had considered

affronts to national sovereignty and neutral rights. Even carrying non-military provisions owned

by Americans, an American ship could now legitimately be driven away from a voyage to

France.[11] In contrast, the United States obtained much more favorable terms in its 1795 treaty

with Spain. Pinckney's Treaty (also known as the Treaty of San Lorenzo, where it was

negotiated) specifically excluded provisions from the category of contraband, acknowledged the

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[10] *The Jay Treaty*, Nov. 9, 1794, Articles XVII-XVIII. Accessed via http://avalon.law.yale.edu/18th_century/jay.asp on December 3, 2013.

[11] Bemis, *Jay's Treaty,* 260-266; Greg H. Williams, *The French Assault on American Shipping, 1793-1813: A History and Comprehensive Record of Merchant Marine Losses* (Jefferson, NC: Macfarland, 2009), 16-22.

principle of free ships-free goods (meaning that goods owned by non-neutrals were safe from confiscation if they were found on neutral vessels), and granted ships of either Spain or the United States the freedom to sail among ports belonging to the other signatory's enemy.[12] Pinckney's Treaty again tied American neutrality at sea to territorial disputes on the North American continent, but historian Samuel Flagg Bemis has pointed out that this connection worked in the American negotiators' favor. Spanish negotiators did not yet know the terms of the Jay Treaty, but they had reason to suspect that Britain's separate negotiations with the United States might have harmed Spanish interests in the New World. American negotiators were able to secure more favorable terms in Spain than in Britain as a result of fortunate timing.[13]

As weak as the Jay Treaty was from an American perspective, it was even worse from a French perspective. The 1778 Treaty of Amity and Commerce had put France at a disadvantage, because the French could not search and detain American vessels in the same way as the British did. Now the British retained this advantage with the official sanction of the Jay Treaty. Not only had the United States accepted an unequal and therefore non-neutral position between France and Britain, but it had also slipped away from its original ally in the process.

Responding to the Jay Treaty's ratification, French privateers began capturing American merchantmen in large numbers. On July 2, 1796, the French Executive Directory made its new policy toward American vessels official. Alluding to the Treaty of Amity and Commerce with the United States, the Directory reasoned that if the advantages of a treaty "should turn to the benefit of our enemies, either through the weakness of our allies, or of neutrals, or through fear,

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[12] *Treaty of Friendship, Limits, and Navigation Between Spain and The United States* (Pinckney's Treaty), October 27, 1795, Articles XV and XVI. Accessed via http://avalon.law.yale.edu/18th_century/sp1795.asp on December 3, 2013.

[13] Bemis, *Pinckney's Treaty*.

through interested views, or through whatever motives," such an event "would, in fact, warrant the inexecution of the articles." In essence, the Directory acknowledged the irony that the British gained more from the 1778 Franco-American Treaty of Amity and Commerce than did the French. It therefore decreed that "the flag of the French Republic will treat neutral vessels, either as to confiscation, as to searches or capture, in the same manner as they shall suffer the English to treat them."[14] This decree continued the practice of waging war by manipulating neutral rights, but because the United States was not excluded from this policy, France violated a standing treaty.

By 1797 United States Secretary of State Timothy Pickering had accumulated a list of many grievances against France including illegal captures at sea, non-payment of French debts due to Americans, and other mistreatment of seamen and property in violation of Franco-American treaties.[15] Attempts at diplomatic settlement were unsuccessful. The so-called XYZ Affair delayed negotiations, and once it became public, it shattered positive American attitudes toward their allied co-republic. Negotiation was a dead end; only force remained.

July 7, 1798 is commonly considered to be the beginning of the Quasi-War. On this day the United States suspended its treaties with France, but it did not officially declare war.[16] Indeed, neither the United States nor France declared war for the duration of the conflict, which lasted until it was resolved by treaty in 1800. The Quasi-War was unusual in that it consisted entirely of captures on the high seas; French naval vessels and privateers captured American

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[14] *American State Papers: Foreign Relations* 6:28-29.

[15] Alexander DeConde, *The Quasi-War* (New York: Scribner's, 1966), 8-9.

[16] Howard P. Nash, Jr. *The Forgotten Wars: The Role of the U. S. Navy in the Quasi War with France and the Barbary Wars 1798-1805*, (South Brunswick: A. S. Barnes and Co., 1968), 59.

merchants, and armed American ships in turn captured armed French vessels. The war became a high-stakes game of red rover, and sometimes the same vessel was captured and recaptured multiple times.[17] The Quasi-War has largely slipped from American historical memory. Its economic effects were mixed, and it has generally been overshadowed by the more dramatic War of 1812 and the more intriguing Barbary Wars.[18] Nevertheless, it is important as the first of several undeclared wars in American history. Precisely because it was not declared, this forgotten war had a surprisingly long legacy. It generated hundreds of lawsuits that kept congressmen like Senators Hoar and Reagan arguing into late nineteenth and early twentieth centuries.

The Quasi-War was limited to action at sea, but what made it even stranger was that it focused on civilian merchant ships. Neither France nor the United States was interested in territorial gains or in subduing the other's navy outright, so neither country besieged or invaded the other directly. Instead, seizures of merchants and subsequent attacks on their captors were reciprocation in-kind for specific wrongs between allies. By attempting to maintain their friendship and therefore failing to declare war, both nations focused the action on capturing and protecting merchants. Ironically the same undeclared-war status that had targeted merchants became their legal protection when the war ended. If the two nations were not at war, and

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[17] The *Croyable/Retaliaion/Magicienne/Retaliation* was strangely twice a French vessel and twice American, but many ships were both captured and recaptured, either before reaching port for condemnation or after they had been resold. Frederick Leiner, *Millions for Defense: The Subscription Warships of 1798*, (Annapolis: Naval Institute Press, 2000), 44. DeConde, *Quasi-War*, 127.

[18] The economic effects were mixed because, although many American vessels were captured, those that were not captured reaped the enormous rewards of the neutral carrying trade. For statistics regarding American trade during the Quasi-War, see James R. Fichter*, So Great a Proffit: How the East Indies Trade Transformed Anglo-American Capitalism* (Cambridge, MA: Harvard University Press, 2010), 86-90.

particularly if the treaties between them were still valid, the vast majority of captures were illegal, tantamount to theft. Merchants sued for compensation.

These legal battles reveal the problematic identification of individual with nation during the Quasi-War. Private merchants, often captured by privateers that were lately merchant vessels, themselves, were manifestations of their nations in the international world of the Atlantic Ocean. Privateers held official commissions, but the merchants they captured were uncommissioned, unelected, unappointed representatives of their nations. By attempting to trade, these merchants contended for American neutral rights; by being captured, they constituted American sovereignty under attack; by fighting court battles against their captors, they engaged in the same negotiations for neutral rights as their official diplomats; by demanding protection at sea, they drew the United States into war. In his proclamation of 1793 Washington had implied that it would be American citizens, not officials, who might draw the United States into war, and the Quasi-War proved him right.

Then came the kicker: although civilian merchants could initiate a war and fund vessels to fight it, only their official representatives could resolve it. At the close of the war individual American citizens ceased to be parties on the international scale. The United States aggregated and assumed shippers' grievances against France during peace negotiations. The Convention of 1800 (Treaty of Môrtefontaine) ended the Quasi-War between the United States and France but failed to secure compensation for the individual owners whose goods had been seized. Merchants were again subsumed within their state, but the war was not yet over for them; the merchants turned their legal warfare on their own nation.

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Consider John Gilbert Clark. As master of the schooner *Frederick*, Clark was active in the Senegal gum trade during the Quasi-War. His logbook details a voyage from New York to the French colony of Senegal in March and April of 1798 and a second leg from Senegal to England in August and September.[19] Clark had the normal collection of complaints during these voyages, including bad weather and a leaky hatch that was damaging the cargo.[20] He also had a few wartime scares. On April 10th he received shots in the mainsail and jib from two vessels, but this engagement amounted to nothing after he spoke with the vessels. On the second leg of this voyage the *Frederick* was boarded by Captain Young's *Sally Ann* of Liverpool. Young examined Clark's papers and let him continue on his way. Young also boarded the *Frederick* in friendlier sense of the word; he gave Clark some "Porter Chiss [cheese] & Potatoes" before leaving.[21]

Undeterred by quasi-warfare, Clark continued in the gum trade in 1799. He again sailed from Senegal in April 1799 at the beginning of a voyage to Hamburg. He again met with a would-be captor. At 5AM on May 3rd he "saw a Sail of our Starbord Quarter standing for us." At 9 AM "she Hoisted English Coulor at 10[AM] Fir^d. a Musdull [Muskett?] & hoisted french Coulars and orderd us to Heave too at 1/4 past ditto [10:15 AM] the boat Borded us after Examinig our papers discharge us Very polite and in formed us that the affairs of france & America was settld." This French privateer not only was "Very polite" but also brought good news that the misunderstanding between the two nations was over. This good news was

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[19] Clark carried a cargo on behalf of the French Minister in New York on his voyage from New York to Senegal, a colony that was reportedly in great distress at the time. JGC Papers, folder 4, Petition from John G. Clark to the Ministre de la Marine et des Colonies dated December 19, 1800.

[20] JGC Papers, logbook of the *Frederick*, 3/27/1798: "we find by the Sevear Weather and Labroing [sic] Hard has made hur Leak very Much in hur Upper works and fear much of our Cargo will be damaged After All precaution being Taken".

[21] JGC Papers, *Frederick*, April 10, 1798 and August 22, 1798.

incorrect, but Clark had little reason to worry, anyway. The privateer's captain pronounced his documents to be "Very Regular," which made the *Frederick* an unsuitable prize. Clark was back on his way "after the detention of an houre."[22]

Several days later near the Iberian Peninsula, Clark met another French privateer. Captain Henry of *L'Ariège* had a different opinion of Clark's papers. Captain Henry complained that the ships' papers were too old, signed by the wrong people, and in one case written rather than printed. Perhaps Henry was just a stickler for standardization in a non-standardized era, but Clark thought he had other motivations. Clark later wrote, "after finding my Cargo was Valuable he began to Calculate what it was worth and then Concluded that my papers was Not regular." Henry also pointed out that Clark did not have an official clearance from the port of Senegal, but on this count Clark had a trump card. Clark was "Luckey" to have the captain of that port onboard as a passenger. This star witness promptly explained that Senegal's governor never issued clearances, but that the schooner had indeed loaded in Senegal.[23]

Despite Clark's objections, Captain Henry took the *Frederick* and its cargo of gum and ivory into La Coruña ("Corrunna") to have it condemned. Clark's only protection was his paperwork, so although he could not prevent the prize master from seizing his ship, he carefully demanded receipts for all of the documents taken from him. Once in port, Clark continued the fight. He turned for support to the American consulate and to the Senegal port captain, who "Quite abused the Capt of the Privateer" and was "not a fraid to speak his mind" on Clark's behalf. The American Vice Consul was confident that Clark would be cleared in La Coruña in a

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[22] JGC Papers, *Frederick*, May 3, 1799; JGC Papers folder 2, Letter from John Gilbert Clark to George Smith dated May 17, 1799. Unless otherwise noted, letters from this collection cited in this chapter were written by Clark.

[23] JGC Papers folder 2, Letter to George Smith dated May 17, 1799; Williams, 152.

few days, but was "Afraid that the Agent of the Cruser will Appeal to a Tryal in France." Clark shared his fear, worrying that he might face the same fate as other Americans whose vessels were condemned upon appeal in French courts. "In the case of an Apeal," he strategized, "I Shall follow my Papers Where Ever They Go."[24]

Two weeks later on June 1, 1799, Clark received a ruling in his favor from the local French Consul. The consul's ruling that the *Frederick* should be released made the privateers liable to return the ship and to compensate Clark and the other owners of the *Frederick* for any damages they had sustained. Savvy to the court system and eager to delay until they could receive orders from their owners, the privateer's officers protested the consul's judgment on the grounds that he did not have testimony from the *Frederick*'s mate. The mate was likely to confirm Clark's testimony, but his absence was a convenient stalling tactic. During the capture the mate and the rest of the *Frederick*'s crew had been ferried to the privateer while the *Frederick*, its captain, and its passengers sailed to La Coruña under a prize crew. The privateer had captured a Danish brig from St. Croix shortly after sending the *Frederick* into port, so the privateer and all aboard it were conveniently subject to a forty-day quarantine when it arrived in La Coruña. As long as the quarantine was in effect, the officers of the privateer could withhold the *Frederick*'s mate's testimony, giving them more time to angle for an appeal. Luckily for Clark, the privateer officers made a mistake; they came onshore. Clark pointed out that the officers had been frequently onshore in violation of the quarantine, a devastating accusation if

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[24] JGC Papers folder 2, Letter to George Smith dated May 17, 1799.

their ship had carried a disease. He coerced the officers into releasing his mate's statement and moved one step closer to a ruling.[25]

Clark reported on June 22nd in one of many letters to his business partners that the French Consul was again prepared to rule in his favor but was unwilling to do so. The privateers were very dissatisfied with the judgment, so the consul waited to pass the case to the new consul who had recently arrived in the port. All of these delays spelled doom for Clark. He wrote that a French sloop-of-war "Brought nuse of the Americans taking Every french Vessal that they met with and I believe on the hopes of a war between france & America they will Appeal to Nants." The official declaration of war, hovering ever on the horizon, kept the captors' hopes alive while slowly eroding Clark's confidence in his case. The fact that the *Frederick* had been captured off of the Iberian Peninsula and brought into a Spanish port for condemnation had been a slightly lucky break for Clark. The geography of the capture and condemnation kept the privateers' owners at a distance and had at least temporarily prevented them from using the home court advantage they would gain by appealing to Nantes. In addition, up to this point Clark had been able to resist surrendering his vessel to the French authorities, something that he no doubt would have found more difficult in a French port. By June 22nd, though, he did finally have to surrender his ship. He could no longer protect his property against plundering but merely hoped that the eventual ruling on his case would carry the authority to recoup his losses after the fact.[26]

Just as Clark and the American Vice Consul had feared, the privateers' owners appealed the decision to the Civil Tribunal of the Loire-Inférieure at Nantes. The privateers' appeal was

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[25] JGC Papers folder 2, Letter to Doty Franklin dated June 8, 1799. Letter dated June 12, 1799. Letter to George Smith dated June 22, 1799.

[26] JGC Papers folder 2, Letter to George Smith dated June 22, 1799.

successful; the Civil Tribunal overruled the consul and condemned the vessel on November 4, 1799, five and half months after it was captured. The Civil Tribunal found that the *Frederick's* sea letter was good for only a single voyage to Senegal, but that he had made multiple voyages both to Senegal and to Hamburg, a destination that was not listed on the sea letter.[27] The sea letter was a kind of passport that certified the schooner's owners, cargo, and destination, and it was a required document to prove that the *Frederick* was a neutral, American vessel.[28] Under the Treaty of Amity and Commerce, American vessels were required to renew sea letters "every Year, that is if the Ship happens to return home within the Space of a Year," but the *Frederick* had spent the past year sailing among European and African ports, so Clark would not have had the opportunity to renew.[29] Expired or inadequate documents were such a common cause for capture and condemnation that the convention that ended the Quasi-War devoted an entire article to spelling out the precise wording of an appropriate passport. In a nod to cases like Clark's, the convention further specified that passports did not require renewal in the event of multiple voyages unless the vessel returned to its home port.[30]

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[27] Williams, *French Assault on American Shipping,* 152. See also JGC papers, folder 4, *Jugement Rendu Par Le Tribunal Civil Du Departement de la Loire Inférieure, Entre le Captiaine Clark, commandant le navire américain le* Frédéric*, Et l'Arnatuer du corsaire l'*Arriège*, de Bourdeaux,*(Nantes: V^e. Mallassis, 4 Frimaire, an VIII [November 25, 1799]), 5-6.

[28] Douglas L. Stein, *American Maritime Documents, 1776-1860, Illustrated and Described* (Mystic, CT: Mystic Seaport Museum, 1992) 113-118.

[29] *Treaty of Amity and Commerce Between The United States and France*, February 6, 1778, Article XXVII. accessed through the Avalon Project, http://avalon.law.yale.edu , November 11, 2013. According to the condemnation judgment, the *Frederick*'s passport was dated March 13, 1798, and the ship was captured May 12, 1799. JGC papers, folder 4, *Jugement...* p3.

[30] The language was somewhat more robust in the new treaty: "which Passport shall not be deemed requisite to have been renewed, or recalled, whatever number of voyages the said Ship may have made, unless she shall have returned home within the space of a year." *Convention of Môrtefontaine*, September 30, 1800, Article IV. accessed through the Avalon Project, http://avalon.law.yale.edu , November 11, 2013.

170

Clark appealed the Civil Tribunal's decision, but his appeal was rejected on September 16, 1800, on the grounds that his schooner (a 90-ton vessel with a crew of only 8) had a commission to capture French vessels. This previously unmentioned commission served to qualify the merchant vessel as a privateer that would be subject to capture. Clark complained that he lost "by the Privatersmen being better able to bribe higher then my self." Clark had promised the judges £1500 for a favorable ruling, but he suspected that the privateers had promised to give half of the value of the ship and cargo to the judges.[31] With this judgment Clark and the other owners lost their $5000 vessel and its cargo, valued between $80,000 and $95,000. Clark also spent several thousand dollars and two years of his life defending his case.[32]

The exact number of vessels captured under dubious conditions during this period remains unclear, somewhere in the low thousands, but suffice it to say that Clark's story was not uncommon.[33] Prominent Methodist missionary Thomas Coke found one of his voyages to the United States nearly derailed when his ship was captured by a French privateer and sent toward Puerto Rico. Coke initially hoped that God intended him for some purpose in the West Indies, but he soon realized that he might not reach an English island for months or years, so he was grateful to be released to another vessel on its way to the United States.[34] Some seafarers escaped

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[31] JGC Papers, folder 4, Letter to George Smith & Co. dated Paris, September 17, 1800.

[32] Williams, *French Assault on American Shipping*, 152.

[33] In his impressive volume, Greg Williams has identified over 2,300 vessels involved in spoliation claims in the United States. This number is a rough estimate of illegitimate captures, however, because some claims would have been resolved through the French courts, others forgotten, and others abandoned as evidence was lost or damaged over the years. By 1885, when the United States began hearing claims, all of these causes could have deflated the number of vessels involved. Some claims filed in 1885 carried scant evidence that a vessel was captured or even existed at all, possibly inflating the numbers.

[34] Thomas Coke, *The Journals of Dr. Thomas Coke*, ed. John A. Vickers (Nashville: Abingdon Press, 2005), 245-252.

capture, themselves, but witnessed their countrymen's losses. The schooner *Federal George* was

boarded by English, French, and Spanish privateers. It was released each time, but a few days

after it arrived in port another American schooner came in as a prize. This other schooner was

the *Variety*, which was captured and condemned on the grounds that its cargo of cod "could only

be of the fishery, manufacture, and salt provision of England" and "tasted like codfish which was

of English production."[35] Cod were not the only suspicious creatures. The brig *Elsa* was captured

near the end of its voyage from New London to the West Indies. The *Elsa* carried a non-

threatening cargo of grain, geese, hay, turkeys, and several very sick oxen, some of which had

died during the stormy passage to the West Indies and one more of which died during the four-

hour capture ordeal. The cargo was seized, but the brig was eventually released back to its

original master. The *Elsa*'s cargo was far less valuable than the *Frederick*'s, so its loss was much

smaller, $7,625.17.[36]

Following their ships' condemnations in French courts, captains and owners could

continue to appeal along different channels. Clark pledged to write a petition to Napoleon

Bonaparte (then First Consul of France) asking him to annul the judgment and to render justice.

Clark was not confident that Napoleon would overrule the prize court, but he hoped that

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[35] Williams, *French Assault on American Shipping,* 354; Henry B. Arnold, Logbook of the schooner *Federal George* (1798), Mystic Seaport, Mystic, CT: Log 102, March 12-25, 1798.

[36] The *Elsa* is listed as *Eliza* in some sources, including Williams, *French Assault on American Shipping,* 127; Daniel Francis, Logbook of the brig *Elsa* (1796-1797), Mystic Seaport, Mystic, CT: Log 946, December 25, 1796 – January 19, 1797. The *Elsa*'s capture also entailed added confusion as one of its men lacked proof that he was American, so he was retained as an English prisoner of war. Part of Captain Daniel Francis's recovery battles involved swearing to the nationality of his crewmen. For a description of the experiences of prisoners of war in the West Indies, see Richard C. Malley, "Daniel Caulkins's Voyage: An Incident of the Quasi-War" in *The Early Republic and the Sea: Essays on the Naval and Maritime History of the Early United States,* ed. William S. Dudley and Michael J. Crawford, (Washington, D.C.: Brassey's, Inc, 2001), 101-114.

Napoleon would "take Notus of there Rasacallity."[37] We will never know how Napoleon's office would have responded to this petition while the war was underway, because the United States and France concluded treaty negotiations before Clark sent his petition.[38]

The Convention of 1800 (also known as the Treaty of Môrtefontaine) was signed on September 30, 1800, two weeks after the prize court denied Clark's final appeal. In a letter to his Hamburg associates, Clark fumed that the condemnation of the *Frederick* did not mortify him so much as his "D[d]. hard fortune" that trials of American vessels had been suspended a mere five days after his judgment: "is this not Enough to fret an Angel to think that my buisness [sic] has been put off just long a nuff for me to be the Last American Condem[d]?"[39] Nevertheless, Clark continued with his appeal. On October 3rd he sent his petition to Napoleon, who within a week passed it along to the Minister of the Marine, who in turn referred it to the Minister of Justice on November 6th.[40] Determined "not to heave any more good money After Bad," Captain Clark finally left Paris for Hamburg, his last stop before heading home. He handed the *Frederick* business over to Captain Thomas Melvill, Jr., of Boston, who continued to pursue the claim until giving its management to a Mr. Portalis.[41] Every delay expanded the network of merchants,

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[37] JGC Papers, folder 4, Letter to George Smith & Co. dated Paris, September 17, 1800.

[38] JGC Papers, folder 4, Petition to the First Consul of the Republic of France dated October 3, 1800.

[39] JGC Papers, folder 4, Letter to George Smith & Co. dated Paris, October 6, 1800.

[40] JGC Papers, folder 4, Petition to the First Consul of the Republic of France, dated October 3, 1800. Letter to Joseph Biurra dated October 9, 1800.Letter from Le Secrétaire général des Consuls de la République to John Gilbert Clark dated 15 Brumaire, an 9 (November 6, 1800).

[41] JGC Papers, folder 4, Power of attorney dated 16th Nivôs, an 9 (January 6, 1800); JGC Papers, folder 4, Letter to George Smith & Co. dated January 7, 1801. JGC Papers, folder 5, Letter from Thomas Melvill to John G. Clark dated Paris March 2, 1801.

mariners, attorneys, and agents invested in the case, while a favorable judgment remained tantalizingly just out of reach.

At the same time, every delay introduced a new contingency that came with its own delays. Waiting for the result of this final appeal coincided with waiting for the ratification of the Convention of 1800, which had been signed in France but still required approval by the United States and delivery back across the Atlantic. The friends of the *Frederick* likewise waited for the outcome of the 1800 American presidential election, hoping that Thomas Jefferson's Francophilia might encourage a more positive reception for their many petitions.[42] Even if the petitions did not go their way, the owners of the ship and its cargo still had waiting to do. They could not receive the insurance payout from the underwriters of the voyage until the *Frederick* was sold; surprisingly, the ship and its cargo had remained unsold while the court case dragged on. It was advertised to be sold by auction on April 20, 1801, but this time it was the Clark who sought delays.[43] Clark and the other owners still hoped they could regain the vessel and make more money by selling its goods outright in Hamburg than they could recover if the schooner were sold at auction and a ruling later came down in their favor.

They briefly succeeded in having the sale suspended, but it was a losing battle. Clark's associate in La Coruña reported on May 30, 1801 that his friend Nathaniel Amory, a Bostonian, bought the *Frederick* for the bargain price of $1555. Clark's associate did not mention the sale price of the cargo but focused on the personal implications of the vessel's sale. He wrote, "I have proposed sending your little matters (left here) with [Amory], he is a Gentleman that wishes you

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[42] JGC Papers, folder 5, Letter to Thomas Melvill dated Hamburg April 10, 1801.

[43] JGC Papers, folder 5, Letter from W. Haddocks to John G. Clark dated March 28, 1801.

well & feels for your misfortunes & will take charge of them with a promise of forwarding the same to your home. I regret the loss of the schooner & wish I had purchased her and sent her to S[t]. Thomas, the more I see her, the better I like her."[44] The *Frederick* sailed back to America leaving its former master and its previous legal identity in Europe.

The Convention of 1800, once ratified, brought an end to the conflict. Like Jay's and Pinckney's Treaties, the Convention defined contraband and offered limitations and protections regarding captures at sea. The Convention also recognized the principle that free ships made free goods. The men on neutral ships were also free from capture regardless of nationality as long as they were not actively employed as enemy soldiers.[45] The 1800 treaty was generally a success for Americans' neutral shipping at the time and a success for Napoleon's France, which could not sustain the costs of this side-war or the loss of the provisions that Americans would otherwise have happily sold to France and its colonies.[46]

Unfortunately for Clark and other merchants whose vessels had already been condemned, the treaty did not restore their losses. Article II explained that the two republics had been unable to reach an agreement regarding their earlier treaties (dated to 1778 and 1788), nor had they agreed on the indemnities and claims (like Clark's) that fell under these treaties. Instead, the version of the convention signed on September 30, 1800 kicked the can down the road: "the Parties will negociate further on these subjects at a convenient time." [47] During ratification the

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[44] JGC Papers, folder 5, Letter from W. Haddocks to John G. Clark dated April 11, 1801.

[45] see prior footnote regarding the *Elsa.*

[46] *United States Statutes at Large,* Convention between the French Republic and the United States of America, September 30, 1800.

[47] *United States Statutes at Large,* Convention between the French Republic and the United States of America, September 30, 1800.

U.S. Senate expunged this second Article and added a statement that the entire convention would expire eight years after ratification.[48] The Senate's provisional ratification without this article created a minor crisis when it became France's turn to ratify. Simply dropping Article II left France liable to pay spoliation claims but did not guarantee that the United States would in turn honor the earlier treaties. Rather than negotiating a new treaty from scratch, the French foreign minister Charles Maurice de Talleyrand-Périgord finally offered the Americans a simple solution: France would ratify the treaty as revised by the United States provided that the United States would consider the removal of Article II to constitute "reciprocal renunciation of the respective pretensions which are the object of said article."[49] In other words, France was willing to abandon the 1778 and 1788 treaties provided that the United States abandoned its spoliation claims against France. The American negotiator in Paris accepted the ratification despite his official instructions to preserve the spoliation claims, because he did not see how a peace could be settled in any other way. With merchants pushing to restore trade relations with France, trading these claims for peace and the cancellation of the earlier treaties seemed to be a good bargain. For France and Napoleon, this way of ratifying the Convention of 1800 successfully dropped treaties that had proven to be of little value in order to retain money that was already desperately short.[50]

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[48] DeConde, *Quasi-War*, 288-293.

[49] DeConde, *Quasi-War*, 317-320; Henry Adams offers the slightly different quotation, "provided that by this retrenchment the two States renounced the respective pretensions which are the object of the said article." Henry Adams, *History of the United States of America During the Administrations of Thomas Jefferson*, vol. 1 (New York: Literary Classics of the United States, 1986), 243-245.

[50] Adams, *History of the United States,* 243-245.

For merchants with thousands of dollars on the line, the Convention of 1800 was a worrisome sleight of hand. The claims disappeared from France's national conscience, but where did they go? Perhaps to the United States? The claims first popped up again as a form of payment for the Louisiana Purchase, another Talleyrand negotiation. The United States purchased Louisiana in two payments: $11,250,000 in bonds paid directly to France and $3,750,000 in French debt to Americans that was assumed by the United States. Historian Alexander DeConde has observed that this debt transfer provision was "so carelessly drawn that it later led to considerable difficulties."[51] For instance, the Louisiana Purchase Treaty explicitly aimed to fulfill responsibilities under Article V of the Convention of 1800 *and* the voided Article II.[52] The Purchase Treaty also restricted repayment to only those claims properly lodged within the time-frame defined by the Convention of 1800. This provision would have been reasonable had the Convention defined a time frame or procedure for lodging claims. It had not.[53] These blundered allusions within the Louisiana Purchase treaty are surprising for such an important treaty, but of course debt settlement was a form of payment, not the treaty's goal. Even Robert Livingston, who with James Monroe negotiated the treaty for the Americans, considered the claims convention to be "a trifle compared with the other great object."[54] Much like the Jay Treaty, Pinckney's Treaty, and the Convention of 1800, the Louisiana Purchase Treaty bound up

[51] DeConde, *This Affaire of Louisiana*, 171-172. Henry Adams likewise commented that Monroe's draft of the convention "was certainly not creditable to his legal or diplomatic skill." Adams, *History of the United States*, 330.

[52] Whereas Article V had required each nation to pay debts due to the citizens of the other nation, it explicitly excluded indemnities for captures or confiscations, so it was unclear which types of debts the 1803 Louisiana Purchase Treaty was meant to repay. *Convention of Môrtefontaine*, September 30, 1800, Article V. Accessed through the Avalon Project, http://avalon.law.yale.edu , November 11, 2013.

[53] *Louisiana Purchase: Second Convention*, April 30, 1803. Accessed through the Avalon Project, http://avalon.law.yale.edu , November 19, 2013.

[54] DeConde, *This Affaire of Louisiana*, 171-172; Adams, *History of the United States*, 329-335.

maritime interests and territorial claims on the North American continent into the same set of complex negotiations. Access to the Mississippi would certainly improve American shipping in general, but the writing of the treaty proves that the costs to individual merchants were not well understood. With their eyes on "the other great object" to the west, American negotiators lost focus on the great ocean to the east.

Fortunately, the negotiators did provide one measure to mitigate this indemnity-transfer confusion. They listed the debts that were assumed by the United States as a conjectural note annexed to the convention. This note was not published with the bulk of the treaty, but the correspondence of the American Board of Commissioners appointed to hear the claims indicates that the note did not list any prize claims among the outstanding debts.[55] In the end, the Board of Commissioners heard over 350 cases. The vast majority of these cases were the claims of Americans who sold their goods directly to France and were not paid or who had to pay higher fees under embargoes that should not have applied to Americans. Only eight claims classified as prize causes were paid under the auspices of the 1803 Louisiana Purchase Treaty.[56] Whatever the intent of the ambiguously worded indemnity-transfer provision, the result was compensation for debts, not for spoliation claims.

In the meantime, American merchants kept their claims alive. Captain Clark returned to the United States, and his letters focused less and less on the lost *Frederick*, but he did not forget

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[55] Letter to James Madison from John Mercer, Isaac Cox Barnet, and William Maclure, 26 December 1803, Paris. *The Papers of James Madison Digital Edition,* J. C. A. Stagg, editor. (Charlottesville: University of Virginia Press, Rotunda, 2010), 226. It is worth noting that the "great object" for Livingston was likely not the great expanse of land west of the Mississippi that has since become so important but rather territory along the Mississippi that would guarantee free navigation of that river. See Richard White, "The Louisiana Purchase and the Fictions of Empire," in Peter J. Kastor and Francois Weil eds., *Empires of the Imagination: Transatlantic Histories of the Louisiana Purchase* (Charlottesville, VA: University of Virginia Press, 2008), 38.

[56] *Senate Exec. Doc. No. 87*, 34th Cong., 1st Sess., United States Congressional Serial Set (1856). Accessed through Proquest on November 19, 2013.

it altogether. Whether out of hope, despair, or righteous frustration, Clark continued his petitions

as late as 1823, scrawling his lengthy tale of unjust capture and condemnation again and again.

When writing to American commissioners, he recalled his service on an American privateer

during the Revolutionary War. Perhaps his capture and captivity as a prisoner of war during the

revolution could prove him to be a patriot and win him the justice that he sought.[57] Surprisingly,

Clark's lingering efforts were not totally unfounded; even decades after the capture, new treaties

revived the old claims. Many spoliation claims were settled through treaties between the United

States and other countries where French privateers had brought captured prizes for

condemnation.[58] Clark's ship was brought into a Spanish port, so he sought redress under the

1819 Treaty with Spain. He was denied.[59]

Another opportunity came with the July 4, 1831, Convention between the United States

and France. The Napoleonic Wars that followed the Quasi-War had generated new classes of

spoliation claims on top of those like John Gilbert Clark's. American ministers began pushing

for compensation in 1816, but it was not until 1831 that they secured a settlement. Through some

combination of the agitated statements of the Jackson administration, the intervention of the

1830 July Revolution in France, and his own skill, minister plenipotentiary William C. Rives

negotiated a very favorable treaty for the Americans.[60] The deal brought the United States 25

million francs and freedom from a part of the Louisiana Purchase Treaty that had granted France

[57] JGC papers, folder 7, Petition dated New York, October 26, 1823.

[58] Williams, *French Assault on American Shipping,* 22-42.

[59] JGC papers, folder 7, Letter to Mos. Young, Esq. dated New York March 21, 1819; JGC papers, folder 10, document titled "French Spoliation Nos.398-1397, Schooner 'Frederick' and Cargo: Competency and sufficiency of the Evidence of value," 1.

[60] Raymond C. Dingledine, Jr., "The Political Career of William Cabell Rives" (PhD diss., University of Virginia, 1947) 116-153.

special trading rights in New Orleans in perpetuity. France won 1.5 million francs in

compensation for its own claims and a ten-year reduction in the duties French merchants had to

pay on wine brought into the United States. France's 25 million francs were meant to "liberate

itself completely from all the reclamations preferred against it by citizens of the United States,

for unlawful seizures, captures, sequestrations, confiscations, or destructions of their vessels,

cargoes, or other property," without apparent limitation by years or by classes of claims. It was

up to the United States to determine who was worthy of compensation and to distribute the

funds. This proved to be a problem all its own.[61]

Lengthy debates within the United States paralleled these lengthy international

negotiations. Between 1800 and 1850 congressmen presented fourteen reports about French

spoliation claims in the House and fifteen in the Senate. Some of the reports favored paying the

spoliation claims, others suggested seeking more information and postponing a decision, and

others argued that the United States was not responsible for compensating American merchants

for France's illegal captures.[62]

Reasons to compensate merchants for Quasi-War depredations by French vessels were

fairly consistent. Those in favor of compensation argued that the Quasi-War was undeclared, so

the original spoliation suits against France were just. Furthermore, compensation advocates held

that the United States had assumed these private claims for public use under the 1800

Convention by exchanging the claims for release from troublesome Franco-American treaties. In

representative Edward Everett's words, "The Government of the United States...by the

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[61] July 4, 1831, Convention with France, reproduced in Williams, *French Assault on American Shipping,* 491. Those claims "which are of a different nature from those which it is the object of the present convention to adjust" were to remain valid for pursuit by normal legal means in the courts of the offending nation.

[62] 51st Congress, 2nd session Report No. 2320, February 18, 1891, 4-5.

negotiation and ratification of the convention of 30th September, 1800, allowed the private claims

of its citizens against France to be offset by the public claims of France against the Government

of the United States."[63] Just as the conflation of citizen and nation had initiated the Quasi-War,

the continued conflation of private and public property had been necessary to settle the naval

conflict. The legal conflict, on the other hand, would not be resolved fully until private and

public property could again be dissociated. To Everett and people of similar minds, the 1800

Convention's clear appropriation of private property for the public good called for just

compensation under the Fifth Amendment of the U.S. Constitution.

Of course, compensation would have benefited a select group of merchants at the cost of

the rest of the nation, and it had its detractors. Reasons against the United States paying the

claims varied:

1. *The Quasi-War was a real war in practice;* hence the spoliations claims were never justified in the first place, because under the law of nations no one could expect compensation for wartime depredations by an enemy.
2. *The Quasi-War was actually declared.* The Senate authorized use of force against French vessels, which constituted a declaration of war, albeit a limited war.
3. *The Convention of 1800 did not really abandon the claims.* The idea that the US relinquished the claims by expunging Article II was merely Napoleon's interpretation, not a binding element of the agreement. Americans could still seek redress from France, but not from the United States.
4. *The U.S. gained nothing of public value by abandoning the claims, so abandoning the claims did not constitute taking private property for public use.* As the treaties between France and the U.S. had proven to be of no value already, France abandoning their pretentions to these treaties was of no public benefit.
5. *The U.S. was responsible for the claims that France would have paid, but France never intended to pay them.* The United States was only assuming payment for France's admitted liability, but France never intended to pay, so that liability was zero.

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[63] Quoted in 25th Congress, 2nd session, Report No. 445, January 20, 1838, 105.

6. *The U.S. had already fought vigorously for these claims.* The U.S. could not be held responsible for the claims beyond its reasonable effort to secure them by force and by diplomacy.
7. *The claims were already covered under a previous law or treaty.* New claims arose throughout the Napoleonic Wars and generated new treaties meant to resolve them. Treaties like the 1803 Louisiana Purchase Treaty, the 1819 Treaty between the U.S. and Spain, and the 1831 Convention between the U.S. and France siphoned off different types of claims, leading to disagreements about which claims had already been paid.
8. *The remaining claims had inherent, internal problems.* This class of argument exhibited a great deal of variation, but included suggestions that the claims had fallen into the hands of speculators, that underwriters and insurers who had paid out the policies on captured ships had no right to make claims on their losses, that the only claims that were still unsettled lacked evidence, etc.
9. *The claims were too old and messy.* Paying them in any just, equitable way was simply impossible.[64]

Much like the array of shifting reasons privateers and French courts offered originally for condemning ships like the *Frederick*, this new array sought to relieve the United States of responsibility for French spoliation claims by any available means. Although the congressmen may have considered themselves to be looking back on a Quasi-War that had long since ended, they were in fact continuing that war by fighting the perpetual legal battle to condemn captured American merchant vessels.[65]

Despite these many reports, most of which favored compensation, the matter remained unresolved for several more decades. Between 1850 and 1884 Congress produced nineteen more reports, all agreeing that the United States should pay these claims out of the federal treasury but

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[64] This list is a digest of the many arguments presented in several congressional reports as reproduced in 25th Congress, 2nd session, Report No. 445, January 20, 1838 and in 51st Congress, second session Report No. 2320, February 18, 1891.

[65] This sort of inconsistent justification may be a common feature of undeclared wars, as Slavoj Žižek has identified similar patterns in the Iraq War. The inconsistent denials in Freudian "broken kettle" reasoning often prove responsibility or error despite being intended to disprove responsibility. Slavoj Žižek, *Iraq: The Borrowed Kettle,* (New York: Verso, 2004).

none yielding successful legislation to that effect.[66] Even when two bills passed through the House and the Senate, Presidents Polk and Pierce vetoed them.[67] Yet in 1885, after all of the original claimants had died, a spoliation bill finally made its way through congress. The precisely named "act to provide for the ascertainment of claims of American citizens for spoliations committed by the French prior to the thirty-first day of July, eighteen hundred and one" created a judicial framework to review the claims. [68] Petitioners were to present their cases to the Court of Claims, which would review the cases and advise Congress whether to pay them and in what amount. One of the reasons that the bill passed was that it did not commit Congress to pay anything for the claims upfront. Whereas President Polk had vetoed the version presented to him because the amount appropriated to pay the claims was beyond the means of the nation at the time, the 1885 act did not specify any amount, making it less objectionable.[69] The 1885 act also left it to the Court of Claims to decide whether the spoliation claims were legitimate. This took the issue of legality out of the hands of the congressmen who had debated it for decades and had formed stubborn positions in the process. These adjustments helped the 1885 bill to become law but came with the tradeoff that it would still take a separate act to appropriate funds for each set of approved claims from year to year.

Although John Gilbert Clark and the other owners of the *Frederick* and its cargo died before the French Spoliation Claims Act, their heirs filed for compensation. Marian Adeline

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[66] 51st Congress, second session Report No. 2320, February 18, 1891, 5.

[67] 14th volume of the Congressional Record (1883) page 272, December 14, 1882.

[68] Williams, *French Assault on American Shipping,* 42. "An Act: To provide for the ascertainment of claims of American citizens for spoliations committed by the French prior to the thirty-first day of July, eighteen hundred and one." 25 *Stat.* 283 (1881-1885), 48th Congress, 2nd Session, January 20, 1885.

[69] 14th volume of the Congressional Record (1883) pages 271-273 and 309-15, December 14-15, 1882.

Caverly brought claim number 398 on behalf of John Gilbert Clark. The Union Trust Company of New York and William Mulligan brought claim number 1397 on behalf of co-owners Jacob Doty and George Wattles. All told, the three parties sought $106,940.24 in compensation from the United States. The court heard their claims and in December 1888 certified that Congress should pay them a total of $87,320, a little over 80% of their request.[70]

After 90 years this payment was better than nothing, but not by much. Congress paid the *Frederick* claims directly in the 1891 dollars, without 90 years of interest. Had Clark managed to recover even $1000 immediately and invested it in 1803 in the bonds the United States issued to pay for the Louisiana Purchase, his heirs could easily have had over $160,000 by 1891. Had he and his co-owners received their $87,320 quickly and invested it similarly in 1803, their heirs could have had over $14 million by 1891.[71]

Still, other claimants had to wait even longer and some received no award at all. The Court of Claims continued hearing spoliation cases until 1914, when it had ruled on all claims presented under the 1885 act. By 1915 congress had appropriated slightly under $3.95 million of the $7.5 million approved by the courts, opting not to pay insurers or underwriters and simply leaving some awards unpaid. By 1935 $3.24 million remained unpaid, some of which has remained unpaid ever since.[72] The claims payments occurred in several years, but a rough, low

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[70] 51st Congress, 2nd session Report No. 2320, February 18, 1891, 42; Williams, *French Assault on American Shipping,* 431; General Records Relating to French Spoilation Claims, Record Group 76, entry PI 177 145, box 1 folder 4, National Archives at College Park, College Park, MD.

[71] "French Spoliation Awards of the Court of Claims of the United States," p4, in General Records Relating to French Spoilation Claims, Record Group 76, entry PI 177 145, box 1 folder 4, National Archives at College Park, College Park, MD. These values are based on the 6% interest rate on the government bonds compounded annually for 88 years. In fact interest on the bonds compounded semi-annually, which would have made for significantly higher returns.

[72] Williams, *French Assault on American Shipping,* 42; 74th Congress, 1st session, Report No. 746, May 13, 1935, 2.

estimate of the value claimants lost in interest is illustrative. Assuming every paid claim had

been awarded rapidly (1803) at the same face value, the compounded value of $3.95 million by

1891 would have been astronomical, over $665 million. For comparison, the entire United States

public debt in December 1891 stood at $1,553 million.[73] These spoliation claims were perhaps

the greatest loan the United States ever secured – several million dollars in 1800 at 0% interest

for 90 or more years was quite the bargain. Indeed, it seems likely that the decades of litigation

cost the American merchants and the United States government more than the eventual amounts

of the payments. Perhaps Senator Truman Smith said it best in 1850: "It would be difficult to

find anywhere a more striking illustration of the truth of the axiom that delay is a denial of

justice."[74]

Of course, greater injustices have been committed by the United States, France, and their

citizens than these spoliations and their fallout. Clark's success in the Senegal trade in the first

place was dependent on French imperialism in Senegal as well as established trade patterns built

on the transatlantic slave trade in African lives. Rather than weighing particularly heavily on the

scales of justice, stories like Clark's are important because they tested the relationship between

citizens and their republic. The Quasi-War proved that the United States was responsible *for* its

citizens. The French Spoliations Claims proved that the United States shirked responsibilities *to*

its citizens. Together, the Quasi-War and French Spoliation Claims demonstrate the practical

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[73] United States Department of the Treasury, "Statement of the public debt and of the cash in the treasury of the United States. For the Month of December, 1891." Accessed December 3, 2013 via http://www.treasurydirect.gov/govt/reports/pd/mspd/pre1997/pre1997_1891.htm . Of course, as some claims were in reality paid much later than 1891, even more interest would have accrued.

[74] 31st congress, 1st session, Senate Committee Report No. 44, quoted in 51st Congress, 2nd session Report No. 2320, February 18, 1891, 5.

consequences of undeclared warfare. Undeclared wars may be politically easy to begin, but because they engage parties other than sovereign nations, they are inherently very hard to end.

The Quasi-War also reveals one of the many connections between American maritime interests and American westward expansion during the 19th century. Without neutral carrying rights and claims to pawn off, American negotiators would have had little to trade for their great objects in the west. Had the ocean loomed larger in their minds, they might not have been willing to make the trade. Instead, they exchanged maritime claims for territorial claims – cargo manifests for manifest destiny.

Conclusion

The eighteenth-century Atlantic Ocean was not a void, nor was it an undifferentiated expanse. Its geography – human and otherwise – made for many distinct sites where history could happen. Just as it is important for scholars to situate events in their geographical contexts on land, it is important to situate these events in their geographical contexts at sea.

Logbooks offer this opportunity, and indeed our scholarship is diminished if we do not consider the geographical context of events on the ocean. Reading the remarks of the log alone would reveal that logbook keepers sounded but not how their soundings contradicted and substituted for questionable longitude reckonings. Reading the remarks alone would reveal when winds were favorable or unfavorable but not the varieties of viable paths captains sailed to exploit these winds. Reading the remarks alone would reveal that privateers and naval vessels chased merchants during wartime but not how wartime conditions altered common sailing patterns and enhanced the natural dangers of the sea. Reading the remarks alone would reveal that ships met at sea but not that these meetings occurred with different frequencies and took on different characters in different regions of the ocean. Finally, lest it seem that events at sea only matter at sea, the log and other documentation of a Quasi-War capture reveals how the oceanic context of this undeclared war placed individual, civilian mariners in the unusual situation of engaging directly with the sovereign states involved in the conflict. The fallout from this and other captures carried enduring consequences in the Franco-American diplomacy that smoothed the westward expansion of the United States and filled Napoleon's coffers for his own bid for continental control.

As wide-ranging as this dissertation has been in the waters of the North Atlantic, the oceans of the world are far too vast for any single study. The South Atlantic, Indian, and Pacific Oceans have histories intertwined with those of the North Atlantic Ocean as well as histories all their own. Although from the perspectives of American mariners these places became most prominent in the nineteenth and twentieth centuries, the perspectives of other countries or peoples could locate histories on these seas much earlier. Other histories focused on particular regions within these oceans or within the North Atlantic could delve more deeply or expand more broadly across time. In addition, recognizing the geographies of the oceans opens many more thematic areas for study than could be fully addressed, here. For instance, the missionary Thomas Coke briefly mentioned in the last chapter was only one of many people who took their religion to sea. He saw God's hand not simply in his survival but in the particular path that he sailed: his ship's capture, his redirection to Puerto Rico, and his transfer to a ship to the United States. The details of his circuitous course tied into his faith, and perhaps the same could be said of other missionaries and non-missionaries, in which case their stories might be understood better if their paths were taken into account. I hope that my project has proven the possibility and value of endeavors to situate histories at sea. Yet, in case this is not inspiration enough to include the oceans alongside the landmasses as historical sites, I will offer one final example.

It is well known that Melville based his fictional voyage of the *Pequod* on the real-life voyage of the *Essex*, a whaleship that sank after it was rammed by a powerful sperm whale.[1] Indeed, Melville asserted the plausibility of his narrative by directly discussing the *Essex*, its

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[1] Nathaniel Philbrick, *In the Heart of the Sea: The Tragedy of the Whaleship Essex*, (New York: Penguin, 2000).

Captain George Pollard, Jr., and its first mate Owen Chase midway through *Moby-Dick*.[2]

Melville had encountered the *Essex* story in several forms, but it was during his own meeting at sea that the story made its strongest impact. By chance and the gregariousness of the Nantucket whaling community, he met Chase's son during a gam on the Pacific whaling grounds. The young man gave Melville his first printed copy of Owen Chase's *Narrative of the Most Extraordinary and Distressing Shipwreck of the Whale-Ship Essex*, the authoritative first-hand account of the tragedy of the *Essex*. Melville later noted, "The reading of this wondrous story upon the landless sea, & close to the very latitude of the shipwreck had a surprising effect upon me." Here was a dramatic convergence: the son of the *Essex*'s most prominent survivor met Melville in passing on the wide expanse of the ocean. Moreover, it was not just any expanse of any ocean, but in the Pacific whaling grounds near the coordinates of the *Essex*'s wreck – the coordinates that Chase gave in the very book that Melville had received during the gam.[3]

Do we have a chance meeting at sea to thank for *Moby-Dick*? Perhaps the "surprising effect" Melville experienced was inspiration for the novel, or at least some part of it. On the other hand, the drama that first drew Melville to the tale may have been an even earlier event dependent on the geography of the ocean. As Melville observed, the misery of the *Essex* crew following the wreck might have been avoided had they "steered straight for Tahiti, from which they were not very distant at the time, & *to* which, there was a fair Trade wind." Instead, for fear that Tahiti might be full of cannibals (Melville noted that it was not), "they chose to stem a head

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[2] Herman Melville, *Moby-Dick*, Norton Critical Edition edited by Hershel Parker and Harrison Hayford, (New York: W. W. Norton and Co., 2002), Chapter 45, "The Affidavit," 173.

[3] Melville, *Moby-Dick*, 574. This section of the Norton Critical Edition includes transcriptions from pages 6-7 of Melville's notes in his copy of Owen Chase's *Narrative of the Most Extraordinary and Distressing Shipwreck of the Whale-Ship Essex*.

wind, & make a passage of several thousand miles (an unavoidably roundabout one, too) in order

to gain a civilized harbor on the coast of South America."[4] This navigational choice added to the

Essex story the irony that the survivors had had to resort to cannibalism largely due to their

initial efforts to avoid it. This tragic twist dependent on the geography of the sea caught

Melville's interest.

Here Melville can serve as an example in two respects. First, his autobiographical

episode indicates that literary history can be added to the types of history that happened at sea in

specific geographical contexts. Second, Melville's attention to the relationships between specific

locations on the ocean, both in his autobiographical episode and in the story of the *Essex*

survivors, is a working example of how to be conscious of the geography of the sea even when

one is not looking at logs. After all, it requires a certain madness to pore over logbooks time and

again, plotting and replotting tracks on ocean charts night after night.

> At intervals, he would refer to piles of old log-books beside him, wherein were set
> down the seasons and places in which, on various former voyages of various
> ships, sperm whales had been captured or seen.... Almost every night [the charts]
> were brought out; almost every night some pencil marks were effaced, and others
> were substituted. For with the charts of all four oceans before him, Ahab was
> threading a maze of currents and eddies, with a view to the more certain
> accomplishment of that monomaniac thought of his soul.
>   - *Moby-Dick* [5]

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[4] Melville, *Moby-Dick*, 573. This section of the Norton Critical Edition includes transcriptions from pages 24-25 of Melville's notes in his copy of Owen Chase's *Narrative of the Most Extraordinary and Distressing Shipwreck of the Whale-Ship Essex*.

[5] Melville, *Moby-Dick*, Chapter 44, "The Chart," 166-167.

Appendix: Database and Mapping Procedure

The maps in this paper are based on the latitude and longitude found in logbooks. These data were derived from two collections which each originated under different circumstances with slightly different procedures:

Collection I: Author's Database

My personal database draws on the logbooks from several repositories in the United States. The database is structured into two main sets of records. The first set is a list of all logbooks from the years 1700-1800 that I have located in archives and libraries (a total of 828 logbook bibliographic records). This list includes all bibliographic information I was able to find about these vessels as well as notes about whether I have been able to use them for my research. I used this list to select logbooks of interest to my studies. Rather than selecting logbooks for specific types of vessels or logbooks known to describe interesting events, I chose years that had a relatively high volume of accessible logs. In particular, I emphasized voyages from 1769-1800 and even more specifically1778, 1785, and 1798. These were the years with the most logbooks accessible that also enabled me to pursue research questions regarding specific periods in American maritime history (American Revolution, post-Revolutionary peace, Quasi War). As I delved into the archives I found that a number of these logs were unusable for my research, primarily because they were lost, too fragmentary, or lacked the daily latitude and longitude numbers necessary in order to map voyages. Nevertheless, many of the fragmentary logs and logs without navigational records could be of use to other researchers. Logbooks are scattered throughout many different repositories without a single clearinghouse finding aid to direct

researchers, so I hope that my list, although incomplete, may help others to find logs of specific interest to them.

The second set of records in my database is a list of the daily entries from the logs that I was able to map. This set comprises 4790 entries gathered from 69 logs. I did not fully transcribe these entries, but rather entered the daily navigational numbers in the appropriate columns of the database and took notes on any other features that interested me within the logs. Due to limited resources, I did not record the hourly winds, speeds, or other hourly navigational notes, although I anticipate that it would be possible to map vessels' voyages in even greater detail using such information. I likewise did not always record routine activities, such as changing course, adjusting sails, making repairs, producing small items like spun yarn or chafing gear, or performing other duties aboard the ship. All of these routine activities were essential to shipboard life, but I focused my efforts on material relevant to my research questions. Only entries with quotation marks are carefully quoted, whereas others are paraphrased, often with abbreviated spelling drawn from the originals or as my own shorthand. Hence, automated searches of the notes may require some ingenuity in order to corral the various spellings of "breezes," for example. The spellings and phrasings in unquoted sections should also not be used as evidence in-and-of-themselves for language used in logs – these are paraphrases.

On the other hand, I recorded daily navigational details as accurately as possible. Many of these numbers were difficult to read for all of the reasons common with old manuscripts (difficult handwriting, fading, stains, tears, etc.). In such cases I entered my best reading into the appropriate column and made a note of likely alternate readings in the database column "Technical_Notes." The column contains various notes I left for myself regarding the reading of each logbook, so it should be the first place to look in case of any confusion. When transcribing

navigational details I strove to keep the original numbers recorded by the logbook-keepers. I

made changes only in cases of obvious extreme errors (for instance, a vessel in the latitude of 42

degrees suddenly leaps to 62 one day and then back to 42 again the next), always noting those

changes in "Technical_Notes." Some of these errors were mathematical errors (often discovered

later by the logbook-keeper himself and corrected within the logbook), while others may have

been transcription errors likely made when the logs' writers transcribed or copied readings from

one logbook to another. I did not make any effort to correct for dead-reckoning errors, as the

nature of these errors and the ways in which mariners themselves dealt with them are among my

research questions.

Collection II: CLIWOC

The *Climatological Database for the World's Oceans 1750-1850* (CLIWOC) was

compiled by an international team using logs from several major European maritime history

institutions.[1] The project was funded by the European Union from 2001 until its completion in

2003. CLIWOC features a collection of logs from each of the affiliated maritime institutions, and

the project's final report includes tables detailing the total number of logs from each repository

as a fraction of its overall collection. Despite CLIWOC's impressive size, over 200,000 entries

for the eighteenth century, it still represents a very small fraction of the extant logs in the partner

European repositories. It is also strictly based on European sources, so it does not include any

American logbooks. The goal of the CLIWOC project was to use historical shipping data to

study climate and weather at sea centuries ago. CLIWOC was designed primarily as a climate-

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[1] Universidad Complutense de Madrid et al., *Climatological Database for the World's Oceans 1750-1850*
(CLIWOC), version 1.5 http://pendientedemigracion.ucm.es/info/cliwoc/ (accessed December 5, 2012)

change research project, so it employed a different transcription and interpretation procedure than my database. CLIWOC latitudes and longitudes were entered directly from logbooks just as in my database, but they were later corrected according to a method described in the CLIWOC final report, pages 11-13. These corrections supported the CLIWOC goal of locating weather conditions on a large scale, however the correction system necessarily incorporated a variety of assumptions in order to estimate vessels' paths despite navigational errors (particularly in longitude).

The differences in the datasets result in different appearances when mapped. For instance, my dataset more often results in vessels located over land near the ends of their voyages, whereas the CLIWOC voyages appear cleaner in this respect. These different appearances reflect different research goals and processing methods rather than differences in the quality of the original logbook data. Such discrepancies are an inherent challenge of cross-disciplinary data sharing, but the benefits can be tremendous. By using both my small dataset of American voyages and the much larger CLIWOC dataset, I hope that my dissertation overcomes some of the limits of either dataset to give the most complete vision of 18th-century ocean traffic currently available.

Mapping (method 1):

Based on these two datasets, I have created a series of maps in the ArcGIS suite of programs by ESRI. I have used essentially the same process for both databases:

1. **Create feature class from XY Table** using the standard 1984 WGS coordinate system as the native coordinate system for these data. Each point created in this step represents one day's noon-time entry for one vessel. In the future, I hope to devise a coordinate

system that would more accurately reflect the coordinate system under which late 18th-century mariners operated, however reproducing this coordinate system would be very resource-intensive and is not central to the current project.

2. **Sort** the entries in the appropriate order to be converted into lines. This step organizes logbooks that have multiple entries for the same date, such as single naval logs listing all officers' navigational calculations. A simple sort could otherwise be performed as part of the next step.

3. **Points to line:** The "Points to Line" tool connects the dots between the entries. After this step, each resulting line represents a single voyage

4. **Split line at vertices:** This step breaks each voyage line into segments representing one day's travel. The principle behind this operation is that an entry written at the end of the day describes all of the events in the preceding 24 hours. A line segment is sometimes a more fitting representation of the day's journey than is a single point, even though the ship was unlikely to have traveled in a straight line over the course of the day.

5. **Calculate geometries:** Add four fields to the joined lines (fields are of the type "double," precision 6, scale 2 to preserve significant digits). Calculate geometries to fill these columns with the beginning and ending latitudes and longitudes for each line to make them available for future calculations.

6. **Join:** Creating the lines does not transfer the relevant information to them, but joining the original points to the lines adds the information carried by the points to the associated line segments. Each logbook entry described the preceding day's travel, so each line segment corresponds to the point at the end of the line, not the point at the beginning. I have found that the best way to join the lines is to create a field with a long string

variable that concatenates multiple pieces of information available for both the line

segment and the point. Specifically, this field should contain the Voyage_ID used to form

the initial lines, the longitude at the end of the line segment (or at the point), and the

latitude at the end of the line segment (or at the point)

7. **Produce Maps!** After steps 1-6 the information transcribed into the database from the

manuscript logbooks is mappable as points or as line segments. Making the maps is a

matter of applying a basemap for the background, selecting the features of interest,

adjusting their appearance, and exporting as desired.

Mapping (method 2):

I have also produced one map using a slightly different process – georeferencing.

Georeferencing in GIS allows a user to overlay one map onto another so that the two can be

compared. This is a good choice when working with a collection of historical maps rather than a

collection of latitude and longitude numbers. The maps should be in the same projection, but

they may be at different scales and may cover different scopes. In my case, I combined

georeferencing and plotting using latitude and longitude in order to compare the routes drawn on

historical maps to vessels' actual voyages (see chapter 2, Figure 1).

The georeferencing process begins with scans or photographs of a historical map and

either a modern map or another historical map to use for comparison. Then, the user identifies

pairs of points that correspond in the two maps, such as islands, river mouths, cities, prominent

coastal projections, or any other location that is not likely to have changed between one map and

the other. The user then uses the georeference tool to 'pin' the maps together with each pair of

points. ArcGIS automatically resizes and stretches as needed to make the points match as closely

as possible, and the user can continue adding as many points as desired. More points generally make for a better match, but most 18th-century maps will not match perfectly, so it is up to the user to decide whether the match is satisfactory. The user may also choose to add only locations that were likely to have been surveyed and mapped very accurately during the historical period of interest (for instance, georeferencing to the unclear coastal features of Florida would introduce more error than would georeferencing to London or Gibraltar).

Once the maps match, it is easy to compare them by adjusting transparencies of each map layer or by tracing features of interest. In my case, I was able to trace the routes drawn onto the maps to compare them to my logbooks' routes. Other historical investigations might benefit from comparing disputed boundaries as depicted on different maps, seeing how a city changed shape and size over time, or analyzing two contemporary understandings of the same geographic feature. For example, although georeferencing *to* Florida's coast would be a poor choice, georeferencing maps using other, stable points in order to then compare different depictions of Florida's coast might be yield interesting results.

Research and Writing Value:

I have found that it can be useful to think of maps not so much as research results as as research tools. Maps, like writing, can generate as many questions as they answer. Like historical writing, historical map-making is therefore an iterative process, a dialogue with the sources. First, for instance, I mapped the locations given in the logbooks. When I saw that many locations appeared over land, I wondered how logbook-keepers addressed this issue. I returned to the manuscripts to investigate. When I found that keepers mentioned sounding at the same time that they mentioned suspect longitudes, I wondered where they began sounding. I began identifying

occurrences of sounding in the logbooks and turned again to mapping to continue the investigation.

As with most research this iterative process was never as straightforward at the time as it sounds in retrospect. Most of the maps I have made never lasted longer than the few moments it took me to realize that they did not answer my question, included dangerous assumptions, made no sense visually, or still required more archival material before they would be meaningful. Many more maps went back to the drawing board when friends and colleagues helpfully pointed out issues I had missed. Some resurfaced in improved forms while others never returned to my computer screen, much less to a saved file or printed page. False starts and triumphant revisions are in the nature of historical mapping just as they are in the nature of historical writing. The technical requirements differ, but the thought process can and should be equally agonizing.

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