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SHEEP AND WOOL IN NINETEENTH-CENTURY FALMOUTH, MA:
EXAMINING THE
COLLAPSE OF A CAPE COD INDUSTRY

A Thesis Presented

by

LEO PATRICK LEDWELL, JR.

Submitted to the Office of Graduate Studies,
University of Massachusetts Boston
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

August 2012

Historical Archaeology Program

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ABSTRACT

SHEEP AND WOOL IN NINETEENTH-CENTURY FALMOUTH, MA:

EXAMINING THE

COLLAPSE OF A CAPE COD INDUSTRY

August 2012

Leo Patrick Ledwell, Jr., B.A., University of Massachusetts Boston
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Directed by Professor Judith Zeitlin

This thesis examines the collapse of the sheep industry in Falmouth, Massachusetts in the 1830s. The documentary evidence for the collapse is examined through both the lens of microhistory and that of the traditional model for the collapse, one set forth by the American Geographical Society. The traditional model suggests that the importation of cheap agricultural goods from western states like Ohio caused the collapse of commercial farming in New England. An examination of the local evidence, however, suggests that the real reasons for the collapse of the sheep industry in Falmouth are much more complex, leaving open the possibility of alternate explanations. The AGS model was not predictive in this case because of the fertility of the soil, the lack of connection between factories and farmers, and the timing of the collapse.

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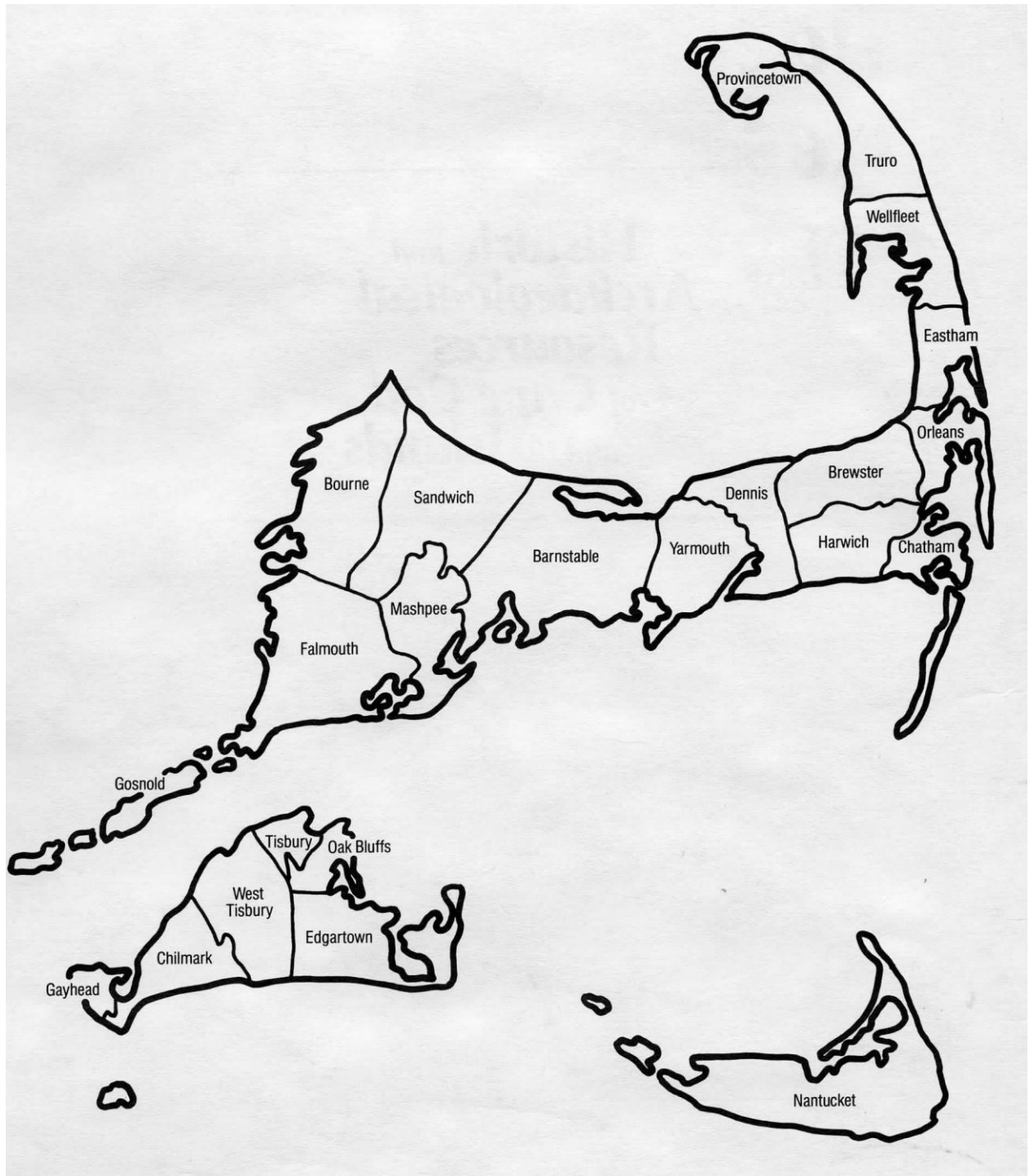


Figure 1. Map of Cape Cod showing Falmouth in relation to the rest of Cape Cod and the Islands, Falmouth Historical Society.

CHAPTER 1

INTRODUCTION

As it did in much of New England, the sheep industry in Falmouth, Massachusetts collapsed in the early 1800's. This thesis will examine whether or not the standard explanation for that collapse, that is, the failure of sheep farmers to compete with cheaper western wool brought in by rail and canal, and suggested originally by the American Geographical Society (or AGS), works as an explanation for the Falmouth case. The AGS macrohistorical model will be compared with the results of a microhistorical examination of nineteenth-century farming in Falmouth. The study follows the principle formulated by the pre-eminent microhistorian Carlo Ginzburg that "By knowing less, by narrowing the scope of our enquiry, we hope to understand more" (2005). The narrow scope of this study is its concentration on the evidence from one New England town, through which I hope to shed light on whether or not the AGS model is explanatory in this specific case and therefore is appropriately applied on a broader scale. This analysis

seeks through microhistory to reconstruct, understand, and examine the economic culture of a society that existed in the early 1800s.

The Setting

The modern economy of Falmouth, Massachusetts, a coastal community on Cape Cod, is based primarily on tourism and health care, but this was not always the case. Falmouth was incorporated in 1688 by the General Court of Massachusetts. Like most of the upper Cape, it contains numerous salt marshes and uplands that are ideal for pasture land, something that early colonists exploited when they settled there. Its climate today makes it popular with tourists, for the Cape is warmer in fall and winter and cooler in the summer than the rest of the mainland. At one time, Falmouth's economy was based on a combination of farming, animal husbandry (such as sheep farming), manufacturing, and maritime activities.

By the twentieth century, this balance had shifted. Until recently, historians have suggested that New England agricultural economies like raising sheep collapsed in the nineteenth century as a result of an influx of cheap raw materials from the west, which deprived local farmers of a market for their raw wool. When farmers lost their markets, they emigrated to a different part of the country or, if they stayed, they let or sold their houses and land over to newly wealthy merchants from Boston.¹ A model devised by the American Geographical Society (AGS) in the late 1920s and early 1930s suggests that the decline of the sheep industry in New England was caused by the ever-changing relationship between sheep farmers and woolen factories. Woolen factories needing raw wool lay adjacent to rivers that ran through the New England countryside, which was burdened with numerous sheep herds. The AGS model assumed that these vast herds of

sheep served to provide the woolen factories with the raw wool that they needed and without which they would fail (Turner 1931; Wilson 1935). It is a fairly logical assumption, and once accepted as universal for New England as a whole, that is, that sheep farmers acted as suppliers for the woolen factories or that the sheep herds existed to supply the woolen industry with raw materials, the reasons for the failure of the sheep industry in New England seem clear.

It is true that in the early 1800s many New England sheep farmers were the exclusive suppliers of raw wool to the new woolen factories that were sprouting up after the War of 1812. The farmers made a profit for very little work, and this encouraged the expansion of sheep raising in New England, especially that of merino sheep (Gaines 2007[21]: 32-34). The AGS model posited that it was less expensive to raise sheep in a frontier state like Ohio, which had more fertile soils. However, with no way to transport that raw wool to New England, these cheaper sources posed no threat to the New England sheep farmers' position as sole suppliers to the New England woolen factories. According to the traditional AGS model, all of this began to change when the Erie Canal was built and made it feasible to transport the cheap wool from Ohio eastwards. Suddenly the sheep farmers of New England had competition (Turner 1931; Wilson 1935).

The situation rapidly deteriorated in the 1840s as rail lines expanded across New England and connected Albany to Boston, flooding the New England market with cheap wool. The price of wool fell lower and lower, until the sheep farmers of New England found that they could not compete with the Ohio farmers. With no market for their wool, there was no reason to keep sheep, and so the large sheep herds all but vanished from the countryside (Turner 1931; Wilson 1935). This explanation of the disappearance of the

sheep industry and other types of New England agriculture forms an important building block in the historical narrative of the nation. This lack of ability to compete agriculturally is used to explain the great migration of New Englanders to all parts of the country, which in turn is used to explain how the American character came to be infused with the Puritan values of thrift, hard work, and moral certainty, at least ideally (Bell 1989).

While the AGS model is still influential today in both the fields of history and geography, this nearly eighty-year-old model is not universally accepted. Still, it forms a basis for understanding New England history and must be included in any study of local and New England economies of the nineteenth century. The idea that the infertility of New England soils made the region unable to compete agriculturally with the Midwest forms part of the underlying structure of the historical narrative for New England specifically and for the country as a whole. Historians Andrew Baker and Holly Izzard (1991:33) use the model to explain not only why farmers in New England made the choices they did but also why sheep farming was abandoned. In his book, geographer Joseph Wood utilizes the AGS model in part to explain the New England diaspora to other parts of the country (1997:27). The AGS model is used in a popular exhibit that deals with New England agriculture at the historically reconstructed Sturbridge Village. This exhibit uses the AGS model so completely that it even has a replica of the dioramas at Petersham, created originally to explain the AGS model to the public in the 1930s. These dioramas illustrate the rise and fall of New England agriculture. The AGS model has become a building block of the general historical narrative, and one that is often not questioned.

Does the AGS model apply in the case of the collapse of the sheep industry in Falmouth in the 1830s? On the surface it should. The town of Falmouth had both woollen factories and large sheep herds, and the sheep industry did collapse. It would seem the elements supporting the AGS model are present, so the conclusion that the direct cause of the collapse of the local sheep industry was the introduction of cheap western wool would be a reasonable one. The example set by noted archaeologist Matthew Johnson (1996), who analyzed the Enclosure movement in England, might urge one to follow a different line of reasoning, however, and to examine more closely the local evidence in Falmouth before coming to that conclusion. One major discrepancy is in the timing of the collapse of the sheep industry in Falmouth. The industry collapsed earlier than the traditional model suggests it should, if indeed the influx of cheap wool from the west were the precipitating event. Does the traditional model with its reliance on a single direct cause really explain events at the local level? In his study of the Enclosure movement in Britain, Johnson concluded that the macro model does not always explain enclosure at the local level when viewed through local documentation from the time period (Johnson 1996). With Johnson's methods in mind, the local evidence in Falmouth will be examined more closely to ascertain if the evidence actually supports the traditional assertions that the single, direct cause of the collapse of the sheep industry in Falmouth was the introduction of inexpensive raw wool from the west.

Microhistory and the Anthropological Eye

The microhistorical approach will be one tool used to examine the world of early nineteenth-century Falmouth and the complex interactions between the land and people. Microhistorian Martin Bruegel (2006: 527) emphasizes this shift from an abstract

approach “to an actor-centered mode of retrieving history in which historical subjects seek out chances, confront limits, endow constraints with significance and transform their world by engaging it.”

Another way of looking at the microhistorical approach is offered by Matti Peltonen. In his article, “Clues, Margins, and Monads: The Micro-Macro Link in Historical Research,” Peltonen cites Ginzburg and Levi’s definition of microhistory, where they state that

The unifying principle of all microhistorical research is the belief that microscopic observation will reveal factors previously unobserved. . . . Phenomena considered to be sufficiently described and understood assume completely new meanings by altering the scale of observation. It is then possible to use these results to draw far wider generalizations (Peltonen 2001: 349).

In this case, the AGS model on the surface seems to describe sufficiently the decline of the agricultural industry in New England, but when the scale of observation is altered to the local rather than the regional level, the resulting facts allow the researcher to draw totally different conclusions.

It would be easy to simply accept traditional explanations for the decline of agriculture in New England, and to dismiss those instances which do not fit the explanations as exceptions to the rule. Peltonen, however, suggests that

the important common feature of the new microhistory is the ‘method of clues.’ By this they mean starting an investigation from something that does not quite fit, something odd that needs to be explained. This peculiar event or phenomenon is taken as a sign of a larger or hidden unknown structure (Peltonen 2001: 349).

The timing of the decline in Falmouth’s sheep industry is temporally disjunctive, for the collapse happened during what should be, according to the AGS model, a period of prosperity that falls a decade before the decline suggested by the model. This fact is the

first clue that the AGS model does not fit this case, and that something else is going on in Falmouth. Because the facts surrounding Falmouth's declining sheep industry do not adhere to the traditional narrative, it is essential to use microhistorical methods to determine what hidden or unknown structures are at work. Using microhistory allows the researcher to recreate the economic and societal conditions of 1830s Falmouth in greater detail in order to understand how different elements of the local society and the economy interacted and were influenced by each other, and how these elements differ from the grand narrative explanation formulated by the AGS.

In their analysis of anthropology and ethnohistorians, Anna Green and Kathleen Troup discuss the importance of microhistory. They write of

Keith Thomas [who] also drew attention to the importance in anthropology of everyday life, wryly concluding that domestic and community relations form the very stuff of social anthropology, and, for that matter, of most people's lives, but one would never deduce this from the subject matter of most historical inquiry. In this sense, anthropology was to become immensely influential in redirecting historians' attention away from the public, political sphere of human action and toward private, daily life (Green and Troup 1999: 174).

Similarly, this study concentrates on the private, individual decisions of farmers and factory owners in Falmouth, who would normally not find voice in the historical narrative, yet are important for answering the historical question of why the sheep industry collapsed in Falmouth in the 1830s. Examining the details of the lives of specific farmers and factory owners in Falmouth allows the researcher to piece together a clearer picture of the historical interplay between the local economy and the individual actors before deciding whether this instance supports or undermines the AGS model.

The Landscape and its Physical Remains

As pointed out by Joseph Wood in his book, *The New England Village*, the utilization and conceptualization of the landscape changes over time as culture itself changes. This principle can be seen in the town of Falmouth throughout its history. When the first settlers arrived in Falmouth, they tried to impose their Puritan ideas of community and proper land use on the landscape. They laid out equal portions of property bounded by fences and walls, which in turn were supposed to determine how the land was used. The stone walls which run across the West Falmouth hills are both a testimony to this original ideal and also an example of how quickly this ideal was modified by a combination of individual desires and needs, the regional economy, and the environment itself.

The lost world of sheep farming and woolen factories can still be seen in the transformed landscape of Falmouth, from the low stone walls that run through the hills of West Falmouth to the buried foundations of mills in the cranberry bogs of East Falmouth. Each is an example of people in the past leaving physical signs of their culture on the landscape (Kealhofer 1999). The rock walls in West Falmouth (and in a more limited way Falmouth in general) are made of a lower course of closely spaced large boulders with a course of two smaller boulders on top. This composition is common in this area, made with materials usually procured from the terminal moraine that runs through West Falmouth (Smith 1986:27-31). In the hills, the main direction of the older walls runs roughly from east to west, with the younger walls either running at angles or parallel, but both are structured the same way. This can be seen with a comparison between the proprietors' records, the geodetic survey map, and the town map of the early 1900s. The

proprietors' records indicate that they laid out West Falmouth so that generally the property boundaries and walls ran parallel to the Sandwich border, roughly east to west (see figures 2, 3 and 4).

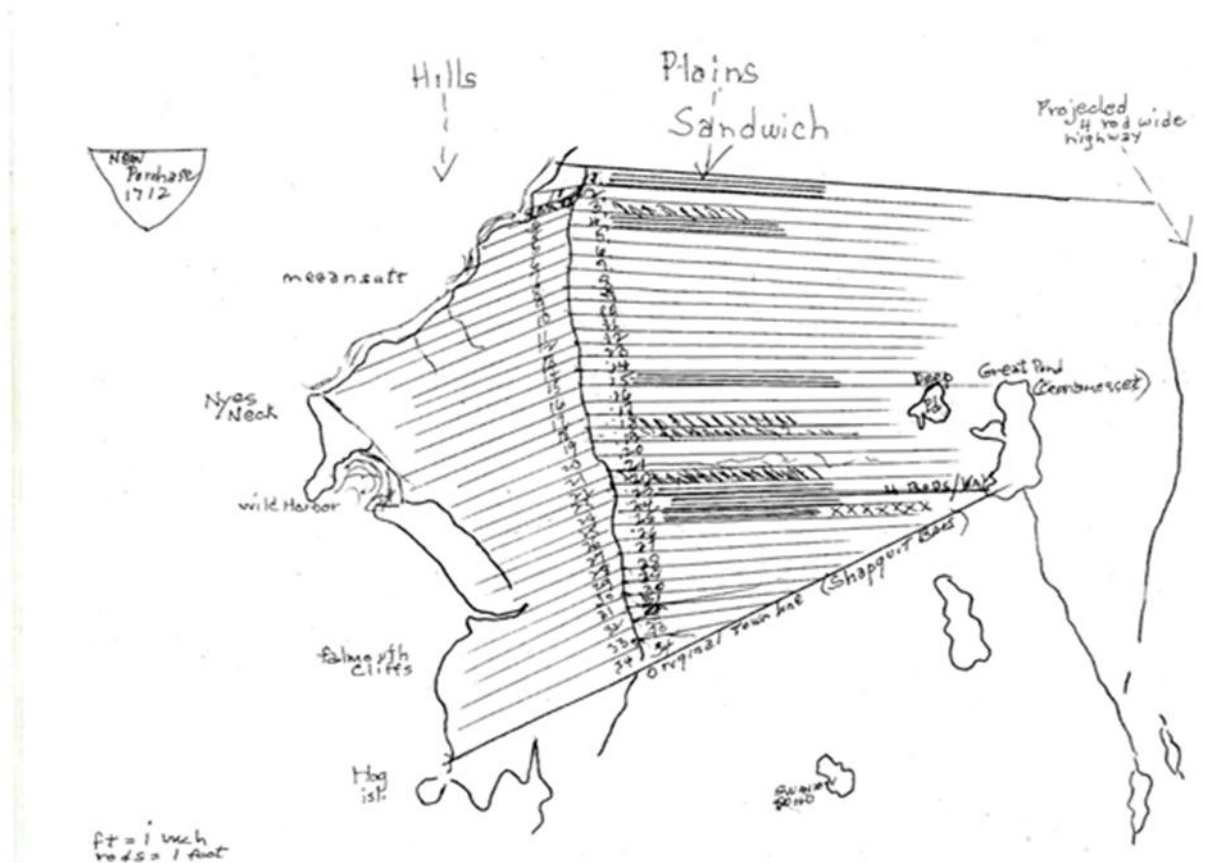


Figure 2. Map of the lots as described by the proprietors and the ancient deeds found in the Proprietors' Records. On the map, north is at the top of the picture. Drawing by Dorothy S. Svenning.

Each lot was to include hill pasture land, farm land, and marshland for salt hay. These older walls can be seen in the deepest parts of the hills today as one travels north. They can also be seen as both property boundaries and walls recorded on the land map for Falmouth (see figure 4).²

It can be inferred that the walls that run at angles, or parallel for short distances to the older walls, were built later because they are not mentioned in the proprietors' records, yet they appear in the *Geodetic Survey of 1845* and the 1927 land map of Falmouth. The walls speak of sheep in two ways. The first is in the intentions of the proprietors themselves. Originally, each settler, in West Falmouth in particular, was granted a long strip of property that ran from the marshes into the hills. The intent of these long strips was to provide each farmer with pasturage in the hills for sheep in the spring, summer, and fall as well as marshland to provide salt hay for the winter (Gaines 2007:1). In *The New England Village*, Joseph Wood indicates that this layout was common for the English settlers of the 1600's (Wood 1997:37-38). The second is in how the walls were actually used. Despite the intent of the proprietors, it appears that they were never used to contain individual herds of sheep. Local records indicate that, in fact, in the spring, summer, and fall, the sheep of individual farmers were put into the hills (or on the town green) as a group under the care of town-appointed shepherds, with only earmarks to distinguish them.³ In West Falmouth, this shepherd worked in the sheep yard, which is marked presently by a low stone foundation on a hill above the Long Pond Reservoir.⁴

In addition to marking property boundaries, the walls themselves were put to more practical use by shepherds as a means of preserving sheep pasturage by cordoning off over-grazed areas and moving sheep to areas where there was newly-grown grass. In cold weather the walls were used as impromptu shelters for the sheep, called creeps. Creeps were located wherever two walls crossed. They consisted of small three-sided rooms. Two of the sides were the stone walls meeting at an angle, while the third consisted of a piece of canvas. Another piece of canvas was stretched over the top to make a roof, providing shelter for the sheep in bad weather. Thus, the walls and the sheep were intimately linked (Gaines 1986:34-35). Arising out of the growing number of sheep, the changes in the function of the walls show the farmers' evolution of land use in response to changing economic conditions.

The evidence for the industrialization of the two rivers in Falmouth is still seen today buried among the brambles, trees, and cranberry plants. The remains of the Moonakis Factory can still be discerned where Martin Road crosses the Moonakis River. On the south slope of the road (which originally functioned as the dam) lies the remnant wheel head, which would have housed the overshot wheel that powered the woolen mill (see figure 5).



Figure 5. Remnant wheel head on the south side of the Moonakis dam. Picture taken by Leo Patrick Ledwell, Jr.

The foundations for these mills are all that is left of what, according to photos, were very impressive structures. Originally the north side of Martin Road would have been the mill pond, but when the property was converted to cranberry growing, the pond was drained and now the Moonakis flows under the road and out to sea (Cherau 2006:2-5).

The remains of the Pacific Woolen Company can be found along two sites on the Coonamesset River. The first site is the lower mill site off John Parker Road. This site is probably the best preserved, in the sense that some of the mill buildings survived long

after the demise of the company itself. One of the mill buildings was used until 1977 as the town's recycling center. The dam for the site and the pump house are still intact, as is the waste house (for converting old wooden cloth into shoddy). This location now serves as the basis for a herring run. Foundations are also on the site. One such foundation is referred to as the Northern Mill and consists of a large, overgrown depression. The superstructure was removed, but there is no record of the machinery being taken away, so it is likely that excavations would bring them, along with the stone basement, to light. Another foundation at this extensive site is the dye house, but that is partly buried by a modern access road. The second site is the upper mill of John Parker Road. This site was originally a grist mill owned by John Parker, but it was acquired in 1838 by the Pacific Woolen Mill in order to provide more control and power over the river for the extensive mill downstream. Remains are harder to discern at this site. The remains of one or two dams can be seen off to the northwest side of the present-day cranberry bog. There are a number of depressions as well as some earth-berming and other mounds. A culvert can be found in the woods. Archaeologically, it is evident that sheep were in important consideration in the ordering of the landscape and that woolen factories in fact existed in Falmouth. One question that concerns this thesis is that relationship between the sheep for whom the walls were built and the factories which grew up along the rivers (Cherau 2006:2-5).

The Archival Evidence

In order to discover the complex relationships between farmers, factory owners, and the regional economy, this study employed documents from the Falmouth Historical Society (*FHS*), *The Bowerman Collection (BC)* from West Falmouth Library, and from

the archives at Falmouth's Town Hall (*FTH*). The nature of each of these repositories is different, and so each one must be examined in turn. In brief, the FHS contains letters, diaries, account books, and other documents of a personal nature, and an accessions committee decides if a donation will be accepted or a purchase made. The committee considers whether those items or documents relate to Falmouth or Falmouth families, and if the documents further research on Falmouth's history. By contrast, the BC contains documents pertaining only to two families. The repository at FTH contains many official local government documents and also documentation necessary for the efficient running of town government.

The Falmouth Historical Society

Founded in 1900, The Falmouth Historical Society keeps its primary source documents in the archives. At present, the FHS collection houses account books, diaries, old bills, photographs, oral histories, handwritten family histories, and letters, just to name a few common items (Mary Sicchio 2011, pers. comm). The data therein represents more heavily families that were either wealthier or that have been in the town a very long time. Few materials represent those who were poor or more recently arrived in town.

This study relies heavily on several documents from this archive. Principal among these are four minute books of Prince and Maltiah Gifford, brothers and partners in the second largest sheep farm in West Falmouth, and the fourth largest in Falmouth as a whole. The FHS houses several of their individual minute or account books that function simultaneously as checkbooks and an accounts payable list. There are gaps in the dates, and only four minute books remain. That said, both brothers were meticulous record

keepers, and the remaining minute books offer a detailed window into the day-to-day operations of their farm. The first minute book is Maltiah's and covers the period from 1805-1817. The other three belonged to Prince and cover the periods 1829-1830, 1834-1836, and 1837-1848.

Other documents used from this archive were the minute books of Arnold Gifford, a relative of Prince and Maltiah Gifford. His minute books cover both his farming operations and the transactions he made as a middleman between farmers like Prince and Maltiah Gifford and inhabitants and stores around Cape Cod, especially Nantucket. His minute books cover the periods of 1837-1840 and 1844-1848. Arnold Gifford's minute books straddle the world of farmers and merchants because he functioned as both.

The next document used from this archive is the time book from the Moonakis Woolen Factory. The main purpose of this time book, which covers the period from March 1832 until June of 1840, was to record hours worked and amount of cloth produced. Marginal notes accompany the record of workers' hours and cloth production. These notes also reveal the world of suppliers and buyers and some details of the operations of the factory. The book is quite extensive, but it is but a fragment of the paper work that would have been generated by both the Moonakis Woolen Factory and the Pacific Woolen Mills.

The next two documents are both account books from packet ships but very different in their span of time. The first is Shubael Nye's account book, which covers three generations of economic activity from 1768-1871. The second is Charles Lewis's account book which covers only the year 1818. Both men were owner-operators of

packet ships that traversed the waters between the Cape and Nantucket. These two surviving account books reveal what goods were in demand locally as well as in demand in Falmouth's primary market, Nantucket. Although they convey a good sense of the structure of the regional economy, as the only such records from numerous packet ships that plied Falmouth's waters, how representative they are is unknown. Neither packet ship was among those that sailed out of West Falmouth.

The last document from the FHS is the proprietors' records. This document records land grants in the late 1600s and early 1700s. The FHS owns a transcription of the original document file, loosely collected in one folder and unnumbered. These are the earliest official documents of the town, the predecessors of the town hall records. The original landowners in Falmouth compiled these documents to mark out land grants and to settle disputes. While the folder does not contain a map, the records can be used to reconstruct the early landscape and its uses as intended by the proprietors (see figure 2).

The Bowerman Collection

The next archive consulted for this study is *The Bowerman Collection* at the West Falmouth Library. The entire archive was a gift of Dorothea Gifford to the West Falmouth Library in 1994 and consists of the personal and business papers of the two most important Quaker families and sheep farmers in West Falmouth, the Bowermans and the family of Prince and Maltiah Gifford. The first records in the collection date from 1673 and the last date is 1961. It also contains the historical notes and oral histories collected by Virtue B. and Alice C. Gifford, cousins and both amateur historians. Alice was born in the late 1800s and recorded her notes in the 1950s, while Virtue wrote her notes a couple of decades earlier. More importantly, there are gaps in the data,

information not considered worth saving or lost for other reasons. The most important gap is the missing minute books of Daniel Bowerman, who was the largest sheep farmer in West Falmouth and Prince and Maltiah Gifford's contemporary. Nevertheless, the information contained in the collection allows for a tentative reconstruction of the world they inhabited and their actions in that world, especially with regards to sheep farming.

Also included in the collection are the reminiscences of Orrin C. Bourne from 1930.⁷ As a boy Bourne both worked and played in the Moonakis Factory, where his father operated the spinning jack in the winter. This document gives insight into the relationship between sheep farmers and the woolen factory as well as the operations of the factory. Because Orrin Bourne was one of the workers and not one of the owners, he can only report his view of their actions and words and what his father had heard. Orrin Bourne worked at Moonakis Factory after the period under study, but this limitation is offset by his conversations with the mill owners who did live in the time period in question. Bourne is the only non-elite person represented in these sources, so his thoughts offer a different perspective on Falmouth economy and society.

Virtue B. Gifford's notes were written in 1936 and deal specifically with land and sheep.⁸ Virtue was the great-granddaughter of Daniel Bowerman, and she intended, like her cousin Alice, to write a history of her town. Her notes are helpful in painting a broad picture of life in the period under study. Not only does she shed light on the lives and economies that the account books in the Falmouth Historical Society archives and the tax documents in Town Hall cannot, but she also drew much of the information from conversations she had with the older people in the family who lived during the time period being studied. Thus, it is a kind of oral history project.

The final document consulted in this study from the Bowerman Collection consists of notes taken by Alice C. Gifford in 1956⁹ in preparation for a history of her family and town. Her notes deal with various aspects of the West Falmouth economy ranging from shipping lumber to Nantucket to raising sheep, for they represent just an initial stage of her planned research.

The Falmouth Town Hall Records

The last archival data comes from the records in Falmouth's Town Hall (FTH), which began even before the town's incorporation in 1688. The Town Hall archives any document that aids in the operation of the town, such as census and tax records. In addition, it keeps any documents that can be used to settle disputes such as land maps and deeds. The Town Hall also retains any document that provides transparency in government or accountability to the people of the town: records of town meeting, selectmen's meetings, and even the salaries of town employees. These three have been fairly constant criteria since the incorporation and are still the criteria today (Trisha Favulli 2011, pers. comm).

The data provide hard numbers on the economy over a span of time. They reveal the political structure of the community and allow for the reconstruction of the physical aspects of the land and the economy. The drawback of the kind of information found in the Town Hall archives is that, while the documents identify who is in the town and what they owned, they reveal very little about the motivations of the people involved or how the economy actually worked. For example, the assessment books provide evidence that Prince and Maltiah Gifford owned sheep, even though it does not disclose what they were doing with them. However, when combined with documents from the other two archives,

the numbers contained in the valuation books and assessment books provide the economic and political context for the world in which the Giffords lived.

The two most important documents in the Town Hall archives are the State Valuations of 1811, 1831, 1840, 1850, and 1860 and the Falmouth Town Assessments (also known as State Bills) of 1831, 1832, 1835, 1836, 1837, 1838, and 1840. Since the early 1800s, Falmouth has conducted a town assessment every year, in which the value of the property of each inhabitant is assessed for tax purposes. Roughly every ten years, this information was compiled with a second assessment sent to the state. In the modern era, the two assessments are the same. This study looked at a range of years applicable to the collapse of the sheep industry. Both the State Valuations and the Falmouth Town Assessments record the possessions and property of each inhabitant in the town. Assessments were, and are still, used as appraisals to calculate local taxes, and valuations were used to estimate the value of property in order to share that information with the state government. Only the valuations contain a totals column, and provided a complete picture of the town's economy throughout the decade studied. Both kinds of documents provide a snapshot of the town in its given year and, when examined in temporal order, they show the expansion and contraction of the economy over any given period of time. This study uses these documents primarily to illustrate the economic history of the sheep and woolen industries.

The *Town Records and Vitals* books for the years 1750-1838 and 1847-1871 succeeded the Proprietors' Records, and are compilations of vital documents from their respective time periods. For example, the *Town Record and Vitals 1750-1838* book contains the minutes from a number of town meetings, as well as a list of births and

deaths, and the state valuation of 1811. A similarly eclectic mix makes up the *Town Records and Vitals 1847-1871*. The importance of these books lies in what is revealed about the politics of sheep through the minutes of various town meetings. These minutes leave no doubt that sheep were economically and politically important for the town and its inhabitants, even if they do not record which factions supported or opposed them.

The last document used from the Town Hall archive is the *Land Book of 1927*, which include property maps preserved in 2006 by Trisha Favulli, the assistant assessor for the town of Falmouth, who put them in plastic covers and bound them and other town documents into a series of books (Trisha Favulli 2011, pers. comm.). The 1927 map was drawn up as the old farms of West Falmouth were breaking apart, so many of the old boundaries and landscapes can still be seen on the map. Also recorded on the map are the surviving stone walls, many of which are no longer visible. While the newer patterns of landholding can be seen to be taking hold, it is also possible to discern the older patterns of landholding as well, when viewed in conjunction with the *Geodetic Survey of 1845* and the Proprietors' Records.

The Goals of This Study

The first goal of this study is to use both these primary sources and local histories to reconstruct the economy of Falmouth that emerged in the late 18th and early 19th centuries. The focus of this reconstruction is the sheep industry and its relationship to the woolen factories that grew up along Falmouth's rivers. It is important also to understand the regional network of trade in which these two industries operated, in order to grasp the economic factors that would have influenced decisions made by both sheep farmers and woolen mill owners. Informing this reconstruction both theoretically and contextually is

Joseph Wood's *The New England Village*, which deals with the evolution in New England from a settlement pattern based on a dispersed economy to a more centralized settlement pattern, with an economy based on extra-local exchange (Wood 1997:88-113). In many ways, this model predicts the emergence of the Falmouth economy and settlement pattern in the late 18th and early 19th centuries. Once a reasonable reconstruction of the sheep industry and the woolen mills in Falmouth is in place, the analysis will proceed to the next goal of the study: to compare the local and regional economy, with its focus on the sheep industry and the woolen mills, to the traditional narrative as expounded on by the AGS and such authors as James Goldthwait (1927), Harold Wilson (1935), and John Black (1950). Will their explanation of the causes of the collapse of the sheep industry, focused as it is on cheap imports from Ohio driving the more expensive New England wool from the market, actually predict the causes of the collapse locally as revealed by the reconstruction of the local and regional economy, or will it, like similar macrohistorical models, fail to do so as Matthew Johnson found to be the case with his case study of the Enclosure Act (1996)?

Organization of the Thesis

In order to address the applicability of the AGS model to Falmouth further background is needed. Chapter Two examines how and why the colonial proprietors imposed their own ideas of landscape on the environment of Falmouth in the 1600s and how economic and political changes in the late 18th century and early 19th century affected the economy in Falmouth, which in turn altered the landscape laid out by the proprietors. These issues enable us to place the role of sheep in the local economy as well as illustrate the origins of the woolen mills. Chapter Three examines the changes that

occurred in the 1830s economy in Falmouth. Through a microhistory approach, the pertinent surviving documents will be used to recreate a picture of the economic changes that occurred locally in both the sheep industry and the woolen factories between 1831 and 1840, as well as to shed light upon the interplay of the individual actors involved in the local and regional economy. This will set the stage for the inquiry into the causes of the collapse.

Chapter Four examines the traditional AGS model and discusses how that model acquired its dominant place in the broader historical narrative. Chapter Five will compare this traditional explanation to the Falmouth historical record in order to determine whether or not the AGS theory is applicable in this particular case, and it will also discuss alternative explanations for the collapse based on the surviving evidence. Finally, Chapter Six will explore the broader issues involved with Falmouth's exceptional history. If Falmouth does not fit the model, does that reflect broader problems with this or other macrohistorical models?

CHAPTER 2

MOLDING THE LANDSCAPE

In order to comprehend the complex interactions between the land, the actors (both farmers and mill owners) and the economy in the 1830s, it is important to understand how the relationships were established in the preceding 150 years. First, this chapter examines the physical features of Falmouth and surveys the patterns set by the early colonists. This chapter will also scrutinize the evolution of the local and regional economy, especially in regards to sheep. Finally, this section will analyze other economic activities that were interwoven with sheep.

Landforms of Falmouth

Falmouth, Massachusetts is located at the southwest corner of the Cape Cod peninsula. It is bounded by water to the west by Buzzards Bay and to the south by Vineyard Sound. To the North lie the towns of Bourne and Sandwich and to the east lies the town of Mashpee. Geographically, Falmouth is divided into two kinds of landforms, both of which are relics of the great ice sheets which created Cape Cod during the Ice

Age. The first landform is the terminal moraine. This moraine runs down the western coast of Falmouth along Buzzards Bay from Bourne to Woods Hole and goes by a number of informal names, including the West Falmouth hills and the Saconessett hills, but it is geographically identified as the Buzzards Bay moraine. The soil in this moraine, while not barren, contains rocks of all sizes, ranging from millions of pebbles to massive boulders. Early on it was relegated to pasture land and woodlots by the settlers and their descendants, who referred to it as “bony.” The width of the terminal moraine varies, from three miles wide in the north along the border of Bourne to as narrow as a mile where the moraine terminates in Woods Hole (Strahler 1966:11-23).

The other dominant landform is the outwash plain which runs from the terminal moraine in the west along the borders of Sandwich, to Mashpee in the east, and all the way south to Vineyard Sound. The outwash plain is made up mostly of sand and clay, with topsoil, and is relatively rock free. It was this area and a narrow strip between the moraine and Buzzards Bay that both Native Americans and the early European colonists chose to utilize for agriculture, for there is good drainage, and the land, if well taken care of, can be quite productive. The outwash plain is drained by a number of small but steady rivers which run from north to south. Both the outwash plain and the terminal moraine are studded with kettle holes, created by melting glaciers. In terms of climate, Falmouth, like much of the Cape, is temperate, but moderated by the ocean that borders it on two sides. As a consequence, it is warmer in the winter than the rest of Massachusetts, and conversely it is cooler in the summer. The growing season for certain crops is shorter than on the mainland, but winters are generally milder and therefore easier on livestock like sheep (Strahler 1966:11-23).

Early Patterns of Settlement

How did the early settlers to Falmouth and their descendants interact with this environment and transmit their culture to the landscape, as well as lay the groundwork for the world in which the sheep farmers and the woolen factory owners interacted?

Traditionally, it is assumed that Puritan settlers, like those who created Falmouth, created compact nucleated settlements based on such considerations as the Puritan communal ideal and the need for defense against Native communities. They tamed the wilderness around them in order to practice communal agriculture for the benefit of the community (Wood 1997:1-3).

The model town, like many other English cultural ideas brought over by the settlers, quickly evolved into a new form. In England the town had been a complex interaction of religion, politics, and economics, molded by centuries of tradition according to Joseph Wood's model. In New England, much of what had evolved from the connection between the land and the culture was abandoned when the Puritan settlers dispersed across the landscape in search of grassland that they could own and utilize for their livestock. In most cases the town was reduced to a vehicle for distributing land and arbitrating land disputes (Wood 1997:38-39). This concern with grasslands also determined how individual properties were laid out. One cultural holdover from England that was continued by the colonists was the division of land into rectangular lots, often in the form of long strips enclosed by fences of either wood, or more often stone. Each settler's rectangular allotment in this period would include salt marsh or freshwater meadows for fodder as well as pastureland for livestock (Wood 1997:37-38). This custom of enclosing land not only imposed ideas of ownership onto the land itself, but in

Falmouth also influenced how livestock were actually raised, especially sheep. In Falmouth, the enclosures were used to control where the sheep grazed at certain times, but they did so in collective herds.

The earliest European settlers in Falmouth were from Barnstable, a Cape town to the east of Falmouth. One of the first settlers was Isaac Robinson, who originally had been assigned the duty of converting Quakers to Puritanism in Barnstable. Through his interaction with the Quakers, he came to the conclusion that they should have the right to worship as they pleased. This idea did not win him friends in Barnstable, so Robinson and a number of others petitioned the General Court for the right to purchase land in what was then called Suconessett. After receiving permission in 1659 to purchase land from the Wampanoags living there, the dissidents from Barnstable moved in 1661 to a neck of land between Siders Pond and Salt Pond, about half a mile from today's Falmouth center (Smith 1986:19-21). They practiced a mixed form of agriculture, which combined the growing of various crops in areas where Native Americans had grown corn, beans, and squash, while also practicing animal husbandry, mainly with sheep but also with pigs and cattle. The heads of families who owned land in the town, called the proprietors, recorded their property in a document that came to be known as the Proprietors Records: each settler was granted a hill allotment for livestock and a plain allotment for both crops and fodder.¹⁰

Sheep were on the minds of the proprietors from almost the very beginning, and this can be seen both from how the landscape was ordered and from the fact that there were so many sheep in the initial settlement that by 1679 distinctive ear marks were already being recorded in the Proprietors' Records.¹¹ Within ten years, the initial

compact settlement between Siders Pond and Salt Pond quickly dispersed (Smith 1986:21). The 19th century historian Simeon Deyo stated that it was the hay in salt meadows, like the one near the initial settlement, that drew Robinson and his followers to this area and which caused the settlement to disperse (Deyo 1890:146). In the original allotment, the salt marsh near the plantation was held in common, but that was not to last, as each new settler and a good number of the original settlers soon struck out for their own patches of salt marsh and sole possession of its fodder.¹²

After the initial settlement, farmers headed west towards Woods Hole and North towards what would become West Falmouth (Smith 1986:19-21). West Falmouth itself was settled by Quakers who had come from Barnstable with Robinson and Hatch. They were joined by Quakers from nearby Sandwich and from Plymouth, where the Quakers had also been persecuted (Smith 1986:19-21). Sheep and salt hay were on the Quakers' minds as well when they moved here, for West Falmouth is bordered on the ocean side by the Great and Little Sippewissett marshes. Stretching for more than two miles along the coast and reaching in some places more than a half mile into the interior, the Great and Little Sippewissett marshes are a rich source of salt hay. In 1691 and 1712, the proprietors laid out the lands of West Falmouth in long strips, running parallel to the Sandwich border. Each allotment consisted of marsh for salt hay, flat lands for crops and hay as well as hilly pastureland for sheep. Both in Falmouth and West Falmouth, grassland and not ideology drove the engine of settlement. The initial allotments laid out in the minds of the settlers were imprinted onto the land in the form of stone walls, many of which are extant today.

In Falmouth the distribution of lands lay in the hands of the proprietors in conjunction with the Court of Plymouth County. It was really only the proprietors who controlled who received land. Their decisions were the earliest manifestation of civil government in Falmouth, and almost all of the surviving Proprietors' Records are concerned with land distribution in one sense or another. In Falmouth, once the all-important consideration of a system of land distribution was established, the proprietors built a meeting house and laid out land for its maintenance, but they established an ordinary or tavern first. In 1674 Isaac Robinson set up an ordinary for the purpose of entertaining travelers going to and from Nantucket and Martha's Vineyard. The establishment of this tavern is important, because it shows that within ten years of its founding, Falmouth had enough traffic with Nantucket and Martha's Vineyard to warrant the construction of an ordinary to deal with all of the people traveling to and from the islands. No such accommodations were made for travelers to and from Barnstable or even Boston. It also indicates the strong ties that developed early between the islands and Falmouth (Deyo 1890:661), showing Falmouth's place in the growing regional economy.

After the proprietors established an ordinary, they built a meeting house. In 1681, a meeting house lot, a graveyard, and thirty acres of land for the support of the minister were laid out. The siting of the original meeting house was placed where the path leading to the original plantation intersected with the paths leading to Woods Hole and West Falmouth. In other words, the meeting house was sited where the maze of paths leading to different farms converged (Deyo 1890:644, *Proprietors Records* 1688). Once the ordinary and the meeting house had been established, Falmouth's incorporation followed in 1688. Expansion led to the creation of more villages, the first of which was West

Falmouth (Smith 1986:18-19), which followed a similar pattern of development. The first Quaker meeting house was built in 1720 at a central location in West Falmouth, where the road coming from Boston intersected with the paths leading to the dispersed farmsteads and the path leading to the grist mills of what would become East Falmouth (Smith 1986:438-444). Again, this auxiliary center was sited on an already established crossroads. Both meeting houses would move again and for the same reason that they were placed initially, that is, centrality of location.

As the main town of Falmouth grew, especially to the east and north, more and more residents made new paths coming in from those directions. These paths did not converge on the meeting house, but instead at a location about a half mile to the east, so the proprietors decided to move the meeting house to this new central location in 1749. While they were at it, they laid out the town commons as well (Smith 1986:39-40). In West Falmouth, a new road was built closer to the scattered inhabitants in 1753, so the Quaker meeting house was moved to this more central location in 1771 (Smith 1986:438-444). In both cases, already established pathways dictated where the meeting house would be, not the other way around.

The Emergence of the Local and Regional Economy

One of the engines driving the development of Falmouth was commercial agricultural enterprises, which included sheep herding. Sheep had always been part of the mixed agriculture practiced by the settlers, though they were not economically central. They were a ready source of meat that required far less attention than the more valuable cattle,¹³ and their wool could provide cloth when wool from elsewhere was scarce. All of that changed with the Wool Act of 1699. Great Britain's Wool Act forbade inter-colonial

trade in woolen products. What this meant for Falmouth was it could no longer import wool from its chief trading partner, Nantucket, which despite its numerous agricultural difficulties had no problem maintaining the largest sheep herds on the Cape all through the Colonial period and the Federal period as well. The Wool Act forced the people of Falmouth to increase their sheep herds and supply themselves with wool for home production of cloth. The growth in the sheep herds as well as the emerging economy of the time accelerated the changes to the landscape. The proprietors initially tried to imprint on the surface of Falmouth their ideas of an agricultural landscape, but the Wool Act forced changes in the landscape that they had not foreseen.¹⁴

Wood postulates that the center villages that developed later in New England during the Federal period evolved from colonial auxiliary centers like those in Falmouth with their decentralized economies. He suggests they did so as a result of the acceleration of the economy brought about by the emergence of local elite and, more importantly, by the domestic, agricultural, and commercial demands of the American Revolution (Wood 1997:93-99). The commercialization of agriculture and the emergence of the factory system that resulted from this acceleration in the late 1700s resulted in far more regular trade connections and increasing occupational specialization. These in turn stimulated the growth of central villages after 1800, usually in what had been the colonial site of the meeting house and tavern in the auxiliary central place (Wood 1997:98-104). Factories also emerged as a result of this accelerated economy, though often not at the location of the central village. Instead, they were sited along water ways that could provide power for the mills. Sometimes the factories would themselves become a new center and the old center based on the meeting house and the tavern would be abandoned (Wood 1997:112).

The most obvious change to the proprietors' original landscape design was physical. The early Proprietors' Records indicate that each proprietor received both a hill allotment and a plain allotment, and that each was to be more or less equal.¹⁵ As mentioned earlier, the pattern of long rectangular strips can still be seen in the stone walls that run through the most remote areas of Falmouth above the Long Pond Reservoir, which is seated in the West Falmouth hills. The rapid expansion of the settlement and the failure or success of various families in meeting the demands of the expanding economy can be seen in the *Geodetic Survey Map of 1845* and the *Falmouth Land Book* of 1927 (see figures 3 and 4), sources that describe eighteenth century changes that had been imprinted on the landscape by the nineteenth century. Either large plots of land had been acquired by wealthy families or they had been subdivided so that a long plot was owned by more than one family. Newer walls appeared marking these newer divisions and their accompanying concepts of land ownership.¹⁶

The intent of the proprietors for how the walls were to be used also was subverted, especially in regards to sheep. In the late 1600s and early 1700s, as the number of sheep increased, how they were herded also changed. Part of the original intent of the boundaries marked by stone walls was to keep livestock separated, with each man in charge of his own sheep. Local historian Jennifer Stone Gaines suggests that the increased number of sheep made this impractical, so what developed was a system whereby the town appointed shepherds to watch all the flocks during the spring, summer, and fall, with the owner taking care of his own herd in the winter.¹⁷ Each farmer was to identify his sheep with distinctive ear marks, which were recorded first in the Proprietors' Records and then later in a special ear mark book in the possession of the town's

shepherds, of which only one copy survives (Gifford, S. 1825; Gaines 2007:32, 35). Because sheep are so destructive to plant life, the walls laid out by the proprietors acquired a new use. The sheep were herded from one walled area to another as the seasons rolled on. When they had done enough damage to one enclosed area, the sheep were moved to another in order to let the damaged plants in the enclosed area grow back. In this way the farmers of the 1700s and early 1800s took the landscape imposed by the proprietors and utilized it in a way not intended by the proprietors themselves (Gaines 2007:34).

Many Cape towns had responded to the Wool Act of 1699 by setting up fulling mills in the early 1700s. Fulling mills took the loosely woven cloth that was produced on farm looms and subjected the cloth to wetting and pounding with fulling mallets, which cleaned, shrank, and felted the cloth. The whole process created a tighter, denser fabric (Gaines 2007:37). The miller provided this service for either a cash payment or a portion of the cloth, usually one yard for every ten produced. In a sense, the transaction was similar to those made between farmers and grist millers or wood millers (Smith 1985:182-183). Falmouth has no record of having a fulling mill until Shubael Lawrence opened one in 1788 on the Coonamessett River. Local Falmouth farmers did not turn to sheep as a viable economic resource until the 1780s because of the depredations of the British navy, which raided the coast for food supplies, and preyed upon Falmouth's sheep herds during the Revolution (Gaines 2007:32-35), delaying the Falmouth farmers' entry into the woolen market. Most of the farmers chose Spanish Merino sheep, which had a finer quality fleece than the rather tough, rangy, horned Wiltshire sheep that had been common before the Revolution. These larger herds were raised for raw wool to sell, or as

means of producing coarse wool items like stockings or mittens, as well as for making clothes for the farmers themselves (Gaines 2007:32-35). In addition to yarn for knitted goods, demand for woven cloth encouraged the creation of the fulling mill. The combination of the demand for raw wool, yarn, and cloth stimulated an increase in the sheep herds, allowing sheep farmers to see their herds as an important means of income.

Mutton was another popular commodity that also fueled the growth of the sheep herds. There is no evidence extant from the period which details where they sold the excess wool or mutton, but based on later patterns of supply and demand, it can be inferred that they sold these items to surrounding towns, to the islands, and to Boston. As late as 1831, there was still a market in Boston and New Bedford for coarse woolens from the Cape, and in Boston at least until the 1830's, Sandwich mutton was highly regarded.¹⁸ Locally, mutton was also very popular, based on the numerous entries for its sale in Prince and Maltiah Gifford's minute books.¹⁹

By 1811 the growth of both the town's sheep herds and its accompanying home market had stimulated the construction of a carding mill in addition to a fulling mill.²⁰ A carding mill is a machine that combs out the fleece and makes it ready for spinning. One pound of wool can be carded this way in ten minutes as opposed to the hours it would take to do so by hand. The remuneration for the miller was the same as it was for the fulling or grist mills: cash payment or a portion of the product (Gaines 2007:38). Evidence for this transaction can be seen in Maltiah Gifford's 1805-1817 minute book, where he records paying Isaac the miller for carding his and Prince's wool in 1809.²¹

While the War of 1812 slowed the expansion of the sheep herds and the fulling and carding mills, the sheep herds in Falmouth and especially West Falmouth bounced

back quickly, as did wool sales. Maltiah Gifford recorded a number of sales in his minute book, the largest being forty-five pounds to Abail Akins in 1817. He made a tidy sum of \$18.17.²² His brother Prince, made another large sale in 1829 of twenty-five pounds to Charles Bowerman for \$8.49.²³ The Giffords made numerous smaller sales as well. In each case, the sales of wool were always to local people.²⁴ No sales to factories were recorded. No wool sales were made outside the town to Boston or the islands. There is no evidence that they sold their wool to local traders or merchants.

It is unclear why, with so many sheep owners in the town, the local households bought wool from each other, even when they owned their own herds. Falmouth seems to have had a significant home textiles industry at that time. It can be inferred that there were some families who had more skills producing cloth, so they needed more wool than they had in their own herds, but there is no direct evidence for this supposition. The evidence in the minute books supports both the local historians' assertions as well as the assertion by the *Historical and Archaeological Resources of Cape Cod and the Islands* (HARCCI 1987:296-298) that throughout the Federal period, the sale of wool, and the production of woolen goods as well, was a function of home textile manufacture.²⁵ By 1831 this system of local exchange encouraged the growth of Falmouth's and West Falmouth's sheep herds and particularly Prince and Maltiah Gifford's herds to the point at which Falmouth possessed more sheep than any other town on the Cape, and the Giffords possessed the second largest sheep herd in West Falmouth.²⁶ This demand for wool also spurred the increase in both fulling mills and carding mills. By 1831 there were two fulling mills and three carding mills in operation along East Falmouth's rivers,²⁷ a testament to the growing home market. Carding and fulling mills produced better quality

cloth, better than home manufacturers ever could, and they did so more efficiently. Hand carding and spinning wool was time consuming, but profitable. Farmers viewed carding and fulling mills as both a means to save time and to improve their product. The existence of three carding and two fulling mills in Falmouth suggests that there was a heavy demand for their services in support of the home textile industry. Things were about to change, however, and this local system that had been evolving since the late 1700s, would be gone by 1840.

The shape of the regional economy, driving and driven by commercial agriculture was already discernible when Isaac Robinson established his ordinary in 1674, but the economy really took off in the 1700s.²⁸ By the early nineteenth century, Falmouth was exporting meat, wood, and livestock to Nantucket and the other islands. Nantucket especially was a major destination for agricultural goods because of its isolation and absence of adequate agricultural land. The reasons why Falmouth raised sheep for both mutton and wool, while Nantucket raised sheep only for wool are unclear from the surviving evidence, but it is very probable that the reasons have to do with location and environment. Nantucket had a deficit of good agricultural land but had good harbors and was sited well for both trade and whaling. It made more sense for Nantucket to concentrate its limited agricultural resources on wool production. Income from the sale of wool could then be used to purchase agricultural goods which were difficult to raise on Nantucket. Conversely, it made more sense in Falmouth to concentrate efforts on agricultural products which could be easily grown or raised and sent to the ready market of Nantucket. This demand from Nantucket, driven by an explosion in population from the growing whaling industry and increased trade, stimulated an explosion in the carrying

trade in Falmouth, which can be seen in the increase in the number of sloops, or packet ships, between 1698 and 1714. In 1698 there were four sloops operating in the area, whereas by 1714 there were thirty vessels. This market swelled by the mid-1700s for a number of reasons. The first is that the Cape's position between the timber and fishing grounds of coastal Maine and the wealthy markets to the south, like Providence and New York, made it, and especially Nantucket, a hub of trade. This increase in wealth stimulated both Nantucket's growth and demand for the kind of agricultural goods that places like Falmouth were already providing.²⁹ Second, all over the Cape, fishing and offshore whaling were becoming major economic activities. The largest and best sited port for both those activities was Nantucket. Again this swelled Nantucket's growth to the point where it, and not Boston, was the regional hub of trade for the southern shore of the Cape by 1760. Nantucket's continued growth as a trade hub and especially as a center of whaling continued until the town's decline in the 1840s.³⁰

Falmouth responded to the state of the regional economy by the late 1700s, when the farmers of Falmouth and West Falmouth diversified themselves. They built boats and ships to fish and to hunt whale, but most importantly, to trade. Coastal packet ships out of West Falmouth and Falmouth brought farm products to markets as far away as Boston and New York, but their main market was the island of Nantucket.³¹ As the whaling industry grew, Nantucket grew. Nantucket's growing population became ever hungrier for meat, and West Falmouth farmers, who had plenty, were only too happy to comply.³² This stimulated not only the growth of sheep herds for meat, but also the number of cattle and pigs. Throughout the periods covered by the Giffords' minute books, sales of meat such as mutton, beef, and pork both to Nantucket and to locals made up a substantial

portion of their income.³³ The Gifford brothers recorded numerous sales directly to Nantucket butchers or to either packet captains or to local stores with Nantucket connections.

Three examples drawn from the minute books should illustrate this diverse system of supplying meat to Nantucket. The first and most obvious is the sale of livestock to a butcher on Nantucket. The entry for September 23, 1830 describes the sale of eight bulls, six lambs, two sheep and five calves to Dunnum the Butcher of Nantucket for a grand total of \$41.58.³⁴ The means of transfer was one of the packets that plied the waters between West Falmouth and Nantucket. Unfortunately, the account book of Captain Hamblin, who transported the animals in his ship, no longer exists to show how he and his packet profitted from this particular exchange, but based on the account books of both Charles Lewis and Shubael Nye, it is most likely he charged a carrying fee, probably amounting to less than a dollar.³⁵ Another entry in Prince and Maltiah Gifford's 1834-1836 minute book reinforces this possibility, as it records the brothers paying Captain Ezeekial Swift 75 cents to transport calves to New Bedford.³⁶ Sometimes captains of packet ships would purchase meat from the Giffords for resale in Nantucket. A captain such as Joseph Swift, who had shares in three sloops and a brig, and who purchased 175 pounds of beef in 1835 for \$8.31, is probably a good example. While the Giffords did not record the final destination of the beef, a comparison between Swift's other purchases over time and the account books of both Charles Lewis and Shubael Nye indicate that the purchase was probably bound for Nantucket with other goods.³⁷

Lastly, stores with Nantucket connections often purchased meat for resale in Nantucket or for outfitting whaling ships out of Nantucket. The best example would be

the Swift brothers, Daniel and Seth, who ran both the local blacksmith shop and a store that specialized in the products of the coastal trade carried on with Nantucket and Kennebec, Maine. They also built ships and ran a chandlery and a salt shop that enabled fisherman to preserve fish (Smith 1985:434). They were very busy men, and they made numerous purchases of meat. For example, on 1 September 1836, the brothers Swift bought fourteen and three-quarters pounds of mutton, fifteen pounds of veal as well as one forequarter and one hind quarter of veal for \$3.30 from the brothers Gifford.³⁸ Due to their Nantucket connections and the needs of the population there for meat, the Swifts often purchased meats in bulk for resale to Nantucket rather than for personal use.

Other Economic Activities

Raising sheep for either wool or meat did not happen in a vacuum, however. Farmers like the Giffords had other means of income. Some bought shares in the Falmouth bank which opened in 1821, while others like the Giffords bought shares in or worked on salt works.³⁹ The Gifford minute books frequently mention either having to work on the salt works or sending for wood to repair the salt works.⁴⁰ This business was a constant concern of Prince and Maltiah from their youth in the late 1700s, when the Massachusetts General Court, with the encouragement of the Continental Congress, offered a bounty of three shillings for every bushel of merchandisable salt in 1776. The local farmers quickly came up with a very efficient, wind-powered way to extract salt from the surrounding seas, and by the early 1800s, Falmouth's shoreline was covered in salt works. The addition of a ten-cent duty on imported salt only served to make salt-making one of the most profitable enterprises that farmers like the Giffords could embark upon. Between the Revolution and 1812, the price for a bushel of salt rose from fifty

cents a bushel to seven dollars a bushel (Smith 1985:66). While the Giffords do not record the income made from their share in the salt works in their minute books, it must be assumed that they made a substantial amount of money from this venture. The minute books do record their debts incurred in keeping the salt works going, in the form of repairs and general labor.⁴¹ Oral histories, such as that of John Dillingham in 1909, are insistent that the farmers of West Falmouth often ignored all other pursuits in order to tend to the salt works, even when competition from other sources had brought the price of a bushel down to \$1.00 by 1829 (Smith 1985:66). Another source of income and profit recorded in the minute books was the cutting and sale of cord wood. Much of this was sold locally to those without woodlots, but a good portion was also sold to Nantucket, as recorded in 1777 in Shubael Nye's account book.⁴² Economically, raising sheep and the carding and fulling mills that were interlocked with that industry were part of a much larger local and more diverse economy.

The growth in Nantucket and its corresponding need for agricultural goods contributed to Falmouth's growth. The economic acceleration in both the commercial agriculture and the regional economy led to the development of Falmouth as a central village (Wood 1997:110-112). Centered on the meeting house and its accompanying common, laid out in 1749, a linear village developed during the Federal period.⁴³ Clustered along this line running to the east were both the residential buildings of the more well-to-do as well as commercial buildings such as the Bank of Falmouth and the doctor's office, the blacksmith shop, and a tailor's shop. Both the bank and the doctor's office overlooked the green itself.

The early settlers of Falmouth created a landscape from the interaction of their cultural expectations with their new physical environment. The development of both the regional and local economies altered that interaction to create a functional, rather than a utopian, landscape that served their growing economic needs. The development of the town parallels the pattern proposed by Joseph Wood. The expansion of Falmouth's initial settlement was prompted by the desire for more pasturage. Joseph Wood challenges the theory that the Puritan settlers of New England ordered their landscape in the 1600s according to Puritan ideology, with its implicit desire to form a covenanted community, or even according to defensive considerations. Instead, he posits that "distribution of grasslands influenced how English settlers intent on family farming constructed their settlement geography, its orientation, its extent, and its forms" (1997:23). In other words, because cattle and other domesticated animals like sheep were so central to the mixed agriculture practiced by the early Puritan settlers, those settlers arranged where they lived according to the location of food sources for their animals. Instead of compact communities, which were in fact the Puritan ideal, New England towns were made up of dispersed farms and houses, what he refers to as dispersed places, nominally connected by centrally located meeting houses which acted as a political and religious focus for the towns (Wood 1997:20-33, 91-95), but not economic centers.

The creation and purpose of these auxiliary center places were for social, political, and religious activities, but not economic ones because the economy was decentralized. Falmouth followed this pattern predicted by Wood as well. In Falmouth, there was no centralized place for trade. Wood states that "the political purpose of the town, if not the town itself, evolved out of the economic, the system of land distribution" (Wood 1997:

39). This desire to control the distribution of land led the earliest form of town government and of town record keeping in Falmouth. Wood suggests that “By controlling the division of land, the proprietorship initially asserted political authority over community organization and saw to it that a church was established and land provided for its maintenance” (1997:39). In addition, Falmouth established an ordinary and a meeting house, furthering its political and economic development. While factories did not appear in Falmouth until the end of the Federal period (1790-1830), in most other respects the pattern laid out by Wood holds true, especially in the development of its commercial agriculture and other industries generated by a developing regional economy and changes in the pattern of land ownership. Like many New England towns, by 1830 Falmouth was using its prosperity to rewrite itself into the romantic ideal in which an imagined Puritan past, complete with centralized utopian villages, was used to justify the past and mold the future (Wood 1997:136-142). But this prosperity, while it succeeded in implanting its ideal on the imaginary landscape of the past, failed by 1840.

CHAPTER 3

DECADE OF CRISIS

The decade that spanned from 1830 to 1840 was a pivotal one not only for sheep, but also for the local economy of Falmouth. The state valuation of 1831 confirms that the town had prospered from the patterns of growth discussed earlier. There were 2973 sheep, more sheep than in any other Cape town, and the town's stores and other businesses collectively had \$69,297 in goods used for carrying on their businesses, also known as stock-in-trade. There were three carding mills and two fulling mills. The town had also recently acquired a factory. The assessors had every reason to be pleased about the state of the town.⁴⁴ The state valuation of 1840 reveals a different picture. The town's sheep herds, which the *MHCRSTR* referred to as "central to the theme of agriculture" (1985:10), now numbered only 1338 beasts, while the value of the stock-in-trade of the town's stores and businesses equaled only \$28,812. There were at that point two woolen factories operating in Falmouth, but all of the carding mills and fulling mills were gone⁴⁵ since the woolen factories had taken over those operations as part of the process of making cloth. What happened?

Overview of Economic Activity: 1830-1840

This decade of crisis can be examined using both the minute books of the Giffords in conjunction with the state valuations, town assessments, and the Moonakis Factory's time book. The sheep industry and its relationship to the woolen mills and the landscape is the main focus of this study, but neither the sheep nor the factories can be examined in isolation. The raising of sheep has to be placed in the context of the complexity of the local agriculture. Profit or lack of profit in one area of production affected other areas as well. Also the sheep and the factories need to be placed into the context of their local economy in the 1830s, as this local economy would have dominated decisions made about production in both industries. Consequently, while examining the interrelationships between all the areas of farm production, it is important to compare the sales of the sheep raising portion of the Giffords' farm to other areas of farm production. The events of the local economy for this decade will be examined and then compared to both the Gifford farm's minute books and the factory data from the Moonakis Factory time book in order to lay the ground work for an assessment of what effect (if any) these events had on either one.

Falmouth Farmers and Their Practices

To understand how the local farmers worked, it is essential to examine the background of Prince and Maltiah Gifford and scrutinize how they dealt with their sheep. It must be understood that for these farmers, sheep were very important. Their importance can be seen from not only histories and *MHCRSTR* reports, but also from the brothers' own minute books.⁴⁶ They took careful notes on the numbers of sheep, as well as when they needed to be put out and brought in. Even after the sheep became less

profitable, the Giffords still kept track of the times they sheared and washed the animals and sent them to the sheep yard.⁴⁷ For Prince and Maltiah Gifford, like everyone else, the decade started out well. According to the *State Valuation of 1831*, together they owned seventy sheep, split evenly between the two brothers.⁴⁸ Their farm in West Falmouth was large, and they had the second largest sheep farm in West Falmouth. While seventy sheep might not seem like a large number, many farmers kept smaller herds which sufficed to meet their home manufacturing needs. The typical herd was between thirty and one hundred sheep.

In dealing with their herd, they followed the same pattern year after year. In May or June, the winter coat accumulated by the sheep was shorn, either by the Giffords themselves or by someone hired to do it for them. For example, on the 8th of June in 1836, they hired a man to shear their sheep for eighty-three cents. With that done, they turned over control of their sheep to the town shepherd, but they kept some at home and a few on their land at Shapquit. The Giffords record in 1836 putting the sheep out to the sheep yards on June 13th, but in other years, “turning out the sheep to the woods,” as Prince was wont to say, would happen in late May.⁴⁹ The town shepherd (one of the seven hired by the town) then took the Giffords’ sheep along with everyone else’s from the area and roved them all through the hills of West Falmouth and sometimes into the town itself in search of pasture. The sheep roamed somewhat freely and were likely to be found anywhere at any given time, even on the town green (Gaines 2007). This made them unpopular with some people in the town who, beginning in 1808, repeatedly put warrants before the town meeting demanding that the sheep be fenced in by their owners and restricted to their owners’ properties. It is a measure of both the popularity of the

sheep as well as the power of their owners that these warrants always died in Falmouth's town meeting. It also helped that at various times throughout this period, the Giffords and the Bowermans served as both town selectmen and moderators of town meeting.⁵⁰

The sheep were allowed to roam until early November, when the Giffords would hire one of their younger relatives to go to the sheep yard by Long Pond, separate out their sheep, and bring them home.⁵¹ Once they had them back near their barn, they began feeding the sheep winter fodder, both English hay from their meadows and salt hay from their marshes; then they would also cull the herd. Between November and February, sheep would be selected out and butchered for mutton, which was quite popular in the area to judge by the number of sales recorded in the minute books.⁵² Once March rolled around, mutton production ceased, and the sheep were fed fodder until their annual spring shearing, and then it was back out to the sheep yard.⁵³

Data from the Minute Books

While the sheep were obviously important to the Giffords, they were not the only concern on their farm. These farms had diverse production strategies, of which sheep were a part. The minute books help piece together the relationship of sheep raising to other forms of production. Dividing the surviving data from the 1830s from the minute books into four two- year periods allows for an examination of changes over time. A two- year interval was selected here to allow for the gaps in years in the minute books. Because there are missing years, the figures here are incomplete, but the two-year span gives a picture of average sales made by the Giffords in order to show the rise and fall of their production and sales. In addition, the two-year span provides a better understanding of the kinds of sales achieved by the Giffords than does a single year alone. Of the four

categories compared, two listed are products of sheep: wool and mutton. The other two categories are beef and wood, which made up a large portion of the profits recorded in the minute books. Also noted are pounds sold or in the case of wood, cords and feet sold. The minute books only record amounts sold and for what price and to whom, but they do not record costs associated with the running of their farm, so the sale totals do not reflect their net profits. The following tables give an overview of the amounts sold and the total sales of the Giffords' farm from 1829-1840.

Table 1. Sales of the Giffords' Farm from 1829 to 1840

	1829+1830	1834+1835	1837+1838	1839+1840
Wool	\$27.43	0	0	0
Mutton	\$7.11	\$10.07	\$7.72	\$8.97
Beef	\$95.68	\$111.28	\$50.58	0
Wood	\$117.05	\$197.21	\$240.70	\$131.67

Table 2. Amounts Sold by Giffords from 1829-1840

	1829+1830	1834+1835	1837+1838	1839+1840
Wool	71 lbs.	0 lbs.	0 lbs.	0 lbs.
Mutton	174 lbs.	245 lbs.	121 lbs.	132 lbs.
Beef	1929 lbs.	1711 lbs.	317 lbs.	0 lbs.
Wood	30 cords; 21 ft.	36 cords; 25 ft.	39 cords; 36 ft.	19 cords; 35 ft.

The first period, from 1829-1830, was a lucrative one for the Giffords, for they continued a pattern of selling wool and mutton locally. The amounts sold are comparable

to the amounts recorded for wool and mutton sales in Maltiah Gifford's minute book for the earlier periods of 1805-1817. Adding together the sales for both wool and mutton, it is not an insignificant amount, until it is compared to the money they made from beef and wood sales. In 1829 and 1830, the Giffords sold nearly 2000 pounds of beef, while they only sold 174 pounds of mutton. They made approximately \$89 more from their beef sales than they did from their mutton sales. In addition they also earned \$117.05 from the sale of cord wood. Adding these sales to the other items sold by the Giffords, items such as pigs, hay, and apples, yields a grand total of \$512.52 for the period.⁵⁴ In this period, they earned nearly half their money from the sale of beef and wood.

In the next period, 1834 and 1835, there was a small drop in total sales, probably as a result of having no wool sales, the pattern that would remain for the rest of the decade. On the other hand, mutton sales actually increased in this period. Beef and wood sales also saw an increase in this time period. They sold fewer pounds of beef but made more money because the price per pound increased. The big ticket item for 1834-1835 was wood. They increased wood production and made over \$80 more in this period than in the two-year period before it. Adding these items to the other products sold on the farm, the overall income for 1834-1835 came to \$499.81.⁵⁵ The loss of wool sales accounted for the minuscule drop in income, and overall both periods are reasonably close.

Things began to change for the worse in the next two periods for the Giffords. The third period covers 1837 and 1838. As during 1834 and 1835, the Giffords sold no wool but continued to sell mutton. The price of mutton, which had remained fairly stable at four cents a pound, began to fluctuate wildly between four and a half and seven and a

half cents per pound after 1837, which accounts for the relatively high dollar amount recorded in this two-year period, despite the drop in amount of mutton sold by 124 pounds. The 1837 and 1838 period saw a sharp drop-off in beef sales that would continue into the next period and beyond, for the Giffords earned only half of what they had made in the previous period. It is possible that this decline in beef sales is related to a rapid decline in the state of the economy. The disastrous state of affairs was reflected in the State Valuation of 1840 and might have had its origin in the period 1837-1838. The only exception to this decline in sales for the Giffords is in the sale of cordwood. In this two-year period, the brothers sold more wood and made more money than they had before. Eight out of fourteen purchases of cord wood for the period were by a man named Richard Wood, on behalf of some third party. Richard Wood is named as a captain of a packet vessel by a minute book of the late 1840s, so it is very possible that many of these purchases went to Nantucket as well as to locals. It is also possible that the Giffords engaged in this increase in woodcutting to offset the losses they were experiencing in wool, mutton, and beef, as well as in other area such as pork and grain production. They also expanded their hay operations, both in English hay and in salt hay, but to no avail. The overall income for 1837 and 1838, despite the expanded woodcutting and hay production, was \$330.02,⁵⁶ down almost two hundred dollars since the first period of 1829-1830.

The last period, 1839 and 1840, was by far the worst one for Prince and Maltiah. They sold no wool, and while mutton sales expanded, even this slight expansion in mutton production could not offset the collapse of beef production. In this two year period, no beef was sold at all. Prince and Maltiah had cattle, but they just were not

selling any beef and only managed to sell one cow and two calves as livestock.⁵⁷ When examined in conjunction with the state valuation of 1840, which shows the stock in trade for the town at \$28,812 (much reduced from its 1831 high of \$69,297), the data suggest that poor beef sales reflect the state of the poor local economy.⁵⁸

Wood production was also down in this period. The brothers managed to sell only about half of the amount they had sold in the previous period. It is very likely that this drop in productivity was a result of overcutting during the 1837 and 1838 period, for the price of wood per cord had risen from \$4.50 during the 1829-30 period to \$5.50 after 1837.⁵⁹ While it is possible that both Giffords were ill in this period, no surviving evidence indicates that, nor does any surviving evidence indicate that there was a decline in their ability to hire additional laborers. If the Giffords actually had possessed the extra wood, they would have made a substantial profit by selling it. It is more likely that they no longer possessed enough trees to take advantage of the increased prices. In addition, the losses experienced in the other areas of farm production, such as pigs and grains, were further exacerbated by a sharp decline in hay production. This across-the-board decline in productivity or at least in sales is reflected in the rather dismal returns of the 1839 and 1840 period, with a total income from these commodities only \$255.63.⁶⁰

Based on the data from the minute books, it is clear that the economic fortunes of the Giffords paralleled that of the town. Both started the decade in prosperity and both ended the decade in severe decline. This suggests a relationship that may be reflected in the decline of the Giffords' beef production in the period of 1837 and 1838. It seems that the economic conditions of the town, and its corollary, demand for production, affected operations on the farm both in terms of choosing what was sold as well as where the

Giffords' efforts were directed in production. The overcutting of wood as well as the expanded hay production in the 1837 and 1838 period seems to have been a compensation for the decline in production in beef, pigs, and wool.

The number of sheep also began to decline in this period. One reason for the decline could be that as demand for agricultural goods fell as a result of the economic downturn, the Giffords were forced to shift their efforts and time away from the less productive sheep herding and towards woodcutting and haymaking. Reducing the number of sheep was a strategy that was adopted as a result of a lack of wool sales. They were not making any money from wool sales because the factories out-competed home manufacture, the long standing source of demand for wool. When faced with the economic crisis, the brothers shifted to more productive forms of agriculture. This point will be further examined in Chapter 5. It is instructive to examine the actual numbers of sheep owned by Prince and Maltiah Gifford, as well as other prominent sheep farmers in Falmouth during this decade and compare these numbers to the economic data.

Data from the State Valuations

Table 3. A Sampling of the Changing Herd Sizes for Falmouth Farmers

Dan Bowerman	100	100	100	100	70	43	44
Prince and Maltiah Gifford	70	70	71	71	49	36	31
Elijah Swift	50	50	70	0	0	0	0
Nathaniel Lewis	100	100	100	80	50	0	0
Ward M. Parker	70	75	75	75	40	30	0
Shubael Lawrence	39	40	40	40	20	20	10
William Nye	15	12	17	7	10	0	12
John and Henry Robinson	20	25	0	0	0	0	0
	1831	1832	1835	1836	1837	1838	1840

This examination will focus will be on the number of sheep owned by the Giffords between the years of 1831 and 1840. The data come from the state valuations of 1831 and 1840, as well as from the assessments or state bills for 1832, 1835, 1836, 1837, and 1838. Both kinds of documents recorded what each inhabitant of the town owned in a given year. The only difference between them is that the state valuations have an aggregate at the back. In addition to the number of sheep owned by the Giffords in a given year during this decade, the number of sheep owned by other sheep farmers will be examined in order to place the Giffords' data into the context of the town as a whole. The six sheep farmers listed above were typical of the residents who owned sheep in Falmouth.

In 1831 the herds in town were owned by a variety of people and many of the farms were prosperous. The two top sheep farmers in Falmouth in 1831 were Daniel Bowerman and Nathaniel Lewis. In the middle range of sheep farmers were men like Elijah Swift and Shubael Lawrence. At the bottom of the scale were farmers like John and Henry Robinson.⁶¹ It is important to know that many of these farmers, like the Giffords, practiced a form of mixed economy, finding revenue in a variety of crops, work in the salt works, investments in trade, and animal husbandry. For example, Shubael Lawrence was also president of the Falmouth Bank and the owner of a fulling mill and a carding mill, among many other things. Elijah Swift had shares in whaling vessels and packet ships, and he ran both a construction business and salt works, while John and Henry Robinson operated first the Pacific Woolen Mill and then went on to found their own, which would eventually become the Moonakis Woolen Factory.⁶² According to the 1832 assessment, the size of the sheep herds in Falmouth remained much the same as they had been the year before, with just a few increases. Ward Parker displaced the Giffords in the number three position.⁶³

The year 1835 continued the trend of increases and stability in the herds, the one exception being the herds of John and Henry Robinson, who no longer had any sheep at all. For the rest of the decade, the Robinsons concentrated on their mill and the wharf and boats in which they had shares.⁶⁴ By 1836, however, a rapid decline in sheep began for some of the few farmers. The records reveal that the Giffords were still maintaining their herd. Also maintaining the status quo in numbers of sheep were Daniel Bowerman, Ward M. Parker and Shubael Lawrence. The surprise is Elijah Swift, whose herd dropped to

zero in 1836. He never owned sheep again, and instead concentrated on his salt works, his ships, and his construction business.⁶⁵

A marked decline began in 1836 and continued into 1837. The Giffords herd dropped nearly a third, while Daniel Bowerman's herd dropped by nearly a quarter. If 1837 saw a precipitous decline in the sheep population, the 1838 assessment reports a disastrous one. Nathaniel Lewis abandoned sheep herding altogether by 1838. Ward M. Parker's and Shubael Lawrence's herds had dropped by more than half by 1836. Despite his slight comeback in 1837, William Nye lost his entire herd in 1838.⁶⁶ In the following year, the *State Valuation of 1840* paints not only a grim picture of Falmouth's economy, but also one of decimated sheep herds.

Comparing the sheepherders side-by-side, both internally and with the economic data from the minute books, a pattern emerges. From 1831-1835, it is plain the number of sheep is maintained or in some cases increased. The exceptions to the trend in this time period were John and Henry Robinson. Their abandonment of sheep may be tied to the decline in the number of workers recorded in their time book for 1835, though it is unclear how.⁶⁷ William Nye just may have been an erratic farmer, but even his herd increased slightly by 1835. In comparing the data from the Giffords' minute books to the number of sheep recorded in the state valuations and assessments, it appears that an upward trend in the numbers of sheep owned happened while wool sales declined. For the 1834-1835 period in Prince Gifford's 1834-1836 minute book, no wool sales were recorded and yet the Giffords and a lot of other farmers were still increasing their herds, the extreme case being Elijah Swift, who added twenty sheep in the space of a year.⁶⁸ This increase in herds could be a result of the demand for mutton, but according to the

Gifford minute books, the demand for mutton was steady throughout the decade, although the sheep herds declined.⁶⁹ It seems almost like there was a disconnect between declining wool sales and stable mutton sales on one hand and increasing number of sheep on the other.

From 1836 to 1840, the general pattern in the sheep population was one of severe decline. It seems as if the sheep farmers were cutting back their herds or, more often than not, getting rid of them altogether, the exception being William Nye who added sheep to his herd after his initial drop in 1836. Everyone else seems to have shared the more common experience of decline. When these data are compared to those from the periods of 1837-1838 and 1839-1840 in Prince Gifford's 1837-1848 minute book, it is apparent that the decline in sheep occurred at the same time as the Giffords (and probably most of the other farmers) experienced a fall-off in both demand for agricultural goods and their accompanying income.⁷⁰

For the Giffords, the period of 1837 and 1838 saw the most precipitous decline in their sheep herd, coupled with a decline in beef sales and a parallel increase in both wood-cutting and hay production. Their income dropped to \$330.02 in 1837-1838 from the \$499.81 that they had earned during the 1834-35 period. The period of 1839-1840 saw the Giffords' income drop even further to \$255.63. While their sheep herd only lost 5 sheep in this period, their production in beef dropped, as did their pork production and a number of other traditional money makers.⁷¹

These declines in production, especially beef, it can be argued, reflect a decline in demand. Sheep are the exception here. Their numbers decreased in these two periods, just as they had increased during the 1834-1835 period, despite the lack of wool sales.

Perhaps the decline in sheep was tied to the decline in the local economy and was a casualty of belt-tightening and a shifting of priorities to deal with a worsening market. This possibility will be discussed more in Chapter Five. It can be seen from the examination of the Gifford minute books, the state valuations, and the town assessments that this decade saw an increase in the sheep herds until 1836, after which a rapid decline occurred, which reduced the overall population of sheep in Falmouth by two-thirds⁷² (roughly the same decline in the stock-in-trade valuation).

Data from the Moonakis Factory Time Book

The traditional explanation stresses the connection between the sheep industry and the woolen factories in New England, and so it is necessary to examine the expansion of the wool industry in Falmouth, along with the corresponding decline in both fulling mills and carding mills, using the state valuations and town assessments as well as the Moonakis Factory time book. These data can be compared to both the farm production, according to the Gifford minute books, and the rise and fall of the sheep population, as described in the assessments and state valuations.

As stated earlier, the home production of woolen cloth expanded in the 1700s as did the demand for improved cloth produced by fulling mills. Shubael Lawrence took advantage of the demand for this improved cloth by setting up a fulling mill in Falmouth in 1788, as well as the first carding mill in 1811. By 1831, according to the state valuation, the town of Falmouth had two fulling mills and three carding mills, all of which had formed the basis of a brisk trade carried on by the local households, who made homemade woolen goods. People brought the raw wool to the carding machine, had it carded for a small fee, then brought it home and wove it into cloth. They brought the

cloth to the fulling mill and for another small fee (one yard out of ten for the miller or a cash payment) had it felted to improve the cloth. They could take the cloth home and make clothes that they would then sell to places like Nantucket, Boston, or New Bedford, and while they were at it, they would make their own clothes.⁷³

Sometime between 1828 and 1831, after Congress had passed what would be known in the south as the Tariff of Abominations (which placed taxes on imported goods including woolen goods), Alexander Clark came to Falmouth. He set up what would become the Pacific Woolen Factory.⁷⁴ No records survive explaining this choice of a name, but it is clear that the goods from this factory were sold in New England, not in the West. Alexander Clark had come from Nantucket, and after receiving backing from the Baker and Goddard Company of New Bedford, began construction of a mill along the Coonamessett River, known then as the Five Mile River or Dexter's River.⁷⁵ He recruited a number of locals to either help manage the factory or provide further backing, including Reuben Dillingham, Stephen Dillingham (through his company Dillingham and Boyce), Abner Hinckley, and John and Henry Robinson. Each of these men owned wharves and shares in packet ships, and this may be why they were recruited by Clark.⁷⁶ By 1831 the factory was up and running, as indicated by the State Valuation of 1831, which lists one factory in town owned by the above people. Unfortunately, this partnership was not destined to last. For reasons that are not recorded, John and Henry Robinson pulled out of the Pacific Woolen Factory sometime in 1831, and with the backing of Abner Hinckley, started their own woolen mill on the Moonakis River which they named the Lewisville Woolen Manufactory, later renamed the Moonakis Woolen Factory. According to the

Moonakis time book, these mills opened for business by 1832. Employing 10 people, they began producing cloth by September.⁷⁷

Both the Lewisville Manufactory and the Pacific Woolen Factory followed the model of what Gail Fowler Mohanty describes as Rhode Island-style mills, which were small mill operations different from the larger Waltham-style mills, of which Lowell is the best example. The Rhode-Island-style mills were controlled locally, with one owner or a small partnership as opposed to corporate shareholders (Mohanty 1989:193). Each mill at this point was partnered with locals who had shops (which were probably used for selling woolen goods), ships (which more than likely carried finished goods to Nantucket and perhaps brought raw wool to Falmouth), and wharves (likely where the ships carrying the mills' products could land).

By 1833 the presence of two woolen mills had a most deleterious effect on the carding and fulling mills. Only one carding mill and one fulling mill were still left, both owned by Shubael Lawrence. The rest had gone out of business.⁷⁸ This collapse of the fulling and carding mills was a result of the collapse in demand for their services because of the ready-made cloth from the two woolen mills. Their rapid disappearance reflects the decline of home manufacture of woolen goods for sale by local farmers. It certainly is true that by the 1834-1835 period in Prince Gifford's minute books, no wool sales were recorded at all. It is highly likely that there is a connection between the two, for the Gifford minute books make it clear that local farmers were not selling their wool to the factories. Before the two factories were set up in Falmouth, the Giffords sold reasonably large amounts of wool, but once the factories began to sell improved cloth, the wool sales ceased. This issue will be discussed in fuller detail in Chapters Five and Six.

While no data exist for the operations of the Pacific Woolen Factory, the time book for the other Falmouth factory, the Moonakis Factory, provides a wealth of details about production in the period from 1832-1840. Three phases can be discerned. The first is the period from 1832-1834. The work force fluctuated between five and eleven employees, but the average was about eight. Production in this time period was quite good, with the output for 1833 totalling over 10,000 yards of cloth. On the other hand, the entries for 1832 and 1834 are somewhat spotty, with pages missing. Based on the number of employees retained, however, production must have been good for those years as well.⁷⁹

The next phase spans the period 1835-1838, and is marked by a decline both in productivity and in employees. The nadir of this period is in 1835, when the factory employed only three people and produced no cloth.⁸⁰ The factory may have kept itself afloat by employing the fulling and carding mill it possessed to process local wool for those who still practiced the home manufacture of woolen cloth. It is around this time that the Giffords recorded their last sales of wool, though not to any factory, and the three sales came to only fifteen pounds.⁸¹ Production at the factory fluctuated in this period after 1835 from 3400 yards in 1836 to 1400 in 1838. What remains constant is the low number of employees, the average of which is three.⁸²

The last period is from 1839-1840, when the woolen factories began to recover from the mid-decade slump. There are gaps in the production records for this time, but what is left, coupled with the increase in the average number of employees from three to six, indicates an upswing in production probably to about two thirds of the 1833 level of production.⁸³

The pattern revealed in the time book is one of an initial burst of productivity from 1832 to 1834, followed by a slump from 1835 to 1838 and finally by a recovery in 1839. When the data from the minute books are compared with the state valuations, town assessments, and the time book, however, the data do not correlate. This lack of correlation in the empirical data presents a challenge to the AGS model, for integral to the AGS model is the supposed interdependence between the sheep farmers and the factories, which according to this evidence did not exist in Falmouth. The minute books, the valuations, and assessments show a pattern of economic and agricultural expansion until 1836, followed by a rapid decline, while the pattern revealed by the factory time book shows a meteoric expansion of production from 1832-1834, followed by a serious slump between 1835 and 1838. The decade ends with a partial recovery for the factory beginning in 1839.

By 1840, according to the state valuation, the Pacific Woolen Factory was doing quite well for itself. It possessed a factory, two warehouses, and a shop. It even sported two dwellings for its employees. About its nearby rival, the Moonakis Woolen Factory, quite a bit more is known. John and Henry Lawrence, who by 1840 had become the sole owners of the second woolen factory in Falmouth, finally settled on the Moonakis Woolen Factory as a name for their company. The state valuation says that the Moonakis Woolen Factory was in possession of one factory, one warehouse, and two stores. For good measure, they also had a grist mill. Unlike many of the inhabitants of Falmouth - farmers, store owners, and sheep - the Pacific Woolen Mill and the Moonakis Factory seem to have not only survived but also flourished.

The data reveal that the 1830s were a period of immense change for not only the farmers of Falmouth but also for the entire population. While some relevant data are missing, a comparison of the surviving data from the Giffords' minute books, the state valuations, the town assessments, and the town book of the Moonakis Factory allows a picture of Falmouth in the 1830's to be drawn. After 1836, the sheep herds, in conjunction with other elements of Falmouth's economy, went into a disastrous decline. Beef production plummeted by the end of the decade, as did the town's stock-in-trade. In contrast, the data suggest that the two woolen factories in Falmouth had mid-decade slumps, which they emerged from just as the rest of the town slipped into economic crisis.

CHAPTER 4

THE TRADITIONAL MODEL

The model put forth by the American Geographical Society (AGS) came to dominate historical thought about the way New England agriculture collapsed in the 1840s. Sponsored by the AGS, prominent historians, geographers, and economists helped construct a picture of New England, its agriculture, industry, and economy. In order to understand the complexity of such a diverse system, the AGS maintained, many disciplines would need to cooperate in order to create a clear picture of the challenges of the region.

History of the AGS Model

The central assumption of the traditional model is the claim that New England's soil is rocky and infertile and often referred to by a variety of authors as hardscrabble. Clearing ground filled with stone is labor-intensive and needs more equipment. Because of this terrain and the difficulty in preparing it adequately for the demands of agriculture, claims the traditional explanation, farmers in New England were limited in what agricultural crops they could produce and by the high cost of production (Wright 1933:9). The model suggests that once factories provided a ready market for wool, Eastern farmers

increased production of wool by increasing their herds. Sheep were more cost effective than other agricultural products. This increase in sheep-farming could last only as long as the factory market was available and exclusive. New England agriculture had inherent disadvantages. Once improved transportation allowed inexpensive agricultural goods from the west to enter the New England market, New England farmers, especially sheep farmers, could not compete. As a consequence, they abandoned sheep (Turner 1933:9; Bell 1989:450-452).

This model has its origins in a paper written by James Walter Goldthwait, “A Town That Has Gone Downhill” (1927). While making a topographic map for the township of Lyme, New Hampshire, Goldthwait observed that the population had dramatically decreased since the middle 1800’s. Goldthwait suggested in his paper that one of the causes for the depopulation was that the local farms were not productive and that they required a lot of work. In order to make his point, he specifically quoted from *The History and Description of New England: New Hampshire*, observing that “the principal occupation of the people is in subduing a hard, siliceous surface, and extorting from its reluctant lap the bread of toil” (1927 :536). He concluded by noting that by 1840 the population of Lyme began to emigrate to the west in search of farmland that was easier to work and more productive (1927:536).

Goldthwait’s inquiry into the depopulation in Lyme, NH inspired the American Geographical Society to bring together a group of geographers, historians, economists, and sociologists to study the population, region by region, of the United States. They chose to study New England first because of the “highly critical state of its agriculture and part of its industrial population. From the related subjects of economics and

sociology contributions [would be] sought to make a well-rounded study of the history of settlement with a view to furnishing an essential background for the conditions of [the day]” (Wright 1929: 318). The earliest contributors included Louis Wolfanger, James Truslow Adams, and Harold Wilson, who conducted their individual studies in the 1930’s. Wolfanger concentrated his studies on soil and economic geography. Adams’ specialty was history, and Wilson was an economic historian. In addition, historian Frederick Jackson Turner examined the political influence of the New England region. Together, these scholars provided information from different disciplines to the AGS to create what the AGS believed was a complete picture of agriculture, industry, population, and the economy in New England.

Although Goldthwait’s paper only dealt with New Hampshire and not New England as a whole, nevertheless, it prompted the AGS to recognize that the declining population and abandoned farms meant that something had fundamentally changed in rural New England. Consequently, the AGS sponsored a program that sought to understand the attenuated state of New England agriculture. This study, which occurred between 1927 and 1950, closely examined the issues arising from the interaction of man with the natural landscape, including such diverse elements as topography, rock structure, soil, and climate.

In order to study such a complex system, the AGS decided it needed a number of specialists to conduct inquiries, region by region, into the causes of the agricultural systems having reached such a critical state. Each academic contributed papers to the New England Studies Program, the umbrella group that gathered and compiled all the information into what would become a coherent model that explained the collapse of

New England agriculture. John K. Wright, a geographer and historian employed by the AGS from 1920 to 1956 as a librarian, editor, academic contributor and eventual director, claimed that the AGS viewed their undertaking as analogous to doctors seeking to cure a very sick patient:

When competent modern physicians undertake to cure a complicated and difficult case they first examine into all possible causes of disease and disability. . . . Diagnosis that is both thorough and comprehensive is needed regarding the maladjustments in the body politic of New England. The various separate factors – geographical, economic, social, historical – that combine to frustrate the efforts and hopes of large groups of people must be analyzed in detail (Wright 1929: 485).

It would take several years, decades even, to compile all the disparate information and study the interrelationships. The information from different disciplines was shared among the scholars, published in the *Geographical Review*, and became the basis for the AGS model. The contributors published a series of papers which concluded that New England soils were stony and infertile, and that hardscrabble, subsistence farming was the only form of agriculture that could be practiced there. Later, analysts like Bell discussed the same issues (Wright 1933:9; Bell 1989:450-452).

In 1933 the AGS published *New England's Prospect 1933*, which was a compilation of the research to date on the conditions in New England, what caused them, and what could be done to improve the situation. This publication formed the backbone of the model that explained the collapse of agriculture in New England. In the following years, authors such as economist John D. Black and historian Harold Wilson continued to expand upon this model. *New England Prospect 1933* became a jumping-off point for a much longer and complex series of articles that built upon the original model.

Wolfanger, Adams, and Theories of Subsistence Farming

Louis Wolfanger concurred with Goldthwait's opinions about New England farming. Wolfanger claimed that New England farmers "were unable to wrest a competitive living from soils that nature had unstintingly strewn with alien boulders and almost exhausted long before his arrival" (1931:287-288). The influence of this description in the AGS model can be seen in Petersham, Massachusetts in the series of dioramas of the Harvard Forest. The dioramas show the step-by-step clearing, field abandonment, and subsequent regrowth of the Harvard Forest in Petersham. Researcher Richard T. Fisher created the dioramas during his tenure at the forest. Fisher believed that New England's continued growth in agriculture depended upon regenerating forests for sustained timber yield. In "Another Look from Sanderson's Farm" Brian Donahue describes the production of the dioramas:

The dioramas were produced to show how careful management of regrown forest stands could help New England produce high quality timber. The dioramas were constructed during the 1930s and most of them were designed by Fisher himself before his death in 1934 . . . They depict the death and rebirth of the Petersham Forest [and] the rise and fall of New England farming . . . but around the rest of the hall are more models, three quarters of the exhibit, that few but museum visitors ever see. These dioramas display the vision of conservation that flowed from an understanding of [history]" (Donahue 2007: 22).

The history these dioramas presented was drawn from the AGS model. Fisher's goal was to show that better management was needed to resurrect and sustain New England agriculture. He felt that farmers should avoid the mistakes they had made in the past. Fisher's idea of using history to resurrect and create a sustainable model of New England agriculture was very much in line with the purpose of the AGS. Fisher also

implied through the dioramas that farming “on stony soils led to the early construction of stone walls” because it was so difficult to move the stones far away from their farms.

The stone walls that dominate the dioramas (and New England as a whole) arise from the act of clearing. They do not change as the dioramas proceed through time, implying that the walls originated from a land so stony that it had to be cleared of rocks before farming could begin (Bell 1989: 451-452).

The creation of stone walls as an element of small-scale farming, and thus landscape evidence of the inferiority of New England agriculture, was only part of the larger AGS model. The corollary to the idea of the infertility of the New England soils was the inability of New England farmers to compete agriculturally with Western farmers. Once western agricultural goods entered the New England markets via canals and especially railroads, farms and most of their traditional products were rendered unprofitable and thus abandoned. James Truslow Adams, in his contribution to *New England's Prospect 1933* sums up the farmers' challenges nicely:

Costs, topography, climate, and markets all favored the western farmer. The western country, appearing to offer more profitable opportunities, attracted capital, which, as well as labor, was lacking to the small farmer of New England. At a critical period, the difficulties of large-scale production were insuperable for Yankee agriculture (Adams 1933:9).

In other words, small-scale farming led to the rapid agricultural decline in the New England region. With the introduction of cheaper agricultural goods from the west, New England farmers began to abandon farming altogether when they realized that they could not compete in the marketplace.

The Implications for the Rural Economy

It is in this context of this AGS model that Harold Wilson (who contributed to the original study) wrote “The Rise and Decline of the Sheep Industry in Northern New England” (1935). Wilson, again using the AGS model of an infertile New England environment, proposed that the expansion of the number of sheep in the early 1800s was both a result of the agricultural limitations of an infertile landscape and, more importantly, a response to the demands of an expanding woolen industry (Wilson 1935:13-21). Wilson proposed that sheep provided far greater profit in the past for the labor involved than did raising corn or wheat, two popular crops at the time (Wilson 1935:13). This idea led to the second and more important of Wilson’s reasons for the expansion in the number of sheep in New England: by the 1820s and 1830s, factories of all sizes were expanding production and increasing in numbers, mainly in southern New England, but also in northern New England. These factories needed wool, and the farmers of New England, according to Wilson, responded to that demand by ramping up raw wool production through the increase of their sheep herds. In the process, the sheep farmers and the factories formed a symbiotic relationship. As woolen factories increased both in number and production, so the number of sheep also increased. Industry stimulated the expansion of sheep in this period, Wilson argued (1933:13-18).

Wilson claimed also that this symbiotic relationship between sheep farmers and wool factories ultimately led to the decline of sheep in this period (1933:17-25). If this demand for New England wool was reduced or even removed, the sheep herds that were sustained by it would disappear. This idea is the underlying concept of Wilson’s portion

of the traditional model: in various forms, the demands of one sector of the New England economy, such as wool factories, and the agricultural portions of the New England economy, such as sheep farming, formed an interdependent relationship. Wilson's idea that sheep herds expanded to meet the growing demands of the factory and the population it served is played out in other sectors of the agricultural economy as well, even though this was not the case in Falmouth. Wilson suggested that in New England, factories became a ready market for a product that the farmers found easy to raise with minimal effort regardless of the quality of the soil. Like factories that created a ready market for wool, the population increases in the cities and surrounding areas created a ready market for milk, cheese, and butter, so New England farmers began to focus their efforts on these profitable forms of agriculture. The idea that New England agriculture was an adjunct to the expansion of industry and urban demands is the basis for the AGS's explanation of the collapse of the sheep industry in the 1840s (Baker and Izzard 1991:341).

Wilson suggested that because it was cheaper to produce wool in Ohio and other western states in the 1820s, wool could be produced in far greater quantity there. As long as there was no transportation to get the wool to markets in the east, however, this state of affairs had no effect on New England sheep-raising. This situation began to change with the construction of the Erie Canal in 1825. Wilson asserts that after 1825, cheaper western goods slowly began to move into the eastern market. The Erie Canal, according to Wilson, created a beachhead that was expanded upon by the creation of the Pennsylvania canal system and the expansion of the railroads. At this point, New England farmers' products were still viable in the market because, although those modes of transportation allowed western goods to enter the eastern markets, the transportation costs

were still high enough to make eastern goods competitive (Turner 1931:158-159; Wilson 1933:19-20; Bell 1989:456-460).

These circumstances changed in the 1840s, according to Wilson, when the rail line between Boston and Albany was completed; the completed line lowered the transportation costs for goods from the west to the point at which eastern goods became too costly. Transportation costs were lowered to a negligible level, and in the battle between eastern and western wool, it all came down to production costs. Wilson claims that the two dollars per year it cost in the east per head of sheep just couldn't compete with the twenty-five cents to one dollar per head per year it cost to raise sheep in Ohio; thus, after 1845, the eastern farmers began to abandon sheep and other forms of agriculture (Wilson 1933:20). As stated before, Wilson's assumption that the eastern farmers were unable to compete with the western farmers was grounded in the environmental determinism espoused by the AGS.

In 1950 John D. Black used the AGS model to write *The Rural Economy of New England*. In this regional study, Black presented as a regional study an analysis of New England's rural economy along with its industries and trade. His main purpose was to present problems that needed to be addressed in order to revive New England's economy. Part of his basic analysis was that New England soils were rocky and infertile, and that only with the administration of large doses of fertilizer would they be productive for the New England farmer (Black 1950:181). He took as a starting point the infertility of New England in building his model, but he did not spend a great deal of time supporting his initial position. For him, the AGS suggestion that New England's soil was infertile was simply a commonly held truth. Writing nearly twenty years after the initial series of

studies, Black took some of the model's ideas as accepted historical fact. With Black, the idea that New England soil is infertile and rocky moved from the realm of a geographical study to that of common, accepted wisdom.

The model advanced by the AGS and authors like Wilson and Black for the collapse of New England agriculture in general, and sheep in particular, with its basis in environmental determinism, forms the cornerstone of a broader historical narrative, one in which the hardscrabble environment which is supposedly the New England environs forged a Yankee character based on self-reliance and moral certainty (Turner 1931: 155-156). This character was imprinted on much of the country through the emigration of New England farmers forced to seek better. A couple of examples of New England's influence on the rest of the country as a result of this immigration should suffice (Turner 1931: 154, 156, 161).

The New England Diaspora

Frederick Jackson Turner utilized the AGS model and discussed the influence of the New England diaspora in his 1931 paper, "New England 1830-1850." Turner suggested that New England gained power in the Union by the dissemination of her economic and political influence and her intellectual ideals. For economic influence, he cited such New England expatriates as J.P. Morgan and Jay Gould, who held commanding positions in the U.S. economy. He cited numerous examples of political influence in such diverse settings as Utah, which adapted the New England style town to meet the needs of the Mormon theocracy. Incidentally, the founder of Mormonism Joseph Smith came from Vermont (Turner 1931).

Turner also referenced the Wisconsin Constitutional Convention of 1846, where two-thirds of the representatives were New Englanders. The New Englanders, according to Turner, carried many of their cultural ideas and their work ethic with them wherever they went, and unlike southern settlers in the west, the transplanted New Englanders were more likely to pay attention to and act upon even radical ideas that came out of New England, like the Abolitionist Movement and Transcendentalism, so those movements spread, particularly Abolitionism. The Puritan work ethic also helped generations of Americans in the West to define themselves as no-nonsense, hardworking, God-fearing people (Turner 1931).

This traditional AGS model still influences views of New England today, and it forms the basis for a wide variety of theories that deal with the region. For example, Andrew H. Baker and Holly B. Izzard argued in their 1991 paper “New England Farmers and the Marketplace,” as did others before them, that “the New England environment was full of rocky soil and rugged terrain more suited to raising livestock instead of cultivating crops” (Baker and Izzard 1991:33). Like the AGS researchers, they conclude that “with relatively inexpensive goods from more distant farmlands now available, it no longer made economic sense for the region’s farmers to continue certain types of production” (Baker and Izzard 1991: 43). According to Baker and Izzard (1991:43), one of those types of production that was abandoned was wool production. Their conclusions are not backed up with citations of any of the authors of the AGS study. Instead, their assertions are presented as commonly known truths or they are based on authors who in turn derive their citation from the AGS authors.

Joseph Wood also discusses the spread of New England ideals when he describes how the settlement ideal of a center village first conceived in New England in the early 1800s “endures in villages real and imagined across the United States, a settlement ideal brought by immigrants from New England” (Wood 1997:157). The New England ideal of a strong central village, forged by the hard work of the farmers whose land surrounds the center of town, continued to be a staple of American culture as it moved west. Wood builds on the AGS model and its theory that New England is hardscrabble and stony.. In the opening chapters of his book, Wood describes the environment of most of New England as “the less enticing sandy scrub and stony loam hardscrabble of the morainic lowlands, which the rivers interpenetrated and deep forest covered. Receding glaciers had distributed a heterogeneous, extremely stony glacial till across most of New England” (Wood 1997: 27). The word choice in many cases resembles the word choices from the AGS, yet like Baker and Izzard, the AGS is not cited. Again, the infertility of the New England environment is either assumed as a fact or authors are cited who are regurgitating the AGS model. The fact that all of these authors – Goldthwait, Black, Wilson, Turner, and Wood - use the same terminology and the same theory spread over such a long period is indicative of the power this model has had on the mindset of historians.

Strengths and Weaknesses of the Theory

At its heart, the AGS model is a macro-economic theory generated from environmental determinism. Because of these two components, the AGS model has the shortcomings of both theories, as well as their explanatory strengths. Their explanatory strengths have been examined by Wolfanger and others, and a quick examination of their

shortcomings is in order. Macroeconomic theories assume uniformity across the region or nation under study that is not always apparent in reality. This is not to say that macroeconomic theory is always wrong, but it does tend to obscure, and at worse ignore, the actions of individuals and local structures and their effect on events.

Macroeconomics often purports that the actions of individuals and localities are determined by overarching economic factors, rather than claiming that those overarching economic patterns are determined by the interactions of individuals and local economies with others across a region or even the world. Theories employing macroeconomics tend to utilize patterns which are expected to hold everywhere, a theoretical stance that microhistorians such as Carlo Ginzberg (1991), warns, is not always supported by local evidence. At its worst, macroeconomic theory oversimplifies instead of explains.

Environmental determinism assumes a uniform reaction to environmental stimuli. In other words, a particular environment or landscape will produce similar cultures or economic conditions. For example, Turner discussed the difficulties inherent in New England's hard rocky soil, and he suggested that it produced the thrifty, hard-working Yankee work ethic that has become part of the character of the region. Looking more closely at individual cases, however, one can see that similar environments do not always produce similar cultures. The AGS model, however, uses an environmental determinism model and assumes a uniformity of environment in New England, that all of New England is rocky and hardscrabble, even if that description is not borne out by the evidence in Falmouth or many other locations in New England. A deeper analysis can reveal flaws in the AGS model.

To test the AGS model's applicability to the local context, I compare it to the pertinent evidence in Falmouth. According to the model, Falmouth's soil should have been relatively infertile, making it difficult to support anything other than crop production. This state of affairs in turn should have forced the local farmers to concentrate on the raising of sheep in order to supply the factories that emerged after the War of 1812. This relationship between the farmers and factories of Falmouth, according to the theory, should have remained profitable only as long as the farmers had no competition from other parts of the country. Once cheap western wool began to enter the Eastern markets, the AGS model suggests that Falmouth sheep-raising would decline disastrously, for the local factories would buy western wool because of its competitive price. The Falmouth wool, according to the theory, would have been more expensive because of the less fertile environment. To meet the strictures of the AGS model as set forth by Wolfanger and Adams, Falmouth should have had infertile soil. In addition, Falmouth farmers should have had an exclusive relationship with the local factories, supplying them with wool, if one follows Harold Wilson's model.

Wilson's form of the AGS model lays out what should be the timeline for the collapse of the sheep industry in Falmouth, which can be summed up as follows. The number of sheep in Falmouth's herds should increase in number from 1830 until about 1845. After 1845, the number of sheep in the town should collapse precipitously. According to Wilson, New England experienced a 63% decline in the number of sheep between 1850 and 1860 (1935: 21). Falmouth should experience a similar decline. The causes of this decline, according to the AGS model and Wilson, were the introduction of wool from Ohio and other western states into the New England market (Turner 1931:158-

159). The timing of this decline in the AGS model is set by the completion of the Erie Canal in 1825 and its expansion with the opening of the Ohio and Pennsylvania canal systems between 1832 and 1834, coupled with the expansion of railroads, especially the Boston to Albany line, in 1841. After 1841 the price of wool declined so much as a result of the flood of cheap western wool that, according to the model, New England farmers could no longer make a profit selling wool to the woolen factories, and thus abandoned sheep farming altogether (Turner 1931:173; Wilson 1935:19-20). Raising sheep for profit should have declined after the introduction of cheap wool from the west if Wilson and Turner are to be believed. By examining the local evidence in Falmouth, the predictive qualities of the AGS model can be tested.

CHAPTER 5

COMPARISON OF LOCAL ARCHIVAL EVIDENCE TO THE TRADITIONAL MODEL AND POSSIBLE EXPLANATIONS FOR THE DECLINE

An examination of the local evidence for Falmouth shows that the AGS model does not adequately explain the collapse of the sheep industry. The three major points of the model, the infertility of the soil, the supposedly close relationship between the woolen factories and the sheep farmers, and the timing of the collapse (coinciding with the introduction of cheap western wool), are not supported by the Falmouth evidence. The AGS model will be compared to the local evidence on these three points. It may be that the theory does apply to other towns in New England to varying degrees, but it does not work for Falmouth. A tentative reconstruction of the causes of the collapse of the Falmouth sheep industry based on a close reading of the local evidence will be presented as an alternative to the AGS explanation.

Falmouth Soil and Cash Crop Production

According to the AGS model, the soil of Falmouth should be infertile to the extent that most farmers there could only practice subsistence farming (Wright 1933:6-9). While Falmouth does have areas where the ground is rocky, especially in West Falmouth,

the soil is by no means infertile, for Falmouth successfully exported various crops over a long period of time. The HARCCI claims that as early as the 1680's Falmouth, along with other towns on the south coast of the Cape, sent excess agricultural goods to Nantucket. During the 1700's, Falmouth became one of the chief agricultural suppliers for Nantucket because of "Nantucket's isolated location and absence of adequate agricultural land."⁸⁴ The productivity of Falmouth soils was to continue into the 1800's.

During the period from 1829-1837, the Giffords sold rye and barley in bushels and pecks as well as bushels of potatoes and barrels of apples to the local market.⁸⁵ The amount of grains and fruits produced for the local market was relatively small compared to what they were producing in meat, wood, and wool, but it is important to remember that their time, efforts, and lands were mainly dedicated at this point to raising livestock, cutting wood, and tending their salt works. Those were the goods most in demand by Nantucket, the primary market for goods from Falmouth. The fact that they were raising barley, rye, potatoes and apples for sale, but with very little tending, is indicative of the productivity of the soil of Falmouth as a whole, despite the fact that West Falmouth mainly consists of moraines with a lot of rocks in the soil.

Despite the somewhat rocky soil, many local farms were quite productive. An examination of both Prince Gifford's 1837-1848 minute book as well as Arnold Gifford's surviving ledgers from 1837-1840 and 1844-1848, shows how productive the soil could be when it received Prince and Maltiah Gifford's undivided attention. After the sheep herds collapsed, and along with it beef sales and wood sales, the Giffords redirected their efforts to raising onions between 1837 and 1840. That the soil was still productive is indicated by the amount of onions produced and shipped out in barrels. The Giffords

could fill large and small orders. For instance, they sold four barrels of onions in November of 1839 to Captain Joseph Swift and forty barrels of onions to Arnold Gifford, who sold those barrels on their behalf to Captain Tobey of the *Oneco* for \$37.71.⁸⁶ The ultimate destination for the onions is not noted in either of the minute books, except to say that the onions were sold south, and this most likely indicated Nantucket, still the major market for goods from Falmouth.⁸⁷ The Giffords were not the only ones who raised onions commercially in West Falmouth, according to John Hoag Dillingham, a local historian born in West Falmouth in 1839. “After the salt had come down to near 25 cents a bushel (a reference to the sale of salt from the salt works), the raising of onions...became the leading industry” (Smith 1985: 434). The village as a whole was raising onions as a cash crop.

Like farmers everywhere, farmers in Falmouth faced challenges from nature, but the evidence reveals how well they coped with these challenges. After maggot worms got into the onion fields and devastated the crop, the farmers of West Falmouth switched over to French turnips, which were sold in Boston. With no more surviving minute books from either Prince or Maltiah Gifford, the evidence comes from local historians such as Virtue B. Gifford, who talked to these farmers when they were very old men and she was a young woman interested in the history of her village.⁸⁸ She noted that Falmouth farmers first raised onions then French turnips, and this is in addition to the crops that they raised to feed themselves. This evidence seems to suggest that the soil supported more than subsistence farming in West Falmouth; in fact, Falmouth as a whole was less rocky than West Falmouth, and even more productive. In the 1800’s, according to the *HARCCI*, Falmouth had more productive farmland than any other town save Barnstable, and a

greater percentage of farmers than any other town on the Cape again except Barnstable.⁸⁹ The Cape as a whole made up more than 3% percent of the grain production in the state⁹⁰

By the early 1900s, even small Falmouth farms were still productive. According to *The Book of Falmouth*, Falmouth was noted as a producer of asparagus and zucchini, as well as the ubiquitous stands of corn common to this area (Smith 1985:189, 245). One such productive farm in the 1900s was Coonamessett Farm in Hatchville (a village of Falmouth). In 1921 Coonamessett Farm grew eighty acres of rye, fifty acres of corn, twenty acres of asparagus, fifteen acres of oats, ten acres of peas, four acres of grapes, forty acres of buckwheat and twenty acres of millet (Smith 1985:248). Most of these crops can find a parallel in the Giffords' minute books, though in lesser amounts than that grown at Coonamessett Farm. If farms like Coonamessett were still thriving in the early twentieth century, it is reasonable to assume that they managed to survive the ups and downs of the economy in the nineteenth century, thus indicating that the soil remained productive in Falmouth.

One major difference between the kinds of cash crops grown in Falmouth in the 1800s and 1900's was the introduction of the strawberry in 1895 by immigrants from the Azores and the Cape Verde islands (Smith 1985:190-195). The strawberry quickly came to be a dominant theme in Falmouth agriculture and by the 1930s, Falmouth had over 500 acres of strawberries planted alongside all of the other kinds of crops grown in large farms like Coonamessett. At the height of demand in the mid-1930s, the sale of strawberries brought in more than a quarter of a million dollars a year into the town (Smith 1985:190-195).

Based on all of this evidence, it is quite clear that the farmers of Falmouth had a long history of producing cash crops for markets, whether local or regional, and that they were not subsistence farmers, for the soils of Falmouth in fact could be quite productive. This is not to say that the soils of Falmouth did not require fertilizer, but then again, Western soils required that as well. The implications of these facts are that the farmers of Falmouth could and did employ the land to raise cash crops and not just farm for subsistence, and that they were not constrained in what they chose to produce. Certainly AGS model terms like “hardscrabble” and “infertile” to not apply to Falmouth.

Farmers and Factories

Wilson and Turner claim that New England farmers were forced by the infertility of the soils to concentrate on husbandry and that when woolen factories began to appear after 1815, that animal husbandry took the form of sheep herding in order to satisfy the growing demands of the factories for wool. An exclusive relationship developed between the woolen factories and the sheep farmers. Because of the constraints of the environment, the sheep farmers were more or less forced into this relationship with the factories (Turner 1931:159-160; Wilson 1935:13). In the case of Falmouth, that does not seem to apply at all, for its farmers had many options when it came to making a profit from the land. They did not have to raise sheep for the factories in order to make money; they could and did raise grains such as rye and corn as cash crops. While they did focus, at least in West Falmouth, on sheep and cattle, it was not because the land restricted them to those choices; instead, it was what the market demanded. They were never forced into an exclusive relationship with the local factories because the land allowed them other options. When cattle and sheep failed them in the 1830s, they were able to switch easily

to onions and turnips in West Falmouth, and truck vegetables and grains in other parts of Falmouth. Farming did ultimately fail in Falmouth, but not because the land was poor.

According to the AGS model, by the 1830s the sheep farmers and the woolen factories existed in an exclusive and symbiotic relationship in which the demands of the woolen mills drove the increase in the number of sheep owned by the farmers. These farmers in turn sold to the only market available to them, the woolen mills (Turner 1931:159-160; Wilson 1935:13). As in the first example, the AGS model does not fit Falmouth's circumstances. It seems that sheepherders like the Giffords and others in Falmouth had no relationship with either the Moonakis Woolen Factory or the Pacific Mill Factory. Perhaps the reason lies in the fertility of the Falmouth soil, allowing the farmers to enter into other ways of achieving profits from their farms. The evidence for the nonexistence of a relationship between Falmouth's sheepherders and Falmouth's woolen factories can be found in both the minute books of Prince and Maltiah Gifford as well as the Moonakis time book. It can also be found in the reminiscences of Orrin C Bourne, who worked in the Moonakis Factory, though at a later date.

The detailed entries in the Giffords' minute books make it clear that they had nothing to do with either the Moonakis Woolen Factory or the Pacific Woolen Factory. The Giffords recorded no wool sales to either factory, nor are any sales of wool recorded to their owners. Alexander Clark and Abner Hinckley make no appearance whatsoever in the minute books, while Stephen Dillingham only appears when he bought meat.⁹¹ The Robinsons appear in the minute books, but never to purchase wool. The Giffords do record wool sales, quite a number of them before 1831. For example, "5th mo. 29th 1830--- Charles Bowerman to Prince Gifford Jr. and Maltiah Gifford Dr. (debtor) to 25 $\frac{3}{4}$

lbs. sheep's wool--- \$ 8.49.”⁹² All of the other entries going as far back as 1807 read much the same.⁹³ The problem for the AGS model and Wilson is that none of these meticulously recorded wool sales are to the local woolen factories or their owners. They all seem to be to local people, both men and women⁹⁴

What is missing in these minute books is an entry that is found in an account book from an island not very far from Falmouth. The island of Naushon lies in the Elizabeth Island chain, which is off the coast of Woods Hole. The island had been the exclusive property of the Bowdoin family since 1730, and for most of that time, they ran it as a large sheep farm (Emerson 1963:5). By 1819, there were 4000 sheep on the island.⁹⁵ While the actual records of the island are in private hands, Amelia Forbes Emerson put together excerpts of these records in *An Anthology of Naushon 1833-1917*. One of these entries from 1863 states very clearly what the Gifford minute books do not, “Sold wool from 1115 sheep, 2765 lbs, @ 71 cents to J.C. Robinson, agent of the Moonakis Factory” (Emerson 1963:141). In order to find a record of someone selling wool to a Falmouth factory, one has to leave Falmouth and go to nearby Naushon Island. While this sale was from 1863, it more than likely reflects a long-standing relationship for reasons explained shortly. The entry from Naushon shows that the local woolen factories were getting much of their wool from a source that was still local and not from the west, which contradicts the AGS model. So if Falmouth farmers were not raising sheep to sell to woolen factories, what were they doing with it? According to *HARCCI*, the most likely purpose of raising sheep and selling their wool is for making “home manufactures” or woolen cloth either for home consumption or resale sometimes as far afield as Boston.⁹⁶

What makes the absence of wool sales to the factories even more glaring is that John Robinson makes an appearance in the Gifford minute books in 1839, but not to purchase wool. The 1837-1848 minute book records the following “3rd mo. 5th 1838--- Paid John Robinson for Dressing Cloth for Maltiah--- \$0.60.”⁹⁷ This entry indicates that the Giffords by this time are buying cloth from a factory instead of making their own. This meticulousness of their records makes the absence of any sales of wool to the factories or their owners all the more glaring. If they had made any sales to them, they would have recorded it, and yet in all of their surviving minute books that cover the period of 1829-1848, there is not one.⁹⁸ This runs counter to what the AGS model and Wilson say should have happened.

It might be pointed out that perhaps the absence of wool sales by the Giffords to the Moonakis Woolen Factory, or to the Pacific Woolen Factory, is exclusive to only the Giffords. Perhaps other local farmers in Falmouth sold wool to these factories, but their minute books are lost. An examination of the linear notes from the Moonakis time book, however, shows that this is not the case. As stated before, the Moonakis time book is mainly a record of the hours worked by employees as well as the amount of cloth produced. More importantly, the back pages include a series of notations which record sales of wool to the Moonakis Factory as well as a record of people who paid the factory a fee to have their wool processed into cloth.⁹⁹

It appears that all of these deliveries of wool were by sea. The list notes repeatedly that a Captain Hamlin brought wool in and shipped finished products out.¹⁰⁰ This would make a great deal of sense in light of the fact that John and Henry Robinson, the owners of the Moonakis Factory along with Abner Hinckley, owned two wharves and

a total of seven packet ships.¹⁰¹ Wool was brought in on their ships and offloaded at their wharves. Finished goods went out of their wharves on their ships, bound more than likely for Nantucket, based on a letter from L. Swain to J. Robinson found in the time book.¹⁰² It would be faster and easier, in terms of raw wool, to deal with Nantucket or even Naushon Island, both of which had farmers with much larger herds than the farmers of Falmouth. Naushon Island was owned exclusively in this time period by the Bowdoin family and in 1817 had 4000 sheep. Dealing with the myriad of local sheep farmers and the small herds that existed in Falmouth or anywhere on the mainland Cape would have been time consuming.

The fact is that the Robinsons and Abner Hinckley had the means to access larger sheep herds, and it appears that they used this access. None of the names of suppliers in the time book are local farmers. Neither Robert Chisolm, who delivered 265 lbs. of unwashed wool and had it processed into 4 bales of cloth, nor William Mackey, who sold 524 lbs. pounds of wool to the factory, are recorded in the State Valuations or Town Assessments as living in Falmouth. None of the other names that appear, except Captain Hamlin, was a resident of Falmouth.¹⁰³

The conclusions that can be drawn from the time book are that the Giffords were not the only farmers who did not do business with the factories of Falmouth. It appears that at least in the case of the Moonakis Woolen Factory, the owners had the means through their wharves and ships to avoid dealing with local farmers, and, based on the information contained in the time book, they utilized those means to do just that. While no evidence remains to indicate whether the Pacific Woolen Mill followed the same policy, based on their absence from the Gifford minute books as well as the fact that they

had a similar access to ships and wharves in the person of Stephen Dillingham (as well as connections with New Bedford), it is more than likely that they also avoided using Falmouth farmers as wool suppliers.¹⁰⁴

This raises an obvious question: why would the Moonakis Woolen Factory and the Pacific Woolen Factory avoid using local sources of wool from the very beginning? There are two answers to that question. The first can be found in the oral testimony given by Orrin Bourne. Orrin Bourne, as stated earlier, worked as a young boy along with his father in the Moonakis Woolen Factory. His testimony gives the details of the day-to-day operations of the woolen mill, but far more important was what he had to say concerning the owners' attitudes towards the local sheep farmers. According to Orrin, the owners of the factory hated using the local sheep farmers as a source of wool. The owners felt that the local farmers were "unreliable" as a source.¹⁰⁵ Despite the fact that Orrin and his father worked at the factory in the 1870's and 1880's, long after the Giffords, this state of affairs was likely true in the 1830's, because the local farmers always diversified. This leads to the second answer. It is very likely that the local farmers got around to the sheep when they were ready and able, and not when the factories needed wool; after all, their land was fertile and they had other income options beside wool. That fact alone would make them unreliable, whereas the Bowdoin family, with its 4000 sheep on Naushon, was focused on sheep and nothing else. Logically, they were much better suppliers. Any business needs a secure and steady supply of raw materials in order to operate properly and it seems that farmers of Falmouth, because of their independent natures and economic diversification, could or would not provide that secure and steady supply of

wool that the factories needed. Thus the factories found wool suppliers in places like Naushon and Nantucket instead of Falmouth.¹⁰⁶

When the data from the Giffords' minute books are combined with the Moonakis time book and the testimony of Orrin Bourne, there appears to be no relationship between the woolen factories and the sheep farmers in Falmouth. It appears that the Falmouth farmers did not sell wool to either the Moonakis Woolen Factory nor the Pacific Woolen Factory, either because the woolen mills would not buy it or because the farmers had better income sources and chose not to sell; most likely, it was a combination of both. The AGS model and Wilson state that there should be a tight relationship of supply and demand between the owners of sheep and the woolen mills, and yet in Falmouth there is no evidence supporting that assertion; in fact, the evidence asserts the contrary. The AGS model purports that the relationship between the two is a result of the infertility of New England soil (Baker and Izzard 1991:33), and yet in the case of Falmouth it may be that the fertility of its soils was what prevented the creation of just that relationship.

Comparison of Timelines

When the timeline for the AGS model is compared to the local evidence from Falmouth, the local evidence does not support the model's timing for the collapse (see Table 3). An examination of the *State Valuations of 1831 and 1840* as well as the *Falmouth Town Assessments* of 1832-33, 1835, 1836, 1837, and 1839, reveals a pattern of sheep growth that starts out as the AGS model suggests, but which diverges wildly in terms of the timing of the collapse¹⁰⁷. As demonstrated previously, the farmers of Falmouth, including the brothers Gifford, experienced a period of either stability or growth in terms of the number of sheep between 1831 and 1835¹⁰⁸. A good example of

the farmers who experienced more stable sheep herds would be Prince and Maltiah Gifford. Between 1831 and 1835, the number of sheep owned by them remained stable with a slight fluctuation¹⁰⁹. Generally most of the farmers in Falmouth followed a pattern of stability like the Giffords, though there were a number of farmers who experienced a rapid increase¹¹⁰ like Elijah Swift¹¹¹. Taken altogether, the pattern revealed is one of increase, though perhaps not to the extent that the AGS model suggests for New England as a whole.

Where the evidence from the state valuations and the town assessments really diverge from the AGS model is in the timing of the collapse. According to authors of the AGS model, the late 1830s and early 1840s were when the sheep industry and the population of sheep reached its greatest climax (Turner 1931:158-159), but this is not the case in Falmouth. An examination of the state valuations and the town assessments reveals that there is a hiccup in the population of sheep in Falmouth in 1836¹¹². While many of the sheep farmers in the town maintained the same number of sheep, a number began to record lower numbers. Elijah Swift, for example, had no sheep at all by 1836¹¹³.

Beginning in 1837, the number of sheep in the town as a whole began to decline swiftly. Between 1837 and 1840, it seems that most of the farmers in Falmouth abandoned sheep altogether.¹¹⁴ Overall, the number of sheep in Falmouth declined from 2973 in 1831 to 1338 in 1840, with all of the decrease happening between 1836 and 1840.¹¹⁵ This is in direct contradiction to the AGS model which says that this period should be the one of greatest increase (Goldthwait 1927:546). In essence, the decline that should be happening according to the AGS model in the mid-1840s is happening in Falmouth in the mid-to-late 1830's.

Railroads and Timeline

Ignoring the obvious problem of a lack of relationship between the woolen factories and the sheep farmers of Falmouth in the local evidence, it might be argued that the underlying reason for the decline put forth by AGS model, namely, the introduction of cheap western goods, could still be explanatory for Falmouth, even if the timing is not (Turner 1931:158-159). Entertaining the argument that perhaps there was a relationship between the factories and farmers of Falmouth undocumented in extant records, the collapse of the sheep industry in Falmouth might have been like the canary in the coal mine – a harbinger of things to come. Its position on the coast made Falmouth vulnerable to the changing economic forces and forecast what was to come for the rest of New England the following decade. The problem here is that the timing is still wrong, only this time it is about railroads and not sheep. The earliest railroad to reach Cape Cod was finished in 1848, and while it probably did bring western agricultural goods to the Cape, its arrival is far too late to be a cause of a collapse that occurred in 1836-1837.¹¹⁶

It might be argued that the rail line to the Cape was not needed to introduce western goods into the Cape and Falmouth markets. Packet ships could have brought these goods to Falmouth from Boston, as packets regularly did ply the waters between the two destinations. The problem again is one of timing. While Boston was the hub of an expanding railroad system, that railroad system did not connect to the west until 1841, when the Albany to Boston line was completed (Turner 1931:173-174). The transportation costs of shipping western goods to the New England market up to that date would have been high enough to allow New England goods like wool to be competitive, but afterwards, according to the AGS model, the low price of production in the west

would have allowed them to continue to make a profit, even as they drove the price of wool down by flooding the market (Wilson 1935:19-20). It is still too late to explain a collapse that occurred in the 1836-1837 time period. Western wool would not have been all that cheap before this date, so its arrival in Falmouth would not have caused a problem for the town's farmers trying to sell wool to the local factories, and therefore could not have caused the collapse.

The Persistence of Farmers

Perhaps it could be argued that the farmers of Falmouth perceived that the price of wool would collapse once a rail line between Boston and Albany was completed, and so voluntarily abandoned sheep before a glut in the market, caused by cheap western goods, forced them to do so. Based on their behavior in regards to the salt works, however, this is highly unlikely. As stated before, many of the farmers of Falmouth were involved in the production of salt. According to John Hoag Dillingham, this industry was so important that they often ignored all else to tend to the coastal salt works (Smith 1986:434). What is of special interest is how these men reacted to the continually falling price of salt after 1812. Competition from salt springs in Virginia and New York drove the price of salt per bushel down from \$7.00 in 1812 to \$1.00 in 1829, yet in response the farmers in Falmouth continued to increase the square footage of their salt works to 1,844,040 feet in 1831 (Smith 1986:66). Even after the bounty on salt offered by the state of Massachusetts was withdrawn in 1834 and the tariff on foreign salt was eliminated by Congress in 1840, bringing the prices even lower, the farmers continued to operate the salt works (Smith 1986:66). The *State Valuation of 1840* lists 1,659,020 feet of salt works in operation. Even after the price of salt per bushel came down to 42 cents per bushel in

1850, there were still salt works in operation. The last one closed in 1870 (Smith 1986:66). The point is that the local farmers would have continued full sheep production until at least 1841. They would not have abandoned something even remotely profitable simply because in 1836, they thought sheep might not be profitable after 1841.

Ultimately, however, it appears the farmers of Falmouth, never thought there was a profit to be had from the factories. The surviving evidence from the minute books and time book as well as the testimony of Orrin Bourne makes it clear that there was no relationship between the sheep farmers and the factories. The local farmers in Falmouth seem not to have concentrated enough on sheep production to provide the constant supply of wool that the factories in Falmouth needed to be profitable. Because they had other and preferred means of making a profit, such as the salt works, wood cutting or even grain production, they were, in the words of the owners of factories, “unreliable.”¹¹⁷ Without a relationship between the woolen factories and the local farmers, the AGS model cannot explain the timing of the collapse. The Falmouth farmers would never have been affected by any competition from the west for they were never suppliers of wool for the local factories to begin with.

Explanations Based on the Evidence

This leaves two rather obvious questions. First, if the Falmouth farmers did not raise sheep to sell the wool to the local factories, they must have been raising them for other purposes. Second, if the AGS model does not explain the reasons for the collapse of the sheep industry, there must be other causes for the collapse. In 1830s Falmouth, the local farmers collectively possessed the largest sheep herds on mainland Cape Cod, yet the evidence suggests that these sheep were not raised to provide wool for the local

woolen factories.¹¹⁸ The *HARCCI*, the writings of local historians, and the state valuations and Falmouth assessments all suggest that the farmers of Falmouth raised the sheep for the purpose of “home manufacture.” In other words, they were using the wool from their sheep to make their own clothes.¹¹⁹ According to *HARCCI*, this had been the case since the Wool Act of 1699. The *HARCCI* goes on to say that aside from making clothes for themselves, the farmers also made clothes for resale, especially stockings and other knitted goods. As the profits from this trade increased, they stimulated the creation of fulling mills and carding mills in Falmouth from 1788 onward. The farmers came to rely on the fulling and carding mills to make finer quality products for sale.¹²⁰ This relationship was remembered by the older people Virtue B. Gifford interviewed in the late 1800s and early 1900s. They remembered bringing wool to be carded and children being sent out into the fields to find thorns to use as pins for the rolls. The rolls were then brought back to the farms and woven into cloth.¹²¹ Since there was no woolen factory in Falmouth before 1831, every sale of wool recorded in the Gifford minute books was undoubtedly for home manufacture, earning income for the Giffords, thus providing the reason for keeping the herds of sheep. Because the woolen factories already had more reliable suppliers of wool when they set up shop in Falmouth, they never reoriented the local wool production towards anything but home textile production.

Falmouth farmers abandoned sheep farming in the 1830s for complex reasons. To begin with, up until 1831 the farmers of Falmouth raised sheep for homemade woolens, as they had for over one hundred years. According to the state valuations and town assessments, this relationship between home manufacture and the sheep herds supported three carding mills and two fulling mills, which means until at least that date, the

relationship appears to have been a healthy one with profits made all around, or at least enough to support the carding and fulling mills.¹²²

This stable state of affairs lasted until 1831 when the first woolen factory opened its doors in Falmouth. The effect of this event was, according to the *HARCCI* was as follows: “With the rise of mechanized factory production, home textile manufacture and local fulling became outmoded” (1987:298). The arrival of the first factory spelled the death of home textile manufacture in Falmouth and with it the industries that it supported, namely the carding and fulling mills. The Town Assessment of 1833 notes that two years after the arrival of the first woolen mill and one year after the creation of a second one, there was only one carding mill and one fulling mill left in the town.¹²³ The most likely explanation for the disappearance of the carding and fulling mills is the abandonment of home textile manufacture in favor of factory-made cloth. This abandonment can be seen in the Gifford minute books after 1831, where wool sales plummeted to nothing, with the exception of three sales in 1836.¹²⁴ The arrival of factories and the concomitant decline of home manufacture did not immediately put an end to the sheep herds, which would not be for another three years, but it did remove the main reason that made raising sheep profitable.

There is no surviving evidence showing why there was a three-year delay between the disappearance of the carding and fulling mills and the decline in the number of sheep in Falmouth. The fact that there was a jump in the overall number of sheep between 1834 and 1835 tentatively supports the idea that the local farmers thought that they were going to find a market for their wool and the most likely market would have been the local factories or that they would continue to earn income from mutton sales.¹²⁵

The local farmers held onto their sheep, and in some cases even increased the herds, until 1836 even though they were not making much money from them. An analysis of the Giffords' minute books reveals that in the 1834-1835 period, the Giffords were supporting 71 sheep and yet were only making \$10.07.¹²⁶ Wilson states that in New England, the average cost of taking care of a single sheep was two dollars per year in the 1830's (1935:20), regardless of whether it was being raised for wool or mutton. If Wilson is right, then once home textile production died out, farmers like the Giffords were losing money by keeping sheep. In good times perhaps this loss was acceptable when balanced against the possible profits that the farmers hoped to make at some future date, but times did not stay good. A number of events were to come together which would adversely affect sheep numbers.

Falmouth's Sheep and the Regional and National Economy

As stated before, the Falmouth economy began to enter into a period of extreme decline probably around 1837, based on the sharp drop in beef sales.¹²⁷ It certainly was at crisis level by 1840 when the state valuation recorded that the town had only \$28,812 in stock in trade, down from \$69,297 in 1831.¹²⁸ The cause of this collapse was more than likely the events occurring in the country as a whole at the time. President Jackson's wildcat banks, which he created to undermine the Bank of the United States, had by 1836 printed so much paper currency that the Federal Government was forced to issue the order that only gold or silver, called specie, would be accepted for land sales. This caused a run on the banks, as people tried to redeem their paper notes for gold and silver that the wildcat banks did not possess. The resulting panic of 1837 caused "the collapse of the credit system" and "bankrupted hundreds of businesses and put more than a third of the

population out of work” (Danzer, et al. 2007:233-234). That this panic occurred in the same year that Falmouth’s economy began to decline suggests that there is a relationship between the two.

Also occurring in 1836 was a devastating fire in Nantucket, Falmouth’s primary market. While not quite as bad as the 1846 fire that occurred there, nevertheless it affected operations on the island for at least two years following the fire (Kelley 2006:67). In 1836 Nantucket sent out 30 whaling ships, yet in 1837 and 1838, only 21 were deployed (Starbuck 1989:326, 336, 346). Less money made as a result of fewer ships sent out would mean fewer goods would be purchased from suppliers in Falmouth, and this would cause an overall decline in revenues for a town that relied on Nantucket as its primary market. On top of all of these problems, there may have been a disease which killed off a large number of sheep in Falmouth. The local evidence for this is non-existent, but data from nearby Naushon reports a large sheep mortality for 1836 (Emerson 1963:137). The island of Naushon is only a few miles from Falmouth, so it is possible that this mortality may have affected Falmouth as well, but no documentary evidence remains to testify to it.

While no diary records why the farmers of Falmouth abandoned their sheep after 1836, the fact that it happened after the confluence of all the above events makes it likely that it was result of the economic stresses put upon an industry that no longer made enough money to support itself. The local farmers could no longer afford to maintain the number of sheep that they had, especially in light of the reality that the local factories had no interest in buying wool from them. Being practical, they abandoned the raising of the sheep for wool (and thus large herds) and refocused their energies into more profitable

areas of production such as raising onions or grain or cutting cord wood, which the productivity of the land gave them the option to do.

CHAPTER 6

CONCLUSIONS

Matthew Johnson, in *An Archaeology of Capitalism*, proposes that “specific contexts must be explored on their own terms before drawing out wider implications” (Johnson 1996:95). Johnson’s case study approach is the opposite of those which employ the AGS model, approaches that take the broader narrative and impose it on specific contexts. In the case of Falmouth, this broader narrative has proven inapplicable. The model has a simplified mechanism, with an emphasis on the infertility of the land forcing farmers into a supply-and-demand relationship with factories based on wool production. The subsequent increase in the number of sheep, followed by a rapid decline once improved transportation, like canals and railroads, allowed factories to buy much cheaper wool from the west, does not fit with the local evidence at all (Wilson 1935:13-23). The reason, as Johnson would point out, is that this model was produced from studies far removed from the physical, social, and economic realities of this specific community (1996:68). A microhistorical approach is much more useful in analyzing the Falmouth data and how or if it might fit the AGS model.

Part of the physical reality of Falmouth was that sheep were important in the town almost from the very beginning. As described in Chapter 2, the needs of sheep suited the land in Falmouth, and they influenced the layout of land boundaries and the uses of the

land, but to use a colloquialism, they were not the only game in town. Sharing the landscape with the sheep were farms on productive soil that raised grains, hay, onions, and other cash crops.¹²⁹ These farmers used the profits they made to invest in the wharves and ships that lay along the coastline. Those shorelines were also dotted with salt works that generated much revenue for their owners, who used these profits, along with earnings they made by trading with Nantucket and other locations, to invest in creating center villages with banks and new meeting houses built in the Federal style.¹³⁰ Because the soil was productive, it allowed the farmers to invest in other industries in the town, such as fulling and carding mills to assist local residents with their household needs, and eventually the construction of woolen factories, which met market needs at greater distances.

As the data in Chapter 3 reveal, the sheep raising industry was prosperous in the beginning of the 1830's in Falmouth, but during the decade of crisis, it began a steep decline, as the farmers focused on other agricultural industries. Socially, in the early part of the decade, sheep were a concern of town government, both in the appointment of town shepherds and in arguments over where they could roam, but they were not the only focus of the local economy. In the state valuations, sheep only received one column among many agricultural columns that denoted such variables as acres of tillage land and multiple forms of livestock. Different kinds of grains comprised five columns, and various kinds of buildings each received their own categories. Other columns which were of concern to the inhabitants included salt works, wharves, and ships. Sheep were important but not the only mode of production the town kept its eye on.¹³¹ The fact that there were people who kept trying to get the sheep restricted to the owners' properties

year after year (they succeeded by 1854) indicates that the society was conflicted over the issue of sheep, and that many townspeople felt that the town would survive their removal.¹³²

Economically, the purpose the sheep served was to provide mutton and to provide wool for home textile production, either for the farmer's use or for resale. This had been the case in Falmouth and for much of New England since at least 1699.¹³³ The difference between Falmouth and places like the towns in New Hampshire and Vermont examined by Goldthwait and Wilson is that, once factories came to Falmouth and made home textile manufacturing obsolete, the farmers of Falmouth failed to become the suppliers of raw wool to the local factories (Goldthwait 1927:527-552; Wilson 1935:12-40). Evidence suggests the reason for this was that the local factories found the farmers unreliable and thus found suppliers in other nearby locations such as Naushon Island.¹³⁴ Perhaps this perceived unreliability was the result of the complex interplay between the farmers and a land that offered them multiple options for profit, with the result being a decision on the part of the farmers not to abandon these other means of working the land just so they could be more attractive suppliers of wool. For the Giffords, cutting cordwood, tending the salt works, or becoming involved in raising cattle was more profitable than raising sheep. Later on, in the 1840s, the Giffords made more profit from onions than they did from both the sale of wool or mutton in the 1830s.¹³⁵ Diversification was in part a strategy to minimize risks of farming.

It was this collective group of realities which formed the framework of the collapse of the sheep industry in Falmouth after 1836, and not the realities promulgated by the AGS between 1930 and 1950. The simple, elegant explanation offered by authors

like Goldthwait, Wilson, and Black, detailed in Chapter 4, does not match the more complex interplay of both the local actors (farmers and factory owners) and the regional economy with the realities of Falmouth at this time. Instead of stimulating the growth of the sheep industry, per the AGS model, the arrival of the woolen factories destroyed the home textile industry, removing most of the profit from raising sheep. Whether or not this is a part of a larger issue of commodity substitution is impossible to say without further investigation. What can be said is that after the arrival of factories in Falmouth, the demand for home manufactured woolen goods decreased rapidly. Decisions made by factory owners as well as decisions made by farmers, both in an interplay with local and regional demands, ensured that no supply-and-demand relationship ever developed between the two in regards to wool. With no relationship between the two, the AGS model of sheep farmers failing to compete with cheap western wool becomes useless and irrelevant as an explanation for the disappearance of sheep in Falmouth. Upon closer examination, the lack of connection between timing of the collapse (1836) and the arrival of Western goods en masse by railroad (1841) only serves to reinforce the irrelevance of western goods as a cause.

In Falmouth the real reasons for the collapse were much more complex. They involved both a separate regional and national economic crisis: the Nantucket fire of 1836 and the Panic of 1837. They may have also been compounded by a livestock epidemic that appears to have swept through the sheep herds of Naushon and possibly Falmouth at the time. Most importantly, they involved a cost-benefit analysis that the local farmers must have made as the economy fell apart around them. In that cost-benefit analysis, they concluded that sheep were too expensive to maintain in tight economic

times and were not worth supporting. Even at this point, they did not try to establish a supply-and-demand relationship with the factories, perhaps because they still felt that being the wool suppliers for the local factories was still not the most profitable option. As evidenced by the data in Chapters 3 and 5, the Gifford minute books do not record what Prince and Maltiah were thinking, but do record that after 1836, the Giffords did not try to revive their sheep herds and instead put more effort into hay production and wood cutting.¹³⁶ The state valuations and the town assessments make it clear that just about all of the farmers in Falmouth followed a similar path in abandoning sheep at about the same time.

Does the failure of the AGS model to explain the collapse of the sheep industry in Falmouth indicate a failure in the model as a whole, or does it mean that Falmouth is merely an exception to the rule? Michael Bell in his paper “Did New England Go Downhill?” notes that crop productivity for New England as a whole was very high as late as 1879. He goes on further to cite *The Report on the Production of Agriculture: Tenth Census* in which he notes that

New England exceeded the national average for corn by 19 percent . . . [and] for wheat by 16 percent . . . [and] high yields of vegetables supported a large export and canning industry...Vegetable farming in the Boston basin was so successful that produce was shipped widely, even dominating the winter market in late nineteenth-century Florida (Bell 1989:457).

If Bell’s numbers are correct, then places like Petersham, MA and Lyme Township, NH, and the AGS model developed from them, are the exceptions and not the rule.

This does not mean that Falmouth could be the basis for a new model to cover all of New England. In fact, there are probably dozens of towns in New England with completely different circumstances that would generate models very different from

Falmouth's pattern or the AGS model. There is no doubt that the AGS model was applicable in towns like Lyme Township and Petersham, and other similar places which did have poor soils and a heavy reliance on producing wool for factories, but those towns were not representative of the entirety of New England. The model's total failure to explain events in Falmouth and its contradiction by Bell's data reveal what may be the underlying flaws in the model. The model generalizes by taking the causes and events that occur in a small number of towns and projects them on the region as a whole. The model also oversimplifies what appears to be a much more complex interplay between the economy, the society, the environment, and individual actions. The AGS model, by taking this unicausal approach, obscures the much more complex skein of actors, landscapes, and environments into which it fits. The creation of a landscape geared toward both agriculture and husbandry and the development of Falmouth's center village in the early 1800s were not singular causes of developments in the town but reflections of its culture and people.

ENDNOTES

1. *Massachusetts Historical Commission Reconnaissance Survey Town Report* (hereafter *MHCRSTR*) 1985:31; Smith 1986:3-4.
2. *Proprietors Records* 1654-1805 (hereafter *PR*); *Geodetic Survey of 1845*; *The Land Book of 1927*.
3. *Town Records and Vitals 1750-1838* (hereafter *TRV*) [2]: 390.
4. *Barnstable Registry of Deeds* (hereafter *BRD*) 1864: 307.
5. Gifford, P., *Minute Book* 1837-1848.
6. Ibid.
7. *Bowerman Collection* (hereafter *BC*), Box 10, doc. 92.
8. *BC*, Box 11, doc. 92, doc. 134.
9. *BC*, Box 11, doc. 111.
10. *MHCRSTR* 1985 [21]: 32; Gaines 2007[21]:32.
11. Gaines 2007:32; *Historic and Archaeological Resources of Cape Cod and the Islands* (hereafter *HARCCI*) 1987.
12. *MHCRSTR* 1985 [21]: 36, *PR* 1654-1805.
13. *MHCRSTR* 1986 [21].
14. *HARCCI* 1987:296-298.
15. *PR* 1654-1664.
16. *PR* 1654-1805; *Geodetic Survey of 1845*; *Falmouth Land Book* 1927; Smith 1985:332.
17. *TRV*: 390; Gaines 2007.
18. *HARCCI* 1987:231, 296.
19. Gifford M. and P. *Minute Books* 1805-1817, 1828-1831, 1834-1836, 1837-1848.
20. *TRV*: 454-478.

21. Gifford, M. 1805-1817.
22. Ibid.
23. Gifford, P. 1829-1831.
24. Gifford, M. and P 1829--1848; Wood 1997:97; Gaines 2007:32.
25. *BC 1900-1920:Box 11 Folder 111; HARCCI 1987:231.*
26. Ibid.
27. *State Valuation of 1831.*
28. Deyo 1890:661; *HARCCI 1987:79.*
29. *HARCCI 1987:240-243.*
30. *HARCCI 1987:78-79.*
31. Giffords M. and P. 1805-1848: *BC Box 11 Folder 111; Smith 1985:15-17; HARCCI 1987:242.*
32. Gifford M. and P. 1805-1848; *HARCCI 1987:248.*
33. Gifford M. and P. 1805-1848.
34. Gifford, P. 1829-1831.
35. Nye 1768-1871; Lewis 1817.
36. Gifford, P. 1834-1836.
37. Nye 1768-1871; Lewis 1817; Gifford, P. 1834-1836.
38. Gifford, P. 1834-1836.
39. *Falmouth Town Assessment 1832; Deyo 1890:86; Smith 1985:660.*
40. Giffords M. and P. 1805-1848.
41. In 1800, the overall profit from the sale of 24,000 bushels of salt came to \$158,000. While the Giffords were not the biggest salt producers in Falmouth, they and the Bowermans owned a significant portion of the Great and Little Sippewissett Marshes on which the saltworks in West Falmouth stood. *BC 1900-1920: Box 11 folder 104-*

106 and 109; Giffords M. and P. 1805-1848; *Land Book of Falmouth* 1927; Smith 1985:66S.

42. Nye 1768-1871; Smith 1985:298

43. *MHCRSTR* 1985:8

44. *State Valuation of 1831*:38.

45. *State Valuation of 1840*; *MHCRSTR* 1985.

46. Gifford, M. and P. 1805-1817, 1829-1831, 1834-1836, and 1837-1848.

47. Gifford, P. 1837-1848.

48. *State Valuation of 1831*:38.

49. Gifford, P. 1834-1836.

50. *TRV* [2]281, 407-410.

51. Gifford, P. 1829-1830.

52. Gifford, M. and P. 1805-1817, 1829-1830, 1834-1836, 1837-1848.

53. *Ibid.*

54. Gifford, P. 1829-1830.

55. Gifford, P. 1834-1836.

56. Gifford, P. 1837-1848; *State Valuation of 1840*.

57. Gifford, P. 1837-1848.

58. *State Valuation of 1831*:24; *State Valuation of 1840*:38.

59. Gifford, P. 1829-1830; Gifford P. 1837-1848.

60. Gifford, P. 1837-1848.

61. *State Valuation of 1831*:18-38.

62. *State Valuation of 1831*:29; Smith 1986:36, 66, 86.

63. *Falmouth Town Assessment* 1832-1833:39-95.
64. *Falmouth Town Assessment* 1835: 5-65.
65. *Falmouth Town Assessment* 1836:25-62.
66. *Falmouth Town Assessment* 1838:6-71
67. *Moonakis Factory Time Book* 1832-1840; *Falmouth Town Assessment* 1835:54.
68. Gifford, P. 1834-1836; *Falmouth Town Assessment* 1835:25-62.
69. Gifford, P. 1837-1848.
70. Gifford, P. 1834-1836, 1837-1848.
71. Gifford, P. 1834-1848.
72. *State Valuation of 1831*:38; *State Valuation of 1840*: 24.
73. *State Valuation of 1831*:38; Gaines 2007:37-38; Smith 1986:182-183.
74. *MHCRSTR* 1840:13; Danzer et al 2007:230-231.
75. *MHCRSTR* 1840:13.
76. *State Valuation of 1831*:7-29.
77. *Moonakis Factory Time Book* 1832-1840; *Falmouth Town Assessment* 1833:89;
Falmouth Town Assessment 1837:40.
78. *Falmouth Town Assessment* 1832-1833:80-87.
79. *Moonakis Factory Time Book* 1832-1840.
80. Ibid.
81. Gifford, P. 1834-1836.
82. *Moonakis Factory Time Book* 1832-1840).
83. *Moonakis Factory Time Book* 1832-1840.
84. *HARCCI* 1987:240-241.

85. Gifford P. 1829-1848.
86. Gifford, A. 1837-1840; Gifford P. 1837-1848.
87. Gifford, A. 1837-1840; Smith 1985:434.
88. *BC* 1900-1920: Box 11 Folder 111; *HARCCI* 1987.
89. *HARCCI* 1987:233.
90. Ibid.
91. Gifford, M. and P. 1805-1848.
92. Gifford, P. 1828-1830.
93. Gifford, M. and P. 1805-1848.
94. Ibid.
95. *HARCCI* 1987; 233.
96. *HARCCI* 1987:296-298.
97. Gifford, P. 1837-1848.
98. Gifford, P. 1829-1848.
99. *Moonakis Time Book* 1832-1840.
100. Ibid.
101. *Falmouth Town Assessment* 1838:23, 74.
102. *Moonakis Time Book* 1832-1840.
103. Ibid.
104. *State Valuation of 1840*:7.
105. *BC* 1900-1920: Box 10 Folder 92.
106. *HARCCI* 1987:233; Heckman 1980:698-70.

107. *State Valuations of 1831:38; 1840:24; Falmouth Town Assessments 1832-1833, 1835, 1836, 1837, and 1838.*
108. *State Valuations of 1831:38; Falmouth Town Assessment 1832-1833:3, 19, 80, 82, 86, 87, 95; 1835:4, 35, 43, 45, 50, 54, 62.*
109. *State Valuation of 1831:38; Falmouth Town Assessment 1835:4, 35, 43, 45, 50, 54, 62.*
110. *State Valuations of 1831:38; Falmouth Town Assessment 1832-1833:3, 19, 80, 82, 86, 87, 89, 95, 1835:4, 35, 43, 45, 50, 54, 62.*
111. Ibid.
112. *Falmouth Town Assessment 1835:4, 25, 43, 45, 50, 54, 62; 1836:5, 26-27, 42, 45, 53, 54, 59, 65.*
113. Ibid.
114. *Falmouth Town Assessment 1837:5, 28, 69, 48, 50, 57, 58, 78, 1848; State Valuation of 1840:24*
115. *State Valuations of 1831:38, 1840:24; Falmouth Town Assessments 1836:5, 26-27, 45, 47, 53, 54, 59, 65; 1837: 5, 29, 48, 50, 53, 58, 61, 69; 1838:6, 34, 35, 58, 61, 69*
116. *HARCCI 1987:111-113.*
117. *BC 1900-1920: Box 10 Folder 92.*
118. *MHCRSTR 1985:10.*
119. *HARCCI 1987:296-298.*
120. Ibid.
121. *BC 1900-1920:Box 11 Folder 104.*
122. *State Valuation of 1831:38.*
123. *Falmouth Town Assessment 1832-1833:52, 80. 87.*
124. Gifford, P. 1829-1830, 1834-1836, 1838-1848.
125. *Falmouth Town Assessments 1833:3, 18, 80, 82, 86, 87, 88, 92; 1835:4, 25, 43, 45, 50, 54, 62.*

126. Gifford, P. 1834-1836.
127. Gifford, P. 1837-1848.
128. *State Valuations of 1831:38; 1840:24.*
129. Gifford, P. 1829-1848; Gifford, A. 1837-1840; Smith 1986:248.
130. *MHCRSTR* 1985:9-11.
131. *State Valuation of 1831:38, 1840:24.*
132. *Town Records and Vitals 1750-1838:281, 407.*
133. *HARCCI* 1987:296-298.
134. *BC* 1900-1920: Box 10 Folder 92; Emerson 1963:141.
135. Gifford, A. 1837-1840; Gifford, P. 1837-1848.
136. Gifford, P. 1837-1848.

UNPUBLISHED SOURCES

This thesis made use of several unpublished sources, including archival documents and personal communications. These sources, with abbreviations used in the thesis, are listed below. In addition, locations of these archives are listed where appropriate.

(BC) *The Bowerman Collection*

1994 Falmouth, MA: West Falmouth Library

(BRD) Barnstable Registry of Deeds, <http://www.barnstabledeeds.org>

(FTA) *Falmouth Town Assessments*

1832-1848 Falmouth, MA: Falmouth Town Hall

Favulli, Trish. Assistant Assessor, Town of Falmouth

2011 Falmouth, MA: Falmouth Town Hall., pers. comm.

Geodetic Survey of 1845

1845 Falmouth, MA: Falmouth Town Hall

Gifford, Maltiah and Prince, *Minute Books*

1805-1817, 1829-1830, 1834-1836, 1827-1848 Falmouth Historical Society

Gifford, Arnold, *Minute Books*

1837-1840 and 1844-1848 Falmouth, MA: Falmouth Historical Society

(HARCCI) Historical and Archaeological Resources of Cape Cod and the Islands

1987 Massachusetts Historical Commission, Office of MA Secretary of State,
Michael T. Connolly, Secretary

Lewis, Charles, *Account Book*

1818 Falmouth, MA: Falmouth Historical Society

Land Book of 1927

1927 Falmouth, MA Falmouth Town Hall

(MHCRSTR) *Massachusetts Historical Commission Survey Town Report*

1985 Falmouth, MA: Falmouth Historical Society

Olson, Pamela, Archivist

2011 W. Falmouth, MA: West Falmouth Library, pers. comm.

Moonakis Time Book

1832-1840 Falmouth, MA: Falmouth Historical Society

Map Book 15-30

1927 Falmouth, MA: Falmouth Town Hall, Maps 24, 25, 26

Nye, Shubael, *Account Book*

1768-1871 Falmouth, MA: Falmouth Historical Society

(PR) Proprietors Records

1654-1805 Falmouth, MA: Falmouth Historical Society

Sicchio, Mary, Archivist

2011 Falmouth, MA: Falmouth Historical Society, pers. comm.

State Valuations (Massachusetts)

1831-1840 Falmouth, MA: Falmouth Town Hall

(TRV) Town Records and Vitals

1750-1838 and 1847-1871 Falmouth, MA: Falmouth Town Hall

PUBLISHED REFERENCES

Adams, James Truslow

- 1933 *New England's Prospect 1933*. American Geographical Society Special Publication, No. 16.

Alexander, Lewis M.

- 1953 The Impact of Tourism on the Economy of Cape Cod, Massachusetts. *Economic Geography* 29(4): 420-426.

Atlas of Barnstable County

- 1880 Boston: George H. Walker and Company.

Baker, Andrew H. and Holly V. Izzard.

- 1991 New England Farmers and the Marketplace: 1780-1865. A Case Study. *Agricultural History* 65(3): 29-52.

Barrows, Harlan H.

- 1921 Nature and Man on Cape Cod. *Geographical Review* 11(3): 464-465.

Bell, Michael.

- 1989 Did New England Go Downhill? *Geographical Review* 79(4): 450-466.

Bidwell, Percy Wells.

- 1917 Population Growth in Southern New England 1810-1860. *Publications of the American Statistical Association* 15(120): 813-839.

Black, John D.

- 1950 *The Rural Economy of New England*. Cambridge, MA: Harvard University Press.

Brigham, Albert Perry.

- 1920 Cape Cod and the Old Colony. *Geographical Review* 10(1): 1-22.

Bruegel, Martin

- 2006 The Social Relationship of Farming in the Early American Republic: A Microhistorical Approach. *Journal of the Early Republic* 26(4: Connection, Contingency, and Class in the Early Republic's Economy): 523-553.

Candee, Richard M.

- 1982 New Towns of the Early New England Textile Industry. *Perspectives in Vernacular Architecture* 1: 31-50.

- Chereau, Suzanne.
 2006 *Report by the Public Archaeology Laboratory in Pawtucket, RI*.
 Pawtucket: 205.
- Danzer, Gerald A., et al.
 2007 *The Americans*. New York: McDougal Littell.
- Deyo, Simeon.
 1890 *History of Barnstable County*. New York: HW Blake and Company.
- Dillingham, John H.
 1909 *Traditions and Narratives of West Falmouth*. Falmouth: Falmouth
 Historical Society.
- Donahue, Brian.
 2007 Another Look from Sanderson's Farm: A Perspective on New England
 Environmental History and Conservation. *Environmental History* 72(1):
 19-34.
- Emerson, Amelia Forbes
 1963 *Anthology of Naushon 1833-1917*. Concord, MA: The Concord Press.
- Florida, Richard and Donald F. Smith Jr.
 1993 Venture Capital Formation, Investment, and Regional Industrialization.
Annals of the Association of American Geographers 83(3): 434-451.
- Gaines, Jennifer Stone
 2007 Woolens Industry. *Spiritsail*. Woods Hole, MA: Woods Hole Historical
 Collection.
- Gilje, Paul A.
 1996 The Rise of Capitalism in the Early Republic. *Journal of the Early
 Republic* 16(2 Special Issue on Capitalism in the Early Republic): 159-
 181.
- Ginzberg, Carlo.
 2005 Latitude, Slaves, and the Bible: An Experiment in Microhistory. *Critical
 Inquiry* 31(3): 665-683.
- Ginzberg, Carlo, et al.
 1993 Microhistory: Two or Three Things That I Know about It. *Critical Inquiry*
 20(1): 10-35.

- Goldthwait, James Walter
1927 A Town That Has Gone Downhill. *Geographical Review* 17(4): 527-552.
- Green, Anna and Kathleen Troup, ed.
1999 *The Houses of History*. New York: New York University Press.
- Hayward, John.
1839 *The New England Gazetteer*. Concord, N.H.: Boyd and White.
- Hekman, John S.
1980 The Product Cycle and New England Textiles. *The Quarterly Journal of Economics* 94(4): 697-716.
- Higbee, Edward C.
1952 The Three Earths of New England. *Geographical Review* 32(3): 425-438.
- Howard, Lauren F. and Thomas D. Lee.
2002 Upland Old Field Succession in Southeastern New Hampshire. *The Journal of the Torrey Botanical Society* 129(1): 60-76.
- Hautaniemi, Susan I.
1999 Mill Town Mortality: Consequences of Industrial Growth in Two Nineteenth Century New England Towns. *Social Science History* 23(1): 1-39.
- Jenkins, Candace.
1998. *Between the Forest and the Bay*. West Falmouth: West Falmouth Civic Association.
- Johnson, Matthew
2008 *Ideas of Landscape*. Malden, MA: Blackwell Publishing
- Kealhofer, Lisa.
1999 Creating Social Identity in the Landscape: Tidewater, Virginia 1600-1750. In *Archaeology of Landscape*: Wendy Ashmore and A. Bernard Knapp, ed.: 58-82. Malden, MA: Blackwell Publishers.
- Kelley, Shawnie.
2006 *It Happened on Cape Cod*. Hartford: Globe Pequot.
- Kittredge, Henry C.
1930 *Cape Cod: Its People and Their History*. Hyannis, MA: Parnassus Imprints, Inc.

Lamoreaux, Naomi.

- 2006 Rethinking Microhistory: A Comment. *Journal of the Early Republic* 26 (4: Connection, Contingency, and Class in the Early Republic's Economy): 555-561.

Mahoney, James and Dietrich Rueschmeyer, ed.

- 2003 *Comparative Historical Analysis in the Social Sciences*. Cambridge, UK: Cambridge University Press.

Mohanty, Gail.

- 1989 Putting Up with Putting Out: Power Loom Diffusion and Outwork for Rhode Island Mills 1821-1829. *The Journal of the Early Republic* 9(2): 196-216.

Motzkin, Glenn, et al.

- 1996 Controlling Site to Evaluate History: Vegetation Patterns of a New England Sand Plain. *Ecological Monographs* 66(3): 345-365.

Mrozowski, S.A., et al.

- 1989 Living on the Boot: Health and Well Being in a Boarding House Population. *World Archaeology* 21(2: The Archaeology of Public Health): 298-319.

Osgood, Herbert L.

- 1904 New England Colonial Finance. *Political Science Quarterly* 19(1): 80-106.

Parks, Roger N.

- 1967 New England Textile Mill Villages in the Early 19th Century. *Old Sturbridge Village*: 1-5.
http://www.osv.org/explore_learn/document_viewer.php?Action_View&DocID=2180

Peltonen, Matti

- 2001 Clues, Margins, and Monads: The Micro-Macro Link in Historical Research. *History and Theory* 40(3): 347-409.

Reynard, Elizabeth

- 1934 *The Narrow Land: Folk Chronicles of Old Cape Cod*. Boston: Houghton Mifflin Company.

Shammas, Carole

- 1994 The Decline of Textile Prices in England and British America Prior to Industrialization. *The Economic History Review, New Series* 47(3): 483-507.
- Small, Nora Pat
 1996 The Search for a New Rural Order: Farmhouses in Sutton, Massachusetts, 1790-1830. *The William and Mary Quarterly*, Third Series 53(1: Material Culture in Early America): 67-86.
- Silverman, David J.
 2003 We Chuse to be Bounded: Native American Husbandry in Colonial New England. *The William and Mary Quarterly*, Third Series 60(3): 511-518.
- Smith, Mary Lou, ed.
 1986 *The Book of Falmouth*. Falmouth: Falmouth Historical Society.
- Starbuck, Alexander.
 1878 *History of the American Whale Fishery*. Seacaucus, NJ: Castle Books.
- Stetson, Judith G, ed.
 2007 *Spiritsail*, Volume 21 Woods Hole: Woods Hole Historical Collection.
- Stiverson, Gregory A.
 1976 Early American Farming: A Comment. *Agricultural History* 50(1: Bicentennial Symposium: Two Centuries of American Agriculture): 37-44.
- Stover, Stephen L.
 1962 Early Sheep Husbandry in Ohio. *Agricultural History* 36(2): 101-107.
- Strahler, Arthur N.
 1966 *A Geologist's View of Cape Cod*. Garden City, NY: The Natural History Press.
- Svenning, Dorothy
 2001 *Eighteenth Century Deeds* 15(2).
- Thomas, Peter A.
 1976 Contrastive Subsistence Strategies and Land Use as Factors for Understanding Indian-White Relations in New England. *Ethnohistory* 23(1): 1-18.
- Thornton, Tamara Plakins
 1989 *Cultivating Gentlemen*. New Haven: Yale University Press.
- Turner, Frederick Johnson.

- 1931 New England 1830-1850. *The Huntington Library Bulletin* 1: 153-198.
- Vital Records of Sandwich Massachusetts, Volume 2*
1996 Boston: New England Historic Genealogical Society.
- Walcott, Robert R.
1936 Husbandry in Colonial New England. *The New England Quarterly* 8(2): 218-252.
- White, Douglas W., et al.
1990 Woodlands in a Post-Agricultural Landscape in New Jersey. *The Bulletin of the Torrey Botanical Club* 117(3): 56-265.
- Wilson, Harold F.
1935 The Rise and Decline of the Sheep Industry in Northern New England. *Agricultural History* 9(1): 12-40.
- Wolfanger, Louis A.
1931 Economic Geography of the gray-Brownerths of the Eastern United States. *Geographical Review* 21(2): 276-296).
- Wood, Joseph
1987 *The New England Village*. Baltimore and London: The Johns Hopkins University Press.
- Wright, John K., ed.
1929 New England. *Geographical Review* 19(3): 479-494.
1933 New England's Prospect 1933. *American Geographical Society Special Publication* 16.
- Zevin, Robert Brook.
1965 The Growth of Manufacturing in Early Nineteenth Century New England. *The Journal of Economic History* 25: 680-682.