

Harvesting Power: Transatlantic Merchants and the Anglo-American Grain Trade,
1795-1890

Thomas David Finger
Flagstaff, Arizona

Bachelor of Arts, State University of New York at Binghamton, 2003
Master of Arts, University of Arizona, 2006

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Thomas D. Finger

Abstract

Between 1795 and 1889, the Anglo-American grain trade grew to provide Great Britain with most of its food imports. At first, bottlenecks in transportation and markets limited trade. Between the 1820s and 1870s, merchants built infrastructure by mobilizing business associations, capital, technology, and nature. British and American merchants invested in American transportation and participated in free trade debates during the 1840s. Following the repeal of the British Corn Laws in 1846, American and British merchants stitched together regional markets to send American wheat to Britain. By the 1870s, three key American regions supplied Britain with grain: the Great Lakes Corridor, California, and the Spring Wheat Region of the northern plains. In the late 1870s, American exports increased as British crops failed. Between 1875 and 1890, American wheat exports rose further as British merchants invested in American milling and transportation. By 1890, the American and British wheat markets converged. This convergence encouraged large commercial agriculture in the United States and a reliance on imports to feed industrial Great Britain.

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Chapter One – Introduction: The Anglo-American Epic of Wheat

In 1899, Progressive author Frank Norris sat down to write his magnum opus. In it, he hoped to tell the story of America, how conquering the frontier led to unheard-of growth in business enterprise. He hoped to tell this story by focusing on the behavior of humans and the array of social forces that exerted profound influence of the will of the individual. He wished to write a book that showed how humans were indeed a force within nature, struggling against the indifferent and gigantic processes animating the larger world of which they knew little. Norris yearned to not only write the great American novel, he strove to produce a profound sociological study that could point to the center of human existence and ambition. To tell this story, Norris chose wheat as his main character.¹

Frank Norris wrote his best-known work, *The Octopus*, to describe the power that railroads and financiers enjoyed over grain farmers in the late nineteenth century. In his other great work, *The Pit*, Norris described the speculation of businessmen in the grain markets of Chicago. Scholars of American literature consider these books among the most influential Progressive works of literature. What you may not know, however, is that Norris considered them to be the first two volumes in a three-part *Epic of Wheat*. Norris never completed the third and final volume, *The Wolf*, due to his early death. While we can only speculate on its exact content, we do know that it focused on the consumption of American wheat in Europe.² The complete *Epic of Wheat* would thus have told the story of a crop of wheat “from the time of its sowing as seed in California to the time of its consumption as bread in a village of Western

¹ Franklin Walker, *Frank Norris: A Biography* (New York: Russell & Russell, 1963), 239–255.

² Frank Norris, *The Epic of the Wheat: The Pit*, *The Complete Works of Frank Norris* (Doubleday, Page & Co., 1903), ii.

Europe.”³ Taken together as a whole, the *Epic of Wheat* would connect the production, distribution, and consumption of wheat within a wide geographic swath into the same frame, connecting people and environments to show “how the resources of one continent could be used to feed another.”⁴ For Norris, this was “an idea as big as all outdoors.”⁵

This dissertation shows that Norris was right. One of the major stories of the late nineteenth century was the transfer of American wheat to Europe. This dissertation focuses on the largest of those markets: Great Britain. It shows that this trade grew from an unpredictable trickle in 1800 to comprise over 60 percent of Britain’s vital wheat imports in 1890. The reason this trade grew so quickly was a transatlantic network of merchants who came together between 1820 and 1870 to bring large quantities of wheat from the United States to Great Britain from 1870 into the twentieth century.

Merchants stand at the center of this story. It describes how they mobilized four key elements to bring wheat in growing quantities from the United States to Great Britain over the course of the nineteenth century. First, individuals employed a network of *business associations* across the North Atlantic economy in order to engage in long-standing business deals rather than opportunistic single purchases of securities or trade goods. Second, merchants used this social network to invest *capital* to develop the American economy. Third, merchants in the United States used this largely-British investment to build transportation and storage *technologies* to move wheat cheaply over increasingly long distances. Finally, merchants at all points in the system had to shape *nature* to allow them to make educated guesses on the supply, demand, and price across various markets. In order to mobilize the four key elements of human networks, capital, technology and nature, these merchants sent a constant stream of information about the

³ Ibid.

⁴ Walker, *Frank Norris*, 243.

⁵ Ibid., 240.

state of harvests, prices, demand, and general market conditions across a growing number of locations in the Anglo-American world.

The four main elements mobilized by British merchants to create the Anglo-American grain trade also correspond to the bodies of literature this dissertation builds upon: economic and business history, the history of technology, and environmental history. Business associations were for general and wheat-specific merchants in the nineteenth century the central way to limit personal risk. In these associations, merchants aggregated their capital and using collective information to decide the best prospects for investment. As economic historians have shown, merchants who engaged in risky overseas trade throughout the history of the Atlantic World banded together in associations of varying durability and length to pool money, information, and resources in an attempt to limit individual liability.⁶ Natural processes were a significant cause of risk. There were perils in relying overwhelming on unpredictable agricultural goods who's amount could be reduced in the field, ship, warehouse, and market by a number of factors including pest infestation and inclement weather.⁷ Ships could very well sink on the open ocean or wet conditions could spoil or reduce the value of cargo.⁸ National, state, or local policy could change unpredictably and dramatically influence individual long term plans or even the destination of cargos afloat at the time of passage.⁹ Finally, dramatically fluctuating markets at the point of purchase or sale could leave a single merchant liable for loss if he had predicted

⁶ K.G. Davies, *The Royal African Company* (London: Longmans, Green and Co., 1957); J.C. Miller, *Way of Death: Merchant Capitalism and the Angolan Slave Trade, 1730-1830* (Madison: The University of Wisconsin Press, 1988); David Hancock, *Citizens of the World: London Merchants and the Integration of the British Atlantic Community, 1735-1785* (Cambridge: Cambridge University Press, 1995).

⁷ Percy Bidwell and John I. Falconer, *History of Agriculture in the Northern United States, 1620-1860* (Washington: Carnegie Institution of Washington, 1925).

⁸ Basil Lubbock, *The Colonial Clippers* (Charles E. Lauriat Company, 1921); Al Miller, “Workhorses and White Flyers: The Northern Steamship Company,” *Inland Seas* 55, no. 1 (1999): 18–30.

⁹ Morton Rothstein, “American Wheat and the British Market, 1860-1905” (PhD Diss., Cornell University, 1960), 158–183.

different conditions when contracting for a good. The most successful merchants of the eighteenth and nineteenth century protected themselves from these risks by trading in a number of different commodities and forming associations and partnerships with other individuals across the economic spectrum, from crop brokers to insurers, and from bankers to politicians.¹⁰

By the early nineteenth century, a few merchant houses on both sides of the Atlantic had come to manage risk better than others. In large ports throughout the Atlantic world, these family dynasties engaged in general trade by brokering deals in wheat, tobacco, cotton and a host of other commodities at the same time they brokered the sale of American securities in Europe through a network of agent houses controlled either by a family member or a trusted associate merchant.¹¹ Agent houses centered in New York City, Philadelphia, and Baltimore would be keystone merchant houses in the Anglo-American grain trade and a crucial node in a larger web of international capital that connected British merchants with investments in the United States.¹² While the association between agent and home offices lasted considerably longer than merchants relationships in the earlier Atlantic economy, business historian Alfred Chandler has shown conclusively that these agent and house associations transitioned over time to the even more

¹⁰ Jonathan Levy, *Freaks of Fortune: The Emerging World of Capitalism and Risk in America* (Cambridge, MA and London, England: Harvard University Press, 2012).

¹¹ John Kouwenhoven, *Partners in Banking: An Historical Portrait of a Great Private Bank, Brown Brothers Harriman & Co., 1818-1968* (Garden City, N.Y.: Doubleday, 1968); Edwin J. Perkins, *Financing Anglo-American Trade: The House of Brown, 1800-1880* (Cambridge, MA: Harvard University Press, 1975).

¹² R.W. Hidy, “The Organization and Functions of Anglo-American Merchant Bankers, 1815-1860,” *The Journal of Economic History* 1, Supplement: The Tasks of Economic History (December 1941): 53–66; R.W. Hidy, *The House of Baring in American Trade and Finance: English Merchant Bankers at Work, 1763-1861* (Cambridge, MA: Harvard University Press, 1949); Ralph W. Hidy and Muriel E. Hidy, “Anglo-American Merchant Bankers and the Railroads of the Old Northwest, 1848-1860,” *The Business History Review* 34, no. 2 (July 1, 1960): 150–69, doi:10.2307/3111545; Dolores Greenberg, *Financiers and Railroads 1869-1889* (Newark, NJ: University of Delaware Press, 1980).

permanent employer-employee relationships as the pace of trade quickened with the advent of steam transport.¹³

Merchant associations were the primary mechanism through which European capital entered the American economy in the nineteenth century. Just as economic historians have noticed a change over time in the structure of merchant associations, so too have they noticed the nature of foreign investment shift over the course of the nineteenth century from portfolio investments with no decision-making control to direct investments implying involvement in a firm’s decision-making process.¹⁴ While British investment always accounted for the largest share of foreign investments in the United States during the nineteenth century, the actual amount invested by British grew over time as associations among Anglo-American merchants encouraged a greater flow of capital.¹⁵

Economic historians have also shown how associations and capital worked to increase the volume of grain moving between Great Britain and the United States. As C. Knick Harley and Paul Sharp have demonstrated, convergence within the Anglo-American grain trade was not a simple supply versus demand equation; it came about as a “push” from the American market met a “pull” from the British market and development of the transportation corridors that connected them.¹⁶ These markets connected through a web of associations and investments that sprang

¹³ Alfred D Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge Mass.: Belknap Press, 1977).

¹⁴ Mira Wilkins, *The History of Foreign Investment in the United States to 1914* (Harvard University Press, 1989).

¹⁵ L.H. Jenks, *The Migration of British Capital to 1875* (New York: Alfred A. Knopf, 1938); P.L. Cottrell, *British Overseas Investment in the Nineteenth Century* (London: Macmillan, 1975); P.L. Cottrell, *Industrial Finance, 1830-1914: The Finance and Organization of English Manufacturing Industry* (London: Methuen, 1980).

¹⁶ C. Knick Harley, “Western Settlement and the Price of Wheat, 1872-1913,” *The Journal of Economic History* 38, no. 4 (December 1, 1978): 865–78; C. Knick Harley, “Transportation, the World Wheat Trade, and the Kuznets Cycle, 1850-1913,” *Explorations in Economic History* 17, no. 3 (July 1980): 218–50; C. Knick Harley, “Ocean Freight Rates and Productivity, 1740-1913: The Primacy of Mechanical Invention Reaffirmed,” *The Journal of Economic History* 48, no. 4 (December 1, 1988): 851–76; *ibid.*; Paul Sharp, “‘1846 and All That’: The Rise and Fall of British Wheat Protection in the Nineteenth Century,” *Agricultural History Review* 58, no. 1 (May 2010): 76–94; Paul Sharp and Jacob Weisdorf, “Globalization Revisited: Market Integration and the Wheat Trade Between North America

from a British desire to develop the United States and from an American desire to exchange that money for raw agricultural produce.¹⁷

Merchant associations and corresponding networks of capital centered in London and American port cities produced what historian George R. Taylor calls “the Transportation Revolution.”¹⁸ As Taylor notes, this revolution in American transport was largely created by American and British merchants with surplus capital and a desire to profit from new markets in the American West. First turnpikes, then canals and railroads, fostered a great wave of British investment in the United States and created fertile conditions for the growth of cereal production in the Great Lakes region.

In the grain trade, technology worked to transform economic risks in production and shipping into opportunities for profit. As Michel Callon and other actor network theorists have noted, the non-human world plays a role in the stability of social arrangements over time.¹⁹ One of the main factors guiding the development of transportation throughout the American interior was the wheat itself. Spoiling quickly, wheat needed to be stored in dry conditions even though it was carried across water for much of its journey from farm to market. So merchants, who between the 1820s and 1840s were likely to own the wheat and the means of its conveyance, began to devise new methods of storage and transport to maintain the commodity of their choice.²⁰

and Britain from the Eighteenth Century,” *Explorations in Economic History* 50, no. 1 (January 2013): 88–98, doi:10.1016/j.eeh.2012.08.002.

¹⁷ Richard E. Caves, “Organization, Scale, and Performance in the Grain Trade,” *Food Research Institute Studies* XVI, no. 3 (78 1977): 107–23; M. Ejrnaes, K.G. Persson, and S. Rich, “Feeding the British: Convergence and Market Efficiency in the Nineteenth-Century Grain Trade,” *Economic History Review* 61, no. S1 (2008): 140–71.

¹⁸ George Rogers Taylor, *The Transportation Revolution, 1815-1860* (White Plains, NY: M.E. Sharpe, 1951).

¹⁹ Michel Callon, “Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St. Brieuc Bay,” *The Sociological Review Monograph* 32 (1986): 196–233.

²⁰ Morton Rothstein, “Antebellum Wheat and Cotton Exports: A Contrast in Marketing Organization and Economic Development,” *Agricultural History* 40, no. 2 (1966): 91.

By the 1850s and 1860s, the grain trade and the American transportation system on which it depended became something of what historians of technology call a sociotechnical system, an arrangement of technological artifacts, humans, and natural environments. As Thomas Hughes notes, these systems grow more stable over time, a process he terms momentum.²¹ The American grain trade achieved momentum by the 1860s, stabilized by business associations across the North Atlantic, a stream of capital from London to New York City, transportation corridors that reduced the cost of moving wheat, and common business practices such as futures trading and grading to facilitate the movement of wheat between markets.

It is important to note, however, that systems do not necessarily mean order. As Richard White has demonstrated, the American rail system did not come about as an orderly and rational response to measured economic change. Rather, the transportation revolution fell into place as merchants scrambled to make up for poor business decisions, most notably the overextension of construction.²² As we shall see in this dissertation, the evolution of the Anglo-American grain trade came about partly from an orderly and conservative extension of merchant networks and capital applied through a concerted vision to see the United States built as an agricultural exporter. It also came about as merchants struggled with local inefficiencies and bottlenecks with no other vision than getting the next deal through. Finally, some parts of the grain trade came about almost by accident, with no concerted effort of vision on the part of merchants who

²¹ Arnold Pacey, *The Culture of Technology* (Cambridge, Mass.: MIT Press, 1983); Thomas P. Hughes, *Networks of Power: Electrification in Western Society, 1880-1930* (Baltimore: The Johns Hopkins University Press, 1983); Thomas Hughes, *Human-Built World: How to Think about Technology and Culture* (Chicago: University of Chicago Press, 2004).

²² Richard White, *Railroaded: The Transcontinentals and the Making of Modern America*, 1st ed. (New York: W.W. Norton & Co., 2011).

lucked into circumstances that made it beneficial to export wheat from the United States to Great Britain.

Nature – as idea manifested in the merchants themselves *and* the physical wheat, its agroecosystem, and the larger systems of weather and hydrology that shaped production, transport, and consumption– was an essential actor in the development of the Anglo-American grain trade.²³ Without mobilizing nature as an idea and as a material and multi-scale process of non-human systems, merchants in the Anglo-American grain trade could not have moved capital or grain to achieve profit. Environmental historians have long understood that ideas and visions of nature do much to condition cultural values, the “good life,” and the perceived limits of the possible.²⁴ The nineteenth century capitalist community, in particular, looked to their own particular idea of nature to justify its use.²⁵ Within the grain trade specifically, merchants adopted an idea of nature as global system given to human use by a divine providence who tasked humans to understand his creation and move goods from places of abundance to regions of scarcity.

The idea of nature spurred grain merchants to construct a transnational trading system designed to trade England’s manufactured goods and capital for American wheat and cotton. As environmental historians Richard Tucker and John Soluri have noted in their studies of other transnational commodity chains, long distance trade required nature be mobilized and altered on

²³ Donald Worster, “Transformation of the Earth: Toward an Agroecological Perspective in History,” *Journal of American History* 76, no. 4 (March 1990): 1087–1106.

²⁴ D. Worster, *Nature’s Economy: A History of Ecological Ideas*, vol. 2nd (Cambridge: Cambridge University Press, 1994); Thomas Dunlap, *Nature and the English Diaspora: Environment and History in the United States, Canada, Australia, and New Zealand* (Cambridge; New York: Cambridge University Press, 1999); Mark Fiege, *Irrigated Eden: The Making of an Agricultural Landscape in the American West* (Seattle: University of Washington Press, 2000); K.R. Olwig, *Landscape, Nature, and the Body Politic: From Britain’s Renaissance to America’s New World* (Madison: The University of Wisconsin Press, 2002).

²⁵ Mark Stoll, *Protestantism, Capitalism, and Nature in America* (Albuquerque, NM: University of New Mexico Press, 1997).

a massive scale to fit human economic needs.²⁶ As the grain trade reached momentum in the late 1860s, merchants remade the hydrology of the Great Lakes region, plowed over the vast Central Valley of California, and marshaled the power of the Mississippi River to mill their grain. These same individuals and organizations began sending their wheat and flour in unprecedented volumes to Great Britain.

While the Anglo-American grain trade itself has seen a number of regional or sector-specific studies, no work yet exists that ties the action of individual merchants, changing market structures, and the environments that support them.²⁷ No one has done more work on the topic than business historian Morton Rothstein and, while his treatment of the business side is exhaustive, his analysis provides little clue into the wide non-human world upon which the trade ran.²⁸ In contrast, William Cronon, in his magisterial *Nature's Metropolis*, thoroughly explains

²⁶ Richard P. Tucker, *Insatiable Appetite: The United States and the Ecological Degradation of the Tropical World* (Berkeley: University of California Press, 2000); John Soluri, “Accounting for Taste: Export Bananas, Mass Markets, and Panama Disease,” *Environmental History* 7, no. 3 (July 1, 2002): 386–404, doi:10.2307/3985915; John Soluri, *Banana Cultures: Agriculture, Consumption, and Environmental Change in Honduras and the United States* (Austin: University of Texas Press, 2005).

²⁷ W. Freeman Galpin, “The American Grain Trade to the Spanish Peninsula, 1810-1814,” *The American Historical Review* 28, no. 1 (October 1, 1922): 24–44, doi:10.2307/1835974; H.M. Larson, *The Wheat Market and the Farmer in Minnesota* (New York: Longmans, Green & Co., 1926); W. F. Galpin, “The Grain Trade of New Orleans, 1804-1814,” *The Mississippi Valley Historical Review* 14, no. 4 (March 1, 1928): 496–507, doi:10.2307/1897152; Wilfred Malenbaum, *The World Wheat Economy, 1885-1939*. (Cambridge: Harvard University Press, 1953); Rodman W. Paul, “The Wheat Trade between California and the United Kingdom,” *The Mississippi Valley Historical Review* 45, no. 3 (December 1, 1958): 391–412, doi:10.2307/1889318; Donald W. Meinig, “Wheat Sacks out to Sea: The Early Export Trade from the Walla Walla Country,” *The Pacific Northwest Quarterly* 45, no. 1 (January 1, 1954): 13–18; Dorothy J. Ernst, “Wheat Speculation in the Civil War Era: Daniel Wells and the Grain Trade, 1860-1862,” *The Wisconsin Magazine of History* 47, no. 2 (December 1, 1963): 125–35; John G. Clark, *The Grain Trade in the Old Northwest* (Westport, CT: Greenwood Press, 1966); H. Fornari, *Bread Upon the Waters: A History of United States Grain Exports* (Nashville: Aurora Publishers Incorporated, 1973); D. Morgan, *Merchants of Grain* (New York: The Viking Press, 1979); Alan L. Olmstead and Paul W. Rhode, “Biological Innovation and American Wheat Production: Science, Policy, and Environmental Adaptation,” in *Industrializing Organisms: Introducing Evolutionary History* (New York: Routledge, 2004); William J Brown, *American Colossus: The Grain Elevator, 1843 to 1943* (Cincinnati, OH: Colossal Books, 2009).

²⁸ Morton Rothstein, “A British Investment in Bonanza Farming, 1879-1910,” *Agricultural History* 33, no. 2 (1959): 72–78; Morton Rothstein, “America in the International Rivalry for the British Wheat Market, 1860-1914,” *The Mississippi Valley Historical Review* 47, no. 3 (1960): 401; Morton Rothstein, “American Wheat and the British Market, 1860-1905” (PhD Diss., Cornell University, 1960); Morton Rothstein, “A British Firm on the American West Coast, 1869-1914,” *The Business History Review* 37, no. 4 (December 1, 1963): 392–415, Morton Rothstein, “Antebellum Wheat and Cotton Exports: A Contrast in Marketing Organization and Economic Development,”

how the environments of production and consumption influence economic processes. But his analysis has little room for individuals and, by focusing on the Chicago-hinterland trade, misses how some of the developments he follows (futures trading and grading) were wrapped up in a desire to move wheat from Great Lakes markets to Europe.²⁹ Cronon mentions Liverpool – the world’s largest grain port in the second half of the nineteenth century - only once in his book, and it is in reference to the cattle trade.³⁰ This is despite the fact that Chicago merchants developed futures trading and grading specifically to efficiently market their wheat on the English market in the 1840s and 1850s.³¹ Sterling Evans comes the closest to adopting a people-centered, structural, and environmental story of the American grain trade, but he has little to say about destination markets. Instead, he discusses how transnational connections among producing markets produce unanticipated power dynamics, such as the Mexican prison labor production of twine used to bind American wheat in the field.³²

This dissertation build on previous work in economic, technological, and environmental history to explain how small community of Anglo-American wheat merchants shaped local, regional, and international markets to grow the export of American surplus to Great Britain.³³

Agricultural History 40, no. 2 (1966): 91; Morton Rothstein, “The Big Farm: Abundance and Scale in American Agriculture,” *Agricultural History* 49, no. 4 (1975): 583; Morton Rothstein, “West Coast Farmers and the Tyranny of Distance: Agriculture on the Fringes of the World Market,” *Agricultural History* 49, no. 1 (January 1975): 272–80; Morton Rothstein, *The United States and the United Kingdom as Centers of the World Wheat Trade, 1846-1914* (Davis, CA: Agricultural History Center University of California Davis, 1990).

²⁹ William Cronon, *Nature’s Metropolis: Chicago and the Great West*, 1st ed (New York: W. W. Norton, 1991).

³⁰ *Ibid.*, 236.

³¹ Jeffrey C. Williams, “The Origin of Futures Markets,” *Agricultural History* 56, no. 1 (January 1, 1982): 306–16, doi:10.2307/3742318; Charles H. Taylor, *History of the Board of Trade of the City of Chicago* (Chicago: Robert O. Law Company, 1917), 184–186.

³² Sterling Evans, *Bound in Twine: The History and Ecology of the Henequen-Wheat Complex for Mexico and the American and Canadian Plains, 1880-1950*, 1st ed (College Station: Texas A&M University Press, 2007), 67–90.

³³ Markets in this sense include humans, capital and resource flows, and the natural systems which underpin them all. See N.S.B. Gras, *The Evolution of the English Corn Market from the Twelfth to the Eighteenth Century* (Cambridge, MA: Harvard University Press, 1926), 32–35; Caves, “Organization, Scale, and Performance in the

Building their ideas of divinely-inspired comparative advantage in response to severe food shortages in Great Britain from 1795 to 1815, these merchants played an important role in directing British investment towards land and transportation in the United States. This investment helped encourage overproduction of wheat and steered that surplus towards the British market in increasing volumes in the second half of the nineteenth century.

Throughout the nineteenth century, the movement of wheat and flour was controlled by a small group of merchants and who moved their breadstuffs through a select number of places. Breadstuffs flowed in well-regulated streams rather than unmanaged tides. The route and size of those streams were the collective result of the ways in which merchants mobilized business associations, capital, technology, and nature. Thus, the grain trade as a business community constituted a collection of specific producing areas where farmers were incentivized to grow wheat due to the presence of a well-funded merchant community who provided an outlet for their produce, transportation corridors to move that wheat to consumptive markets, and industrial markets characterized by stable demand that often grew over time. In business terms, the services of grain merchants meant that producing, processing and consumptive regions cannot be regarded as separate markets.³⁴

Merchant communities shaped three great flows of wheat from the United States to Great Britain in the nineteenth century. First, between 1820 and 1862, merchants within the Great Lakes-Empire Corridor helped stimulate surplus production of wheat throughout the Great Lakes basin and increasingly marketed that wheat in New York City where a few select merchants responded to food crises in England by exporting a greater share of that wheat and flour to Great Britain. Second, between 1860 and 1875, merchants in San Francisco invested Gold Rush

Grain Trade”; D. Pimentel and C.W. Hall, *Food and Energy Resources* (Orlando: Academic Press, Inc., 1984); Paul Hawken, *Natural Capitalism: Creating the Next Industrial Revolution* (Boston : Little, Brown and Co., 1999).

³⁴ Caves, “Organization, Scale, and Performance in the Grain Trade,” 110–120.

money in land and began to plant that land in wheat. Soon, wheat production in California boomed but there was one problem: the region sat thousands of miles away from any wheat-deficit region. During this period, San Francisco merchants began to actively steer this surplus towards the British market. Finally, between 1870 and 1890, merchants in the Spring Wheat Region of Minnesota and Dakota encouraged an explosion of wheat production but sought to market that wheat not in the region’s traditional markets of Chicago and Milwaukee, but in the world’s industrial centers of the eastern United States and Great Britain.

At the same time these regions coalesced, British wheat merchants began searching for new sources of wheat supply for their booming market. Over the course of the nineteenth century, the British searched farther and farther afield for their bread. In 1800, the island of Great Britain held a population of just over nine million. It imported 1,265,000 quarters of grain, only a tiny fraction of which came from the United States.³⁵ In 1900, Britain had a population of 32,249,000. It imported 68,669,000 centals of grain, 32,588,000 of which came from the United States.³⁶ In 1800, virtually all bread consumed in England was baked with domestic wheat. In 1885, a loaf of bread eaten for dinner by a working class family in Manchester was made half of wheat grown in England, a quarter grown in from wheat grown throughout Eurasia, and a quarter grown in the United States. By 1900, those ratios had shifted to even thirds (see Figure 1.1).³⁷

³⁵ An Imperial Quarter is roughly equivalent to eight bushels. Brian Mitchell and Phyllis Deane, *Abstract of British Historical Statistics* (Cambridge: Cambridge University Press, 1962), 5, 95.

³⁶ The standard measurement of weight for grain became the cental in 1858. *ibid.*, 9,99.

³⁷ John Burnett, *Plenty and Want: A Social History of Diet in England from 1815 to the Present Day*, Rev. ed. (London: Scolar Press, 1979), 134.

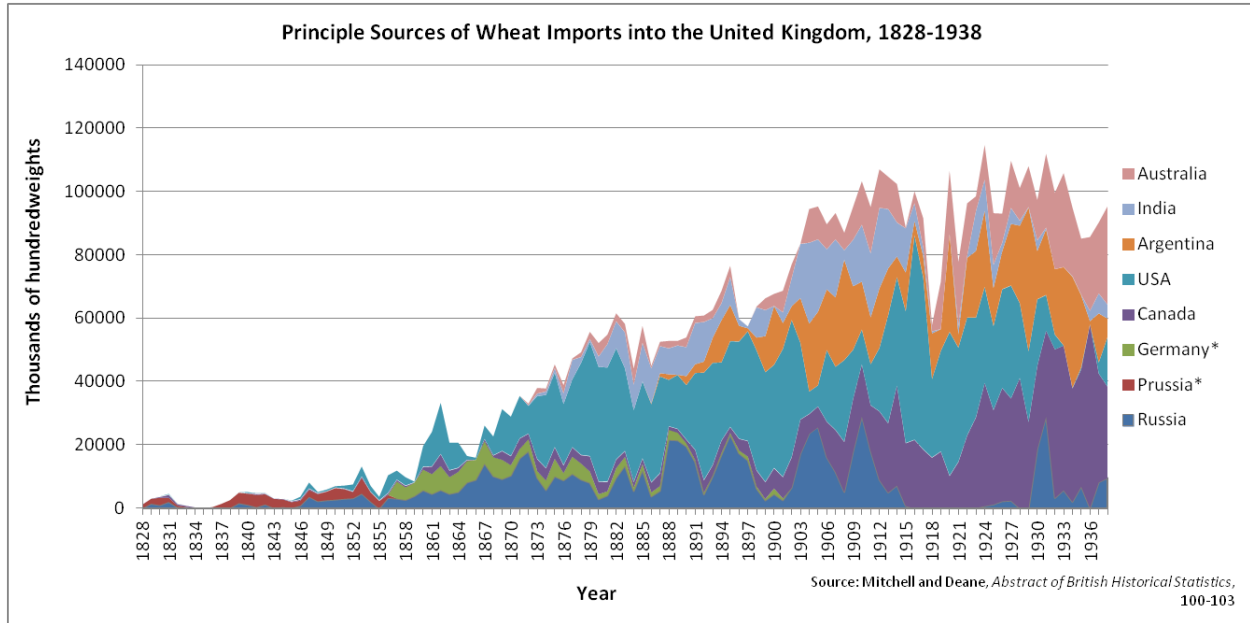


Figure 1.1. Principles Sources of Wheat Imports into the United Kingdom, 1828-1938. The United States grew from an insignificant market to Great Britain’s largest single source of imported wheat over the course of the nineteenth century. Graph by author from data in *Abstract of British Historical Statistics*, 100-103

Between 1850 and 1914, the total long-distance trade in wheat around the world grew from 5 million imperial quarters to 75 million quarters, exhibiting a growth rate of about 4 ½ percent annually.³⁸ The British market grew as the world’s largest open market for wheat and its imports of wheat grew over ten times between 1840 and 1880. Bread consumption as a whole grew in Great Britain throughout the second half of the nineteenth century. One estimate suggests that the average working class diet consisted of 5.4 pounds of bread per week in 1841 and 6.7 lbs per week between 1902 and 1913.³⁹

It was a small community of merchants in the cities of Liverpool, New York City, Chicago, Minneapolis, and San Francisco that helped reorient American grain production from

³⁸ Harley, “Transportation, the World Wheat Trade, and the Kuznets Cycle, 1850-1913,” 226.

³⁹ D.J. Oddy, “Food in Nineteenth Century England: Nutrition in the First Urban Society,” *The Proceedings of the Nutrition Society* 29, no. 1 (1970): 155.

feeding slavery to feeding industrialization in Great Britain. Between 1800 and 1850, the United States exported most of its wheat and flour to feed the slave populations of the Caribbean and South America.⁴⁰ Then, between 1850 and 1890, a transatlantic community of merchants responded to structural changes in the American, British, and global economies to divert a growing percentage of the American wheat surplus to Great Britain. It happened fast. In 1866, the United States exported just 3 percent of its total wheat crop and the majority of that crop went to South America. Just 15 years later, in 1881, the U.S. exported 37 percent of its crop, almost 60 percent of those exports went directly to Great Britain.⁴¹ From 1879 to 1883, the United States exported 35, 40, 37, 31, and 29 percent of its *total* wheat crop, respectively. From 1800 to 1900, grain imports into Great Britain from the United States grew 217 times.⁴² Between 1865 and 1900, an annual average of 41 percent of all wheat imported into Great Britain came from the Anglo-American grain trade.⁴³ These numbers convinced the United States Bureau of Statistics in 1900 that “the influence of the foreign market upon the internal grain trade is becoming constantly greater.”⁴⁴

This dissertation outlines this structural evolution of the Anglo-American grain trade by putting the lives of merchants and the landscapes they inhabited at the center of the story. I range my analysis among describing who these merchants were, how they perceived and acted upon the world, how they moved wheat and money, and how their actions contributed to the commercialization of American agriculture and industrialization in Great Britain. Both general

⁴⁰ Rothstein, “American Wheat and the British Market, 1860-1905,” 2–10, 17–20.

⁴¹ United States and Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970*. (Washington: United States Government Printing Office, 1975), 510–512, 898–899.

⁴² A cental is equivalent to four Imperial Quarters.

⁴³ Mitchell and Deane, *British Historical Statistics*, 100–102.

⁴⁴ Bureau of Statistics, “The Grain Trade of the United States, and the World’s Wheat Supply and Trade,” in *Monthly Summary of Commerce and Finance of the United States, January 1900* (Washington, D.C.: Government Printing Office, 1900), 1995.

and specialists merchants believed that they could profit by moving wheat and capital from places of abundance to places of scarcity. Though motivated primarily by profit, merchants of all kinds assumed that free trade was both an individual and social good by providing profits to the merchant, lowering food prices for the working class in England and stimulating the growth of the American agricultural economy. It was this community of merchants, more than anything else, who was responsible for creating the Anglo-American grain trade.

The rest of this dissertation develops the story outlined above and describes how merchants transformed the Anglo-American grain trade from collectively-held vision to material reality in the span of two generations. Chapter 2, “Envisioning an International Grain Trade” begins the story by describing shifts to England’s food supply and increasing shortages in industrial cities between the years 1795 and 1840. The Anglo-American grain trade began in the late eighteenth century with a growing perception among Britain's merchant class that North America could prove a vital source of imported food into Great Britain. This chapter describes the food landscape of early industrial Britain from the perspective of a small group of merchant politicians who saw an international trade in wheat as a way out of the working-class volatility and economic uncertainty that characterized the French War years. During a period of successive harvest failures brought about by oceanic and climatic conditions over the North Atlantic, a small group of influential merchants – including London merchants Claude Scott, Alexander Baring, and David Ricardo as well as manufacturers from the industrial North like Richard Cobden - began to argue for the removal of restrictive trade barriers and the mutual advantage of international trade between agricultural nations and manufacturing England.

Baring, Ricardo, and Cobden in particular were merchants and politicians who believed that a steady supply of food to industrial cities would stabilize the labor and money market at the

same time it would give Britain a market for manufactured goods. This idea was based upon the idea that nature comprised a global system that would support free international trade by producing abundance in one area and scarcity in another.

Chapter 3, “The Nature of Exchange,” describes how merchants who advocated for a free international trade in wheat simultaneously laid the groundwork for that trade by managing the considerable risks of Atlantic trade through the formation of merchant networks and through indirect portfolio investments in American transportation and finance. Between 1820 and 1850, British merchants set the stage for a development of American wheat surplus by investing in banking institutions, transportation infrastructure, and forging lasting relationships with merchants in Boston, New York, Philadelphia, and Baltimore. These networks of capital were based around notions of trust and respectability, and they represented diversified portfolio investments rather than direct investments in the grain trade. By the 1830s, these investments and networks centered on the relationship between London merchant Baring Brothers & Co and New York merchant firm Prime, Ward, King & Co. Through Prime, Ward, King, Alexander Baring and his partners sent money to invest in the American economy.

To gauge the efficacy of their investments British merchants physically moved across the American landscape. As they interacted with the American landscape and merchant community, British merchants like Baring Brothers employee William Rathbone, became more confident that they could augment their portfolio investments with the shipment of wheat when supplies were abundant and prices low in the United States and harvests deficient and prices high in Great Britain. In this way, British capital slowly, subtly, and imperceptibly began to set the conditions that would guide the flow of American wheat away from feeding slave populations in the Caribbean towards feeding the booming population of industrial Britain.

Chapter 4, “This Mighty Instrument of Concord” describes the transatlantic Corn Law and anti-slavery debates between the late 1830s and 1846 from the perspective of a transatlantic group of merchants who believed they had the most to gain from repeal. British Anti-Corn free traders like Richard Cobden and Jonathan Sturge and American free soilers like Joshua Leavitt and Daniel Webster believed a free trade in wheat was the humanitarian goal to which both nations should aspire because a robust wheat trade would allow the natural harmony of free trade to grow England’s economy, feed a volatile working-class, and destroy slavery by providing an international market for free labor wheat rather than cotton. The drive for repeal grew from a widespread belief among the merchant classes that it was in England’s interest and comparative advantage to focus on exporting manufactured goods from the United States and importing wheat in exchange. This belief built on classical economy and fears of volatility that grew out of the experience of food riots during the French war years and gained new salience when a triple threat of harvest failures, economic downturn, and working-class strife seemed to threaten the very stability of England’s manufacturing political economy. Each movement built on a transatlantic network of merchants and political activists network and used this network to move ideas back and forth between the United States and Great Britain. The efforts of this network culminated in repeal of Corn Laws in England and a community of western merchants and politicians that see the free production and export of wheat as a way to achieve natural and national harmony.

The network of business associations, capital, and economic ideas weaved by British and American merchants set in place the fertile market conditions that helped grow the Anglo-American grain trade in the second-half of the nineteenth century. Following repeal, the networks formed by Baring Brothers and by the British Anti-Corn Law League began to respond

collectively to local and transatlantic market and environmental conditions. Between 1846 and 1890, the basic relationship between the American and British wheat markets fell into place.

By the 1870s, three regional trades marked the American grain economy: the Great Lakes-Empire Corridor, California, and the Spring Wheat Region of Minnesota and Dakota. The introduction of the telegraph and Atlantic Cable contributed to the quick pace of information, giving merchants greater knowledge about international prices and harvest conditions.⁴⁵ Steam transport on land and ocean dramatically reduced transportation costs.⁴⁶ By the late 1870s, the Anglo-American grain trade stood ready to respond as British crops failed en masse. Between 1875 and 1890, the quantity of American wheat exports rose to unprecedented levels as the involvement of British nationals in that trade became more direct, with British individuals and firms buying large shares in milling and transportation throughout the Great Lakes-Empire Corridor, California and the Spring Wheat Region.

Chapter 5, “Organizing a Trade” describes how separate wheat markets around Great Lakes-Empire converged into a single market between 1846 and 1865 as wheat merchants responded to British food crises and shipping/storage bottlenecks that hindered the flow of grain at crucial points in response to rising demand in English cities. Brought together under the banner of internal improvements and the free soil/free trade movements of the 1840s, western grain merchants in different markets began a more concerted effort to build better transportation and storage facilities at key places, design around the variable hydrology of rivers and harbors, and correspond with each other on matters of price, sales, and market standards.

⁴⁵ John Langdale, “The Impact of the Telegraph on the Buffalo Agriculture Commodity Market, 1846-1848,” *The Professional Geographer* 31, no. 2 (May 1979): 165–69; John Gordon, *A Thread Across the Ocean: The Heroic Story of the Transatlantic Cable* (New York: Walker & Co., 2002).

⁴⁶ D. North, “Ocean Freights and Economic Development 1750-1913,” *The Journal of Economic History* 18, no. 4 (December 1958): 537–55; Harley, “Transportation, the World Wheat Trade, and the Kuznets Cycle, 1850-1913”; Harley, “Ocean Freight Rates and Productivity, 1740-1913.”

The efforts to move wheat through transportation corridors in the Great Lakes-Empire Corridor reached the most concerted levels during three food crises in England: the Corn Crisis of 1845-1847, the Crimean War Crisis of 1854-1856, and the Lancashire Cotton Famine of 1862. In these periods, merchants like David Dows traded across the Great Lakes Empire Corridor and banded together to develop new marketing strategies to make wheat and flour readily available in New York City for export to deficit regions in the Americas and Europe. During the Corn Crisis, merchants like Buffalo’s Joseph Dart adopted the use of “to arrive” (futures) contracts to move wheat quickly to the British market while prices remained high and to speculate on high prices in Europe. When the Crimean War cut England off from its primary source of imported wheat, American merchants jumped at the chance to profit from high prices in Britain by grading their wheat and make its quality legible in a foreign market wary of its quality. Finally, during the Lancashire Cotton Famine in England, merchants across the Great Lakes-Empire Corridor banded together with David Dows to provide free shipments of wheat to starving cotton operatives in industrial Britain at the same time they profitably exported unprecedented amounts of wheat and flour to England between 1860 and 1865.

Chapter 6, “Bonanza,” moves focus from New York City, Buffalo, and Chicago to San Francisco. The explosion of wheat agriculture in California during the 1860s and 1870s came as local merchants built off the gold rush economy- investing in land, planting wheat, and searching for potential markets. At the same time, British merchants in Liverpool began actively reaching out to the San Francisco merchant community, establishing agent houses and providing loans to California banks. American push and British pull came together in the late 1860s and 1870s to produce the so-called “California Bonanza,” an unprecedented growth in the size and yields of wheat farms in the San Joaquin Valley. Merchants such as Isaac Friedlander, who owned large

swaths of land and enjoyed tight connections with Liverpool merchants, connected California wheat to the British market by maintaining a diversified portfolio of investments up and down the production, transportation, and supply chain. Friedlander came to realize that California wheat was prized in England because the San Joaquin’s soils produced wheat and flour that was tasty and easy to mill. Most importantly for English merchants, California’s weather meant that harvests rarely failed.

Following Californians Friedlander and Hugh Glenn, as well as Liverpool merchant Stephen Williamson, this chapter traces the international origins behind the California bonanza and contextualizes the rise of industrial wheat agriculture within the growing Anglo-American grain trade. It highlights the extent to which the forces of market convergence throughout the global wheat economy during the 1860s and 1870s were built from local environmental processes (like California’s aridity) that guided wheat production to larger processes like North Atlantic weather patterns that guided shipment from far flung ports and drew markets like San Francisco and Liverpool into increasingly-tight trading relations.

Chapter 7, “Convergence” describes how merchants created and responded to overcapacity in agriculture, processing, and transportation in the Spring Wheat Region of Minnesota and the Dakota territory by tightening their connection to the British market throughout the 1870s and 1880s. In the 1860s and 1870, Minneapolis millers like Cadwallader Washburn and Charles Pillsbury expanded their processing capacity by building new mills and stabilizing the Mississippi River as their power source well before they had steady supplies or markets. At the same time, land dealer James B. Power had to figure out how to make a moribund railroad, the Northern Pacific, profitable. Hampered by swarms of grasshoppers, Powers could not settle the land. So he hatched a scheme to give the land to stockholders. Soon,

absentee landlords hired managers like Oliver Dalrymple to oversee mechanized bonanza farms similar to those in California

Merchants like William Dunwoody connected Minneapolis millers to bonanza farms like Dalrymple’s at the same time they grew selling markets by establishing business contacts with distributors in Liverpool. The same English harvest failures that promoted a growing connection between Liverpool and San Francisco prompted English businessmen like Richard Hadwin and Sidney Klein to consider the United States a good place for direct investment in food and agriculture. No less than six major Dakota bonanza farms were directly owned by British investors and, during the 1880s, British syndicates purchased one of the three largest elevator companies in the United States. Most importantly, a syndicate of London businessmen led by flour merchant Sydney Klein bought significant proportions of Minneapolis’ two largest flour milling companies – Pillsbury & Co and Washburn & Co. – giving a British corporation control of over 60% of the milling capacity of the world’s largest milling center.

Culminating in the British purchase of Pillsbury and Washburn in 1889, a near-century of investment by Anglo-American wheat and general merchants produced a high degree of convergence in the American and British wheat markets. This convergence, in the final analysis, encouraged large-scale commercial agriculture on the American frontier and encouraged a reliance on food imports in industrial Great Britain.

Between 1795 and 1889, British and American wheat merchants envisioned, legislated, invested in, and eventually profited from, a growing trade in wheat between the United States and Great Britain. Like Frank Norris noted, it was a complex process that connected human systems to the natural world. This Epic of Wheat, this Anglo-American grain trade, is the subject of this work. By exploring the development of this trade, from its earliest visions to its

ultimate realization, this work will trace vital but understudied connections between the American and British economies in the nineteenth century. It will explain how merchants attempted structure their society by ordering flows of food, it will highlight how individuals connected production, transportation, and consumption, and by tracing the origins of England’s nineteenth century food system, it will illuminate the origins of the modern industrial diet.

Chapter 2 – Envisioning an International Grain Trade: English Merchants, Domestic Shortage, and the Rise of Comparative Advantage

In early October 1795, King George III sat in his carriage as it rolled towards Parliament from St. James Palace. Earlier that day, a crowd “supposed to be at least 200,000” gathered along the “Parks and Avenues through which his Majesty was accustomed to pass.” At around 2pm, the carriage passed through St. James’ Gate, at which point “the multitude assailed him.” The throng massed around the carriage chanting “Down with George, No King, No Pitt, No War, Bread, Bread, Peace, Peace!” Several individuals theatrically carried “loaves of bread upon sticks, decorated with black crape” - a funeral for the cheap loaf. As the carriage continued with the frightened king, the crowd followed, periodically launching stones through the windows of known royalist sympathizers as they passed by. Some threw dirt and mud at the royal carriage. Suddenly, there was a loud crack. A ball, likely from an air-gun, crashed through the carriage window. A now-terrified king arrived at the House of Peers exclaiming to the Lord Chancellor “My Lord, I, I, I’ve been shot at!” As a testament to their vehemence, the crowd sat waiting outside for the Parliamentary session to conclude, “their noise increasing as their number multiplied.”¹ In response to this attack, the British government tasked London grain merchant Claude Scott to procure bread abroad at inflated prices.² This mock funeral for the cheap loaf and Scott’s attempt to find wheat in foreign countries was but one manifestation of momentous changes in England’s food landscape between 1790 and 1815.

¹ “Truth and Treason! Or A Narrative of the Royal Procession to the House of Peers, October the 29th, 1795”, 1795, 1–5.

² Roger A. E. Wells, *Wretched Faces: Famine in Wartime England, 1793-1803* (Gloucester, UK: Sutton, 1988), 180–195.

In early industrial England, food supply occupied the national imagination and was a centerpiece for class tension.³ This chapter delves into one aspect of this preoccupation, the “bread question” between 1790 and the 1850s, and views it from the perspective of a small group of merchants who did more than any other group to form Britain’s food economy. These merchants came to the conclusion that the domestic wheat supply was insufficient to deal with the growing demand for food in booming industrial centers. They believed it was folly for the nation to rely on the production of a small wheat-producing region when agricultural nations in the Continent and in North America yearned to export their surplus to England. They linked the high cost of bread to national economic underperformance, envisioned great potential for an international grain trade, and concluded that growing such a trade was the answer to Britain’s food supply problems. Merchants like Claude Scott, Alexander Baring, David Ricardo, and Richard Cobden responded to the British food crises of the French War years by imagining an international trade in wheat with Great Britain at its center. By running for office and publishing widely on their free trade aspirations, they mobilized widespread support in England in opposition to the protectionist Corn Laws and in support of an international economic order based upon comparative advantage.⁴ Before merchants could mobilize business associations,

³ Studies of Industrial revolution that only focus only of fossil fuels miss the essential point that the individuals who lived during industrialization assumed a mutual dependency of manufactures, food, and commerce. See David Landes, *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present* (London: Cambridge U.P., 1969); E.A. Wrigley, *Continuity, Chance and Change: The Character of the Industrial Revolution in England* (Cambridge: Cambridge University Press, 1988); Robert Allen, “Agriculture During the Industrial Revolution, 1700-1850,” in *Industrialisation, 1700-1860*, ed. Roderick Floud and Paul Johnson, *The Cambridge Economic History of Modern Britain* (Cambridge: Cambridge University Press, 2004), 96–116; Robert C. Allen, *The British Industrial Revolution in Global Perspective*, 1st ed. (Cambridge University Press, 2009); E.A. Wrigley, *Energy and the English Industrial Revolution* (Cambridge: Cambridge University Press, 2010).

⁴ Alvin Rabushka, *From Adam Smith to the Wealth of America* (New Brunswick U.S.A.: Transaction Books, 1985); A. M. C. Waterman, *Revolution, Economics and Religion: Christian Political Economy, 1798-1833* (Cambridge: Cambridge University Press, 1991).

capital, technology, and nature to construct an international trade in wheat, one had to be imagined.⁵

What is truly remarkable about pro-free trade merchants during this period was the large-scale of their thinking. In contrast to the caricature of the morally-tone deaf capitalist concerned only with his bottom line, Smith, Baring, Ricardo, and Cobden thought on three distinct but intimately related ethical scales.⁶ First, they were certainly concerned with the state of their own business and its profitability. Second, they were concerned with the fate of their nation. Finally, they saw their business and nation as sitting in an international network of people, goods, and money. Most importantly, these merchants were genuinely concerned for the welfare of society. Connecting all these scales was a belief that God had ordered nature with relative abundance and scarcity, and that moral and successful human economies allowed goods to move unfettered between regions of differing natural advantages.⁷

Pro-free trade merchants believed the grain trade connected their businesses, the welfare of the nation, and the international economic order. They believed that grain should flow from

⁵ The economic debate that weighs the comparative “push” of supply or demand in the world wheat trade post 1850 focus on raw numbers and can often miss the social and cultural forces at work for generations in setting the ideas and assumptions that were necessary preconditions of explosion in the grain trade in the second half of the nineteenth century. See C. Knick Harley, “Western Settlement and the Price of Wheat, 1872-1913,” *The Journal of Economic History* 38, no. 4 (December 1, 1978): 865–78; P.R. Sharp, “Pushing Wheat: Why Supply Mattered for the American Grain Invasion of Britain in the Nineteenth Century,” March 15, 2008, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1135250; P.R. Sharp, “The Long American Grain Invasion of Britain: Market Integration and the Wheat Trade Between North America and Britain from the Eighteenth Century,” March 15, 2008, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1135250; Paul Sharp and Jacob Weisdorf, “Globalization Revisited: Market Integration and the Wheat Trade Between North America and Britain from the Eighteenth Century,” *Explorations in Economic History* 50, no. 1 (January 2013): 88–98.

⁶ Environmental history scholarship has been particularly damning in their condemnation of this group. See W. Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York: Hill and Wang, 1983); Donald Pisani, *From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West, 1850-1931* (Berkeley: University of California Press, 1984); William Cronon, *Nature’s Metropolis: Chicago and the Great West*, 1st ed (New York: W. W. Norton, 1991); Thomas G Andrews, *Killing for Coal: America’s Deadliest Labor War* (Cambridge, MA: Harvard University Press, 2008). Though there are exceptions. See Mark Stoll, *Protestantism, Capitalism, and Nature in America* (Albuquerque, NM: University of New Mexico Press, 1997).

⁷ Steven Stoll, *The Fruits of Natural Advantage Making the Industrial Countryside in California* (Berkeley: University of California Press, 1998).

agricultural nations to feed industrial labor in Great Britain, and the products of that labor should be returned as finished goods in payment of food.⁸ Most importantly, they believed Great Britain had removed itself from this natural order by erecting the protectionist Corn Laws, cutting England off from the abundant produce of agricultural nations and subjecting its populace to the high price of bread during years of short domestic harvests. Free trade, they argued, mapped onto the laws of nature by (1) allowing the merchant class to move goods from places of abundance to regions of scarcity without the hindrance of onerous trade duties, (2) freeing up capital and labor spent on bringing marginal lands into agricultural production and allowing businessmen to invest in manufacturing and commerce, and (3) favoring the creation of an international economic order based on the exchange of natural advantages. Through these three measures, pro-free trade merchants argued, the poor would be fed, national commerce would grow, and a peaceful and profitable international system would emerge based on the laws of nature.

Pro-free trade merchants wore three hats: they were simultaneously businessmen, politicians, and social engineers that thought in sophisticated ways about the economic, social, and political makeup of England’s manufacturing economy. This chapter reclaims the actions and worldview of these merchants as they attempted to deal with the extreme food shortages between 1790 and 1840. Beginning with the career of London grain merchant Claude Scott, it will delve into the emerging domestic economy in wheat characterized by national merchant networks and protective trade barriers. Then, it will describe how contemporaries came to see the domestic wheat trade as a limiting factor for the nation’s economy through Alexander

⁸ D. Worster, *Nature’s Economy: A History of Ecological Ideas*, vol. 2nd (Cambridge: Cambridge University Press, 1994); Thomas Dunlap, *Nature and the English Diaspora: Environment and History in the United States, Canada, Australia, and New Zealand* (Cambridge; New York: Cambridge University Press, 1999); Mark Fiege, *The Republic of Nature: An Environmental History of the United States* (Seattle: University of Washington Press, 2012), 57–99; 156–198.

Baring’s evaluation of the relationship between food supply, riots, and the movement of capital within and beyond Great Britain. It then focuses on the great national debate over the Corn Laws in 1814 and 1815, when merchant, politician, and economic theorist David Ricardo argued that an international trade would remove the problem of supply and favor the creation of an international economic order centered on the manufacturing might of Great Britain. Finally, it will end with the ideas of merchant/politician Richard Cobden who, in the 1830s, most clearly articulated the mutually-dependent goals of cheap bread, docile labor, and economic growth based on the importation of cheap breadstuffs and the export of manufactures.

Supply Problems, Domestic Produce, and Withering International Trade – or - The World Claude Scott Helped Create and Wished to Change

The development of the British food economy between ca 1750 and 1850 made workers in cities and industrial sites vulnerable to food shortages. As individuals moved from rural areas where they could supplement their food with forage, they became dependent on a national network of merchants to move wheat – the primary food of England’s poor and working class – from areas of production to places of consumption. Food production and consumption in this era became commercialized.⁹ Central to this process were London grain merchants like Claude Scott who maintained a national network of agents – or “factors” – who moved wheat from farms in the southeast, through London, and towards industrial cities of the North. The networks of Scott and others were also international, and as prices rose in England due to harvest shortage, normally-domestic merchants purchased wheat in Baltic ports. Due to the protectionist British Corn Laws and Navigation Acts, however, this international trade remained small. During

⁹ N.S.B. Gras, *The Evolution of the English Corn Market from the Twelfth to the Eighteenth Century* (Cambridge, MA: Harvard University Press, 1926); E. P. Thompson, “The Moral Economy of the English Crowd in the Eighteenth Century,” *Past & Present*, no. 50 (February 1, 1971): 76–136; Christian Petersen, *Bread and the British Economy, c1770-1870* (Hants, UK: Scolar Press, 1995); John Bohstedt, *The Politics of Provisions: Food Riots, Moral Economy, and Market Transition in England, C. 1550-1850* (Farnham, Surrey, UK: Ashgate, 2010).

periods of dearth, merchants such as Scott who dominated the national market struggled to find supplies on the international market. Prior to the 1850s, then, the international trade in wheat was largely ineffective in insulating industrial sites from food shortages. These difficulties help explain why food-related debate and unrest in England spiked during the early industrial era and why merchants such as Scott became committed free trade politicians.

Claude Scott rose from humble beginnings to become one of London’s richest merchants, a baronet, and a Member of Parliament committed to free-trade. One of the few remaining accounts of Scott’s life recalled he was “said to have begun his life in a very small way.”¹⁰ Another remembered he began his merchant career tending the books for a Whitechapel alehouse in 1773.¹¹ After that date his trading business grew rapidly. By the early 1790s, he operated on his own account. In June, 1796, amid widespread crop failures in southeastern England, Scott received £1,341,327 12 shillings and 7 pence from the government to import grain. He remained a government contractor until 1800.¹² By 1803, Scott was “supposed to be worth £300,000 and lived splendidly in a large house near Bromley, London.”¹³ After this time, Scott became increasingly involved in politics, aligning himself with the free-trader William Pitt. He became a Member of Parliament in 1802, listed as a supporter of Pitt during both ministries. He was a conservative when it came to reform measures, often voting against measures for parliamentary reform. Nonetheless, Scott was active in developing the economic interior of England. It was reported in 1818 that he was “immensely rich and does a good deal of good by employing the

¹⁰ F. G. Hilton (Frederick George Hilton) Price, *A Handbook of London Bankers* (London: The Leadenhall Press, 1890), 148.

¹¹ Joseph Farington, *The Farington Diary*, vol. II (London: Hutchinson & Co., 1923), 145.

¹² “History of Parliament Online.” <http://www.historyofparliamentonline.org/volume/1790-1820/member/scott-claude-1742-1830>. Accessed July 14, 2014; “Papers Relating to the Sale of Corn and Flour by Mr. Claude Scott,” House of Commons Debate, April 26, 1805, vol. 4 cc444-6. Hansard Online, 1803-2005. http://hansard.millbanksystems.com/commons/1805/apr/26/papers-relating-to-the-sale-of-corn-and#S1V0004P0_18050426_HOC_37. Accessed March 27, 2011.

¹³ Joseph Farington, *The Farington Diary*, II:145.

people to improve the roads etc.”¹⁴ By the time of his death in 1830, Scott was a baronet and a principal in the London bank of Scott, Dent & Co.¹⁵

When Scott first took his apprenticeship in Whitechapel in 1773, England was undergoing profound changes in its food landscape. During the eighteenth century, England became simultaneously a great producer and consumer of wheat. By the 1850s, England developed a national system of wheat distribution that replaced a network of regional diets and food economies based upon a number of cereals. Where once barley dominated consumption in the southwest, oats the north, and rye fed the poor during harvest failures everywhere, by 1800 wheat was the dominant cereal in London and in many places throughout England.¹⁶ One pamphleteer suggested that by 1764, sixty-two percent of the population of England and Wales subsisted on wheat compared with fourteen percent for rye, twelve percent on rye and 10 percent on oats.¹⁷ Scotsman George Skene Keith, writing in 1802, noticed across the British Isles “nearly twice as many persons now eat wheaten bread as formerly consumed this species of corn.”¹⁸ There is considerable debate among economic historians as to when wheat fully replaced other cereals in the provinces. While many contemporaries assumed that England had become total wheat consumer by 1800, historians Christian Peterson and E.J.T. Collins dispute this. Peterson and Collins both argue that early nineteenth century England was still a patchwork

¹⁴ “History of Parliament Online.” <http://www.historyofparliamentonline.org/volume/1790-1820/member/scott-claude-1742-1830>. Accessed July 21, 2014.

¹⁵ “History of Parliament Online.” <http://www.historyofparliamentonline.org/volume/1790-1820/member/scott-claude-1742-1830>. Accessed July 14, 2014

¹⁶ Gras, *The Evolution of the English Corn Market from the Twelfth to the Eighteenth Century*; Sir William Ashley, *The Bread of Our Forefathers: An Inquiry in Economic History* (Oxford: The Clarendon Press, 1928); Joan Thirsk, *Food in Early Modern England: Phases, Fads, Fashions 1500-1760* (London: Hambledon Continuum, 2006), 217–220.

¹⁷ Charles Smith, *Three Tracts on the Corn-Trade and Corn-Laws* (London: J. Brotherton, 1766), 108.

¹⁸ C. R Fay, *The Corn Laws and Social England* (Cambridge: The University Press, 1932), 4.

of local cereal diets.¹⁹ Wheat or other cereals constituted the centerpiece of all meals. Workers and their families supplemented their bread, porridge, or cakes with whatever protein or sugars they could scrounge. The most common addition was fat drippings, butter, or treacle – a syrupy molasses often poured over bread.²⁰ Vegetables were almost non-existent. Women and children were often the worst-fed in the household. Pamphleteer Edward Smith noted that women most often went hungry: “on Sundays she generally obtains a moderately good dinner, but on other days her food mainly consists mainly of bread with a little butter or dripping, a plain pudding and vegetables for dinner or supper, and weak tea.”²¹ Children were fed at breakfast and supper “chiefly upon bread,” augmented with butter or bacon fat.²² Not surprisingly, husbands and fathers were “entitled, from [their] bodily wants, to have a larger share than others.” Both in cities and in agricultural families, it was generally assumed that males could eat more, “his labour being of the deepest importance to the family.”²³

Despite the actual timing, over the first half of the nineteenth century regional trades and diets became subsumed under a larger network of wheat that fed the nation from the surplus of commercial and enclosed fields in the southeast.²⁴ The production of the southeastern portion of England became paramount in dictating the quantity and price of wheat on the British domestic market, and whether or not England would have to lean on foreign imports if domestic harvests were slight. In a great arch surrounding London, stretching from the reclaimed and enclosed fields surrounding the Wash, across the Thames Valley, and into Kent and Sussex, landowners in

¹⁹ E. J. T. Collins, “Dietary Change and Cereal Consumption in Britain in the Nineteenth Century,” *The Agricultural History Review* 23, no. 2 (January 1, 1975): 97–115; Petersen, *Bread and the British Economy*.

²⁰ Edward Smith, *Practical Dietary for Families, Schools, and the Labouring Classes* (London: Walton and Maberly, 1865), 196–200; Sidney Wilfred Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Viking, 1985), 32–61, 117–133.

²¹ Edward Smith, *Practical Dietary for Families, Schools, and the Labouring Classes*, 199.

²² *Ibid.*, 198.

²³ *Ibid.*, 200–201.

²⁴ *Ibid.*, 28.

the eighteenth century transformed their fields through the Norfolk system and scientific agriculture to produce greater yields than at any time in English history.²⁵ This transition would have been impossible without the so-called “English Agricultural Revolution.” It would have also been unthinkable had it not simultaneously with a growing network of merchants that moved the wheat of this region into London and distributed it throughout that city and throughout the provinces.

By the 1850s, the industrial cities of England were dependent on the southeast for the vast majority of their food supplies. The cost of bread in England during the early industrial era was dictated largely by the domestic supply, and the international supply was dependent upon (1) the state of domestic harvests and (2) import duties imposed under the Corn Laws.²⁶ As the term “corn” was a generic term for wheat akin to “grain” the Corn Laws were the set of laws regulating the relationships between domestic production and intentional supplies of wheat until their eventual repeal in 1846. Between the 1790s and repeal, the Corn Laws worked to favor domestic production by setting a high duty on imported wheat unless the price of wheat grew to a level that indicated a supply crisis.²⁷ A complex set of laws that included many provisions, the Corn Laws made the barrier of entry to the international trade too high for all but the most well-connected merchants.

The most well-connected merchant of all was Claude Scott. He was in a position like no other to evaluate the relation among domestic production, international supply and the Corn

²⁵ J.D. Chambers and G.E. Mingay, *The Agricultural Revolution, 1750-1880* (London: B.T. Batsford, Ltd., 1966); E.L. Jones and G.E. Mingay, *Land, Labour and Population in the Industrial Revolution: Essays Presented to J.D. Chambers* (New York: Barnes and Noble, Inc., 1967), 4–63; G.E. Mingay, *Land and Society in England, 1750-1980* (London: Longman Group Limited, 1994).

²⁶ William Freeman Galpin, *The Grain Supply of England During the Napoleonic Period*, University of Michigan Publications, v. 6 (New York: Macmillan & Co., 1925), 10–23; Donald Grove Barnes, *A History of the English Corn Laws from 1660-1846* (New York: Crofts, 1961).

²⁷ Barnes, *A History of the English Corn Laws from 1660-1846*, 13–69.

Laws relative to England’s wheat economy between 1790 and 1850. Scott’s trade was profitable because prices were often higher in provincial markets than London, where the collection of supplies from all over England tended to depress prices.²⁸ Scott and his associates fostered the simultaneous commercialization and regionalization of food production and distribution in England in the eighteenth and nineteenth century.

Scott dominated the national market in two ways. First, he sent out his agents to the farms of southeastern England during or just after harvest. Second, he used this network of agents to guide purchased wheat towards provincial markets. These agents were predominantly independent contractors who worked for larger dealers on a commission for each sale.²⁹ Agents met farmers on their way to market with a portion of the crop and were given leeway by merchants such as Scott who controlled the money and/or credit of the organization to negotiate with the farmer. Having purchased the stocks, the factor would provide the farmer with cash or, more likely, provide them with a promissory note allowing the farmer to buy food, clothes, and implements from a local merchant who had a credit account with Scott or an associate.³⁰ Establishing a network of such agents allowed Scott and others to corner the produce of certain areas, and over time, they established lasting relationships with farmers, who would sell their wheat to Scott without prompting by the agent.³¹

Lasting relationships with farmers allowed Scott to devote his agents to the distribution of supply. From their traditional centers at Cornhill, London Bridge, Queenshithe and Mark Lane, London grain merchants sold wheat to provincial millers and bakers who sent their own agents to London on market days to purchase wheat via sample. Additionally, Scott would also

²⁸ Wells, *Wretched Faces*, 24.

²⁹ Fay, *The Corn Laws and Social England*, 58.

³⁰ Gras, *The Evolution of the English Corn Market from the Twelfth to the Eighteenth Century*, 89–120.

³¹ *Ibid.*, 95–100.

send factors to the regional wheat markets which were often held on successive days to facilitate travel.³² Based on sale via sample, agents would negotiate the final terms of sale and arrange for transport via road, turnpike, or canal from warehouses of London grain merchants to the warehouses of millers and bakers. Once at the final destination, the wheat would sit until ready to be processed into flour and bread. During the late eighteenth and early nineteenth century the same individual often performed the same functions as miller and baker, especially in smaller towns. Individuals in larger cities bought flour from the town market or direct from a local miller and baked it in their own home, until the high cost of fuel gave rise to a domestic baking industry and eventual specialization into milling and baking by different individuals.³³ It was in the late eighteenth century when millers began to specialize in the purchase, processing and distribution of wheat in local markets.³⁴ This period produced the first large industrial flour mills. None other than James Watt opened London’s Albion Mill in 1791 to demonstrate how his steam engine could be used in industrial operations.³⁵

Scott wanted to become more involved in the international trade, which would multiply his potential sources of supply and contribute to a further lowering of prices in London and his chance for profit when he sold in provincial markets. Scott traded opportunistically on the international market when domestic supplies were low. During years of adequate supply, Scott’s network was entirely domestic. In years of poor harvests, when the high cost of wheat rendered the Corn Laws inoperative, Scott looked towards the international market to meet the disconnect between supply and demand. First on his own account and then as government contractor, Scott

³² George Broomhall and John Hubback, *Corn Trade Memories Recent and Remote*. (Liverpool: Northern Publishing Co., 1930), 7–13.

³³ John Burnett, *Plenty and Want: A Social History of Diet in England from 1815 to the Present Day*, Rev. ed. (London: Scolar Press, 1979), 17.

³⁴ Fay, *The Corn Laws and Social England*, 45.

³⁵ Andrew Carnegie, *James Watt* (New York: Doubleday Page & Co., 1905), 161.

began to look towards the international market in wheat during the shortage years of the 1790s and 1800s. He bought wheat on the Continent when supplies were abundant and prices low, imported it, and stored it in his London warehouses until domestic prices rose to a point that could bear the cost of transportation and storage. When English supplies were particularly low, Scott would search further afield. In 1795, a year of severe harvest shortage in England and Europe, Scott attempted to buy wheat in the Baltic and North America.³⁶

Two processes outside of Scott’s hands made procuring non-British wheat particularly difficult for Scott when domestic supplies failed. The first was the Corn Laws. 1773 saw the passage of the first Corn Law that were designed explicitly to cut England off from international trade and thereby favor domestic production, farmers, and elite landlords.³⁷ Some merchants like Scott took advantage of the Corn Laws in times of dearth to engage in subsidized imports. Scott also deftly maneuvered under several warehousing exemptions by purchasing wheat on the Continent when supplies were high, storing the wheat, and selling it domestically when supplies there were low. Such delicacy, however, was often beyond the reach of less-connected merchants who operated with less capital and smaller storage spaces.

The second hindrance to Scott’s involvement in the international trade came from nature. Simply, the potential international supply for Scott in the late eighteenth and early nineteenth centuries – the wheat fields of Prussia and Poland – were subject to the same large-scale weather patterns that made crops fail in England. The period in which Scott rose to prominence was characterized, in the words of one contemporary, by a great “variety of the seasons.”³⁸ Especially between 1795 and 1800, there was “a more than usually frequent recurrence of

³⁶ Wells, *Wretched Faces*, 180–195.

³⁷ Fay, *The Corn Laws and Social England*, 29–30; Barnes, *A History of the English Corn Laws from 1660-1846*.

³⁸ Thomas Tooke, *A History of Prices and of the State of Circulation* (London: Longman, Orme, Brown, Green, and Longman, 1838), 5.

unfavorable seasons.”³⁹ While Scott and others used the term “the variety of the seasons,” environmental historians and climatologists now know this variety as the North Atlantic Oscillation, a conveyor-belt of ocean currents, wind, and precipitation patterns that does much to dictate the weather in Europe. Generally speaking, the NAO was responsible for the warmer, drier weather of Southern Europe and the milder, wetter weather of Northern Europe. However in the late 1790s, a low NAO index - meaning lower atmospheric pressure and weakened energy to push westerly winds and ocean currents towards Europe - brought cold wet weather to Northern Europe and England. During this period, wheat crops in England and across Northern Europe failed.⁴⁰ As Scott found out in 1795 and 1800, when domestic supplies failed, Continental supplies were often unavailable as well. Harvests across the world in 1794 were poor and there were few other reliable supplies to be had. By the time Scott’s agents made their way abroad, what little grain was available for export had already been purchased by their counterparts from France, Spain, and Portugal who enjoyed more established relationships with American merchants. In addition, English agents found that, in times of dearth, shippers charged exorbitant rates to ports they had never served, and where their owners had no business connections. Ships would likely have to return with nothing but ballast, a prospect that raised the price of shipping further.⁴¹ Due to these conditions in 1795 and 1796, Scott, the great domestic wheat merchant, failed in purchasing supplies from North America to stem the growing tide of hunger in English cities.

Due to protectionist trade policy and the NAO, the barrier for the international trade in grain during the early industrial era was very high. The community of international traders was small, a characteristic of the grain trade that would remain into the twentieth century. In

³⁹ Ibid., 8.

⁴⁰ Brian Fagan, *The Little Ice Age: How Climate Made History, 1300-1850* (New York NY: Basic Books, 2000), 23–28.

⁴¹ Wells, *Wretched Faces*, 184–186.

October, 1800, Claude Scott was reported to have handled twenty-five percent of all the imports into London.⁴² Only fourteen merchants held decision-making shares of the Mark Lane Exchange, and they controlled which dealers were approved for stalls.⁴³

Despite these conditions, Scott sensed a great opportunity for profit in supplying the growing demand for wheat in industrial cities. In fostering regional specialization and growing supply chains, Scott and other British wheat merchants actually created an acute problem of hunger in many early industrial cities.⁴⁴ Wheat comprised near 80 percent all calories consumed in cities during the late eighteenth and early nineteenth centuries, and often used forty to seventy-five percent of a family’s total income throughout the eighteenth and much of the nineteenth century.⁴⁵

While migrants and agricultural laborers could supplement their meals with forage, their counterparts in the city lived in a built environment that could produce little or no food making them a great potential market for Scott and other London grain merchants. George Dodd, author of the impressive 1856 study *The Food of London* noted the central vulnerability of booming cities to food shortage even at that late date: “any considerable failure in the supply, even for a single day, might produce the most frightful distress, since the spot on which they are cantoned produces absolutely nothing.”⁴⁶ This meant that urban laborers were almost totally dependent on the food that could be brought in from outside of the city. An array of factors could disrupt this flow at any time at any place in the chain. Not only was an urban worker dependent upon a

⁴² Ibid., 26.

⁴³ Fay, *The Corn Laws and Social England*, 57.

⁴⁴ Thirsk, *Rural Economy*, 218–220. Collins, “Dietary Change and Cereal Consumption in Britain in the Nineteenth Century.”

⁴⁵ Burnett, *Plenty and Want*, 70; Carole Shammas, “Food Expenditures and Economic Well-Being in Early Modern England,” *The Journal of Economic History* 43, no. 1 (March 1, 1983): 91; John Komlos, “The Food Budget of English Workers: A Comment on Shammas,” *The Journal of Economic History* 48, no. 1 (March 1, 1988): 149; Carole Shammas, “The Food Budget of English Workers: A Reply to Komlos,” *The Journal of Economic History* 48, no. 3 (1988): 673–76.

⁴⁶ George Dodd, *The Food of London* (London: Longman, Brown, Green and Longmans, 1856), 3.

source of income to provide for their caloric needs, but they were dependent on the condition of wheat in the field, flour at the market, and bread in the bakery.⁴⁷

Scott made his living surveying the state of demand in industrial cities, the state of supply in England’s southeast and conditions in international markets. From his London warehouse, it was Scott’s job to coordinate his network of agents and move them in between sources of supply and places of demand. He thought on a scale that was uncommon at this time in the grain trade. He knew demand was high and growing in industrial cities. He knew that domestic shortages and endemic hunger created a price structure in his favor. Demand and prices were high in Manchester, supply was ample and prices low in London. The main difficulty for Scott, however, was that he culled most of his supply from only one region. When harvests failed in England’s southeast, not only did people starve in industrial cities, but Scott found difficulty relieving that hunger by finding other supplies of wheat.

Scott’s knowledge of the domestic trade and his experience under the Corn Laws, therefore, led him to become a committed free trader. Scott noticed that the Corn Laws worked to redirect the flow of wheat away from Great Britain during all harvest conditions. They forced Scott to maintain two separate portfolios – a domestic and a re-export trade – that were governed by completely different rules and regulations. They also decreased the likelihood that he could find supplies ready and waiting in times of extreme need like in 1795. As a consequence of his failed experience as a government contractor in 1796, Scott became more active in politics, aligning himself with the free-trader William Pitt. As an MP for Malmesbury from 1802 to 1806 and Dungannon from 1806 to 1812, Scott would come to oppose in Parliament any restrictions to

⁴⁷ Thirsk, *The Rural Economy of England*, 67.

the international trade, including the American Intercourse Act of 1806.⁴⁸ Scott rarely spoke on the floor of Parliament as a politician. He was more often called as an expert in the domestic and international grain trade, even after his political career in Parliament ended. Near the end of his life, Scott was called to testify over the proposed Corn Law of 1828, and he argued that protectionist laws unnecessarily restricted England’s supply. He noted that the grain producing regions of Poland and Prussia sat ready for a market and wheat “such as would be bought by any miller in this country—sweet, sound, and good” had “accumulated there for want of a market.”⁴⁹

Claude Smith was more responsible than any other individual of his era in creating a national grain market that made industrial cities dependent upon the harvests of a small region surrounding London. Merchants like him fostered the commercialization of food distribution in early industrial England and thus simultaneously encouraged enclosure and migration to cities. This migration left migrants poor and dependent upon the very networks of merchants that connected them to the fields of wheat they had been cast off of. Scott realized that the national system of distribution left demand and prices high in these industrial cities. He wished for a greater source of supply so that his business of distribution could continue even if domestic harvests failed. Smith’s career as a free-trade politician, then, grew directly out of his appraisal of his business portfolio, England’s food landscape, and the potential of the international market to allow him to regularly move wheat from regions of abundance to regions of scarcity.

⁴⁸ “History of Parliament Online.” <http://www.historyofparliamentonline.org/volume/1790-1820/member/scott-claude-1742-1830>. Accessed July 14, 2014.

⁴⁹ “Corn Laws,” House of Commons Debate, April 25, 1828. *Hansard 1803-2005*. <http://hansard.millbanksystems.com/search/Claude+Scott?year=1828>. Accessed July 23, 2014.

Food Riots and National Economic Performance

Economic historians have noted that the late eighteenth century was marked by improving efficiency in agricultural production but also by a decrease in purchasing power by wage earners. Much of this has to do with a general cooling trend after 1760, with its deepest impacts between 1790 and 1810, which reduced yields and raised prices. High prices encouraged the application of technology and the extension of agricultural production into marginal lands. On balance, high prices and growing production meant more profits for farmers. However, consumers did not share in the benefit and 1800 represented the ultimate nadir of consumer purchasing power for wheat. Long term weather trends, acute harvest failures, governmental tax policies, declining agricultural and industrial wages, and disruptions to international trade placed severe burdens on English consumers during this period.⁵⁰

Between 1792 and 1815, Parliament enclosed nearly three million acres of land. Of this acreage, about one million were previously uncultivated arable land, pasture, scrub, and waste. In England’s southeast, much of the reclaimed land was drained fenland around the Wash. This land, moist under fair conditions, was the first to fail during periods of prolonged wet and cold weather that characterized much of the war years. During these periods, expensive foreign imports made up as much as 15% of the total English wheat supply.⁵¹

As English social and economic historian C.R. Fay notes there was “an exceptionally large” number of unfavorable seasons and harvest failures in England between 1765 and 1800.⁵² During this, “Second Little Ice Age” as economic historian Leona Libby terms it, the purchasing power of the average English consumer dropped dramatically as food prices rose and real wage

⁵⁰ Galpin, *The Grain Supply of England During the Napoleonic Period*.

⁵¹ Patrick Karl O’Brien, “The Impact of the Revolutionary and Napoleonic Wars, 1793-1815, on the Long-Run Growth of the British Economy,” *Review (Fernand Braudel Center)* 12, no. 3 (Summer 1989): 358.

⁵² Fay, *The Corn Laws and Social England*, 28.

fell.⁵³ Persistently low NAO indexes between 1790 and 1820 coincided with wartime disruptions and a turn towards protectionism that left cities vulnerable to incredibly high prices of bread.

In 1795, 1800, and 1812, the price of bread in England climbed higher than it ever had in history. People starved. Those living in cities and working on farms struggled. In 1795, as the London crowd accosted King George, parish records in the county of Devonshire demonstrate a spike in burials. Five years later, in 1800, high prices coincided with a sharp decrease in marriages and births.⁵⁴ Hunger echoed throughout the social and political realms. Food riots wracked the nation – there were 72 cases in 1800 alone.⁵⁵ High food prices dominated until the 1820s. A loaf of bread cost more in 1812 than at any time before or since in British history. Demonstrations and forced wheat seizures often turned into violent tumults. The infamous Peterloo Massacre began, in part, as a demonstration against the Corn Laws.⁵⁶ Simply, between 1790 and 1850, the British nation was wracked by extreme shortages of food supply. This food volatility was enough to convince eminent British social historian E.P. Thompson that “it was not wages, but the cost of bread, [that] was the most sensitive indicator of popular discontent” during this period.⁵⁷

Riots shook England and its grain trade to the core. Wheat merchants were often singled out during these riots. During times of extreme dearth, the poor and most vulnerable to supply shortages resented their dependence on merchant networks for sustenance and decried the profit

⁵³ Leona Marshall Libby, *Correlation of Historic Climate with Historic Prices and Wages* (Santa Monica, CA: R & D Associates, 1975); Leona Marshall Libby, “Correlation of Historic Climate Data with Historic Prices and Wages,” *Indian Journal of Meteorology, Hydrology and Geophysics* 2, no. 2 (1977): 147–150.

⁵⁴ Wells, *Wretched Faces*, 33.

⁵⁵ Bohstedt, *The Politics of Provisions*, 33.

⁵⁶ Francis Archibald Bruton et al., *Three Accounts of Peterloo by Eye-Witnesses: Bishop Stanley, Lord Hylton, John Benjamin Smith*, Historical Series, XXXIX (Manchester: Manchester University Press, 1921), 50.

⁵⁷ E.P. Thompson, *The Making of the English Working Class* (New York: Pantheon Books, 1964), 63.

Scott and others made in moving wheat from regions of abundance to locations of deficit.⁵⁸

Claude Scott himself reported to the Board of Trade amid dearth and rampant riots in 1800 “If I did not feel personal Danger in having anything more to do with the Corn Trade” he would feel freer to engage in the trade.⁵⁹

In 1795 and 1800, wheat supplies were so low that the government gave considerable bounties to importers, solidifying the fortune of merchants like Scott. Distillers were placed on a severe rationing program, oats and barley were offered at poor relief stations in lieu of wheat. Powdered wigs, made white through the use of fine flour, disappeared as a fashion at this time due to heavy taxation. Politicians, priests, and vicars everywhere urged economy of consumption.⁶⁰ Still the English populace desired wheat bread, and lots of it. Arthur Young, the great agriculturalist of his era, lamented “throughout a great part of the kingdom the general assistance given to the poor is by Money, Bread, or Flour, all three being almost equally an encouragement to the consumption of wheat.” London bakers decried the lower class preference for wheat bread that made the poor so vulnerable to hunger in a petition to Parliament amid widespread shortages in 1800: “attempts have been made in times of scarcity to introduce a coarser species of bread into use [barley or oats], but without success.” In the minds of the poor, the bakers complained, “the high price of bread would be considered... a small evil, when compared with any measures which would have the effect of compelling them to consume bread to which they have not been accustomed.”⁶¹

During periods of low supply, contemporaries like Scott and London banker Alexander Baring noticed a steady increase in riots and a decrease in national economic productivity. For

⁵⁸ Thompson, *Making of the English Working Class*; Thompson, “The Moral Economy of the English Crowd in the Eighteenth Century.”

⁵⁹ Wells, 180

⁶⁰ Fay, *The Corn Laws and Social England*, 37.

⁶¹ Both quoted in *ibid.*, 5–6.

Baring, this overlap was enough to convince him that the socio-economic fate of the nation was tied to food, and that the Corn Laws exacerbated volatility by deepening shortage, raising price, encouraging riot, and fostering an inefficient export of capital to pay for imports at an artificially high price.

Like Scott, Baring was in a position unlike most to judge the performance of England’s economy and the state of its politics. As scion to the great merchant dynasty of the Baring family, Alexander grew up connected to money markets in London, Amsterdam, and Philadelphia. Born in 1773 to Francis Baring, Alexander grew up within his father’s political network that included notable Whigs and free traders John Dunning, Lord Shelburne, William Pitt and Edmund Burke.⁶² Through his father, Baring also became intimately connected with the Amsterdam merchant house Hope & Company, as well as to such American financial luminaries as Thomas Willing, Robert Morris, and William Bingham.⁶³ In 1796, Baring married Bingham’s daughter and, after appointed partner in his father’s firm in 1803, became the primary intermediary between the money markets of London and Philadelphia. Upon his father’s retirement later that year, Baring assumed the directorship of the reorganized Baring Brothers & Company. The company became the largest single foreign agency in the American economy, brokering the Louisiana Purchase as government agent for the United States and holding upwards of two-fifths of the stock in the Bank of the United States.⁶⁴ Between 1805 and 1817 he was also a Director of the Bank of England.⁶⁵

⁶² Philip Ziegler, *The Sixth Great Power: A History of One of the Greatest of All Banking Families, the House of Barings, 1762-1929* (New York: Knopf, 1988), 23–40; Peter E. Austin, *Baring Brothers and the Birth of Modern Finance* (London: Pickering & Chatto, 2007), 10–19.

⁶³ David Tearle, *Barings Bank, William Bingham and the Rise of the American Nation: A Transatlantic Relationship from the Revolutionary War through the Louisiana Purchase* (Jefferson, N.C.: McFarland & Co., 2010).

⁶⁴ Austin, *Baring Brothers and the Birth of Modern Finance*, 17.

⁶⁵ History of Parliament Online. <http://www.historyofparliamentonline.org/volume/1820-1832/member/baring-alexander-1773-1848>. Accessed September 22, 2014.

Like Scott, Baring also used his merchant empire and free trade sympathies as an entry into politics. Baring sat in Parliament as a Whig from 1806 to 1835, was Master of Mint for Robert Peel’s government upon retirement from Parliament, and served as the principal negotiator for the United Kingdom for the Webster-Ashburton Treaty which settled a series of disputes over the U.S.-Canada border in 1842. In 1835, Baring was created Baron Ashburton, a title previously held by his father’s associate John Dunning. This peerage and his opposition to the Reform Act of 1832 bolstered his conservative views and by the 1830s, he was no longer a Whig nor a free trader. Despite this transition, Baring was widely acknowledged as an “oracle” on economic issues in Parliament.⁶⁶

The Corn Law debate of 1814 and 1815 proved a watershed moment not only in the career of Baring, but for the fate of England’s food economy. The great debate during these years was how to respond to the generation of food shortages that had wracked England since the early 1790s. Landowners and aristocrats in Parliament, wary of the growing political and economic clout of merchants, sought to grow England’s supply by restricting imports and encouraging farmers to bring more land into production and grow food more efficiently on land already in production. Merchants like Scott and Baring, who favored free trade, argued that such a policy not only contributed to high prices and working-class volatility, it also simultaneously stifled economic growth. The Corn Law debates of 1814 and 1815, placed wheat at the center over debates on the fate of British society and economy.

These debates came on the heels of a rise in climatic variability. In 1812, an extremely wet year and prolonged frost at harvest time produced a poor domestic harvest on the heels of an 1811 harvest largely destroyed by mildew brought on during successive rains in summer. Wheat

⁶⁶ History of Parliament Online. <http://www.historyofparliamentonline.org/volume/1820-1832/member/baring-alexander-1773-1848>. Accessed September 22, 2014.

prices climbed precipitously. Then, in 1813, a dry summer produced a bumper crop. For example, at Portsmouth, the great supply point for the British navy, the price of wheat dropped 50 percent in one month.⁶⁷ While such a harvest eased the suffering of the poor, it brought great distress to the farmers and landowners who could not meet their obligations with the sale of their wheat in depressed markets. As such, a greater call for protection and price guarding rang out from the landed classes.⁶⁸ Others sought to counter Napoleon’s Continental System with trade restrictions of their own.

Parliamentary debates in 1814 and 1815 were thus dominated by the intertwined issues of war, wheat, and weather. In early March, 1815, Baring rose to speak in Parliament over the issue of the Corn Laws. He spoke in measured but knowledgeable terms about the state of England’s economy and its food supply. He concluded that the food supply problem was a drain on England’s economy and the primary cause of the working-class volatility that then gripped the country.

At literally the same time Baring spoke, across town a crowd burst forth on the London streets to voice their displeasure over the proposed Corn Laws. On March 5th, a crowd whose size “exceeded all calculation” flocked to the Mansion House to sign a petition against a proposed revision to the Corn Laws that would restrict imports further. At first, only those deemed “of respectable appearance” were admitted. But soon, a throng of “the lower orders” pressed against the gates. While this gathering produced a petition against the Corn Laws that counted 40,000 signatures, it was clear to all those in attendance that the “lower orders” who had been excluded were not placated in the slightest.⁶⁹ The next day, isolated incidents of violence

⁶⁷ J. M. Stratton, Jack Houghton Brown, and Ralph Whitlock, *Agricultural Records, A.D. 220-1977*. (London: J. Baker, 1978), 96–97.

⁶⁸ Fay, *The Corn Laws and Social England*, 40–41.

⁶⁹ *The Times* (London), March 6, 1815.

were reported all across the City. At the conclusion of one well-attended session of Parliament on March 7, several MPs were greeted by a crowd who “proceeded to commit some violence against the carriages and persons of several who were supposed to be friendly to the bill.” Another crowd in Bedford Square demolished the windows of the Lord Chancellor’s house.⁷⁰

The riots quickly grew in size and number. Gathering at the “usual hour of the Meeting of Parliament” crowds all over the City met and marched towards the Halls. By 1pm on March 9, 1815, crowds had flooded into the passageways and galleries within the Houses of Parliament. Constables were called to close off all street approaches to Parliament. Thus deflected, the crowd dispersed throughout London to attack more carriages and houses of those believed to support the Bill. Later that day, the situation had grown volatile enough within London that the Royal Horse Guards were given orders to stand by with “twenty four rounds of ball cartridges.”⁷¹ By this time, activists in cities around the nation had joined with the London mob in spirit by sending countless petitions against the Corn Laws to MPs.⁷² Tumult continued around London for some days, leaving the houses of Lord Castlereagh damaged and many individuals from Bow to Westminster accosted on the street by violent crowds chanting anti-Corn Law rhetoric.⁷³

Baring’s appraisal of the Corn Laws and food riots started as a reaction to working-class volatility he saw as directly related to food. While “these riots he deplored,” Baring urged careful consideration of the proposed heightened duty to allow MP’s to evaluate the angry petitions from all corners of the nation then streaming across their desks.⁷⁴ For weeks, members like Baring rose in the House of Commons to present these petitions and make them part of the

⁷⁰ *The Times* (London), March 7, 1815.

⁷¹ *The Times* (London), March 8, 1815.

⁷² *The Times* (London), March 9, 1815.

⁷³ *The Times* (London), March 10, 1815.

⁷⁴ “Petitions Respecting the Corn Laws,” House of Common Debates, March 8 1815. Hansard 1803-2005, http://hansard.millbanksystems.com/commons/1815/mar/08/petitions-respecting-the-corn-laws#S1V0030P0_18150308_HOC_6. Accessed March 13, 2013.

official record. Baring himself read petitions from Carlisle, “signed by 5 and 6,000 inhabitants” of that city “which comprized, with very little exception, the whole of the grown population of the district he had mentioned.” Baring also read petitions from “Mary-le-bonne parish, from Plymouth Dock, and from his constituents at Taunton.”⁷⁵ The tone of these petitions was overwhelmingly hostile to the Corn Laws. The people of Carlisle wrote that “the Corn Laws...have occasioned evil rather than good.” Claiming a stake in a political process that they were shut away from, the Carlisle petitioners argued “that any hope of success in restricting the importation of corn, must arise from the people not being fairly represented—from the want of parliamentary reform” They then asked Baring and other MP’s “by doing away the corn laws, to shew that they were really ready to support the interests of the people.” Baring closed his remarks by noting “he agreed with them in the view they had taken of the subject; for no argument—no fact that ever before had been submitted to that House—proved so clearly the insufficiency of the present representation of the country, as the number of petitions which had been on this occasion submitted to parliament.”⁷⁶

Baring believed that the course of industrialization and commercialization in Britain and across the Atlantic World were dictated by the flows of food and capital that supported them. In 1807, Baring first articulated his free trade vision in a pamphlet opposing the Orders in Council restricting trade with the United States. Understanding that the British economy benefitted from the interest, insurance, and shipping fees that West Indies planter paid “to furnish himself with

⁷⁵ Ibid.; Petitions Respecting the Corn Laws,” House of Common Debates, March 10 1815. Hansard 1803-2005, http://hansard.millbanksystems.com/commons/1815/mar/10/petitions-respecting-the-corn-laws#S1V0030P0_18150310_HOC_10. Accessed March 13, 2013.

⁷⁶ “Petitions Respecting the Corn Laws,” House of Common Debates, March 8 1815. Hansard 1803-2005, http://hansard.millbanksystems.com/commons/1815/mar/08/petitions-respecting-the-corn-laws#S1V0030P0_18150308_HOC_6. Accessed March 13, 2013.

European manufactures, and [to provide] American provisions” for his slaves.⁷⁷ The food flowing through the Caribbean served to make English merchants a lot of money as they applied their capital and credit in the absence of any hard currency circulating in the American economy of the late 1700s and early 1800s. And though the “proportion for capital to the demand for it has...been gradually improving in America,” Barings saw London merchants operating in a crucial place for the American economy. This is why the Orders in Council were so vexing for Baring. Given that most North American and West Indian shipments of provisions or sugar – even those bound for France and the Continent – were insured or financially backed by merchants in London, the blockade meant that Britain could not profit from the extensive Atlantic trade it had dominated since the mid-1700s. American merchants paid for this debt through their profits in selling their wheat, sugar, and tobacco on the Continent.⁷⁸

Here is where the Orders in Council meet the grain trade. Throughout the 1800s and 1810s, American merchants sold grain surpluses directly in England only when domestic harvests in Britain were exceptionally poor. Even then, British trade policy meant those imports were miniscule. Barings noted that, aside from cotton, “the other principle articles which we receive from the United States are, tobacco, wheat and flour...all, with the exception of tobacco, necessary for our food.”⁷⁹ So, while Britain was making money off a roundabout food system, they were also importing food directly when domestic supplies were limited. But what would happen when “the American merchant can no longer carry the produce, even of his own soil, to any part of Europe”? Would the current trade relations that helped Britain out of famine or high grain prices continue after “so extensive an injury to a country, whose right of independent

⁷⁷ Alexander Baring Ashburton, *An Inquiry into the Causes and Consequences of the Orders in Council: And an Examination of the Conduct of Great-Britain Towards the Neutral Commerce of America*, Miscellaneous Pamphlets, v. 224, No. 4 (New York: John Bleeker, 1808), 57.

⁷⁸ *Ibid.*, 145–147.

⁷⁹ *Ibid.*, 145.

sovereignty was violated”?⁸⁰ For Baring, “it is impossible to conceive, upon the whole, a commercial intercourse more interesting and important in every point of view, or less deserving of being sacrificed to any other; at the same time it has the advantage not only of not injuring any other branch, when properly understood, but of contributing materially to the prosperity of all.” Food was, for Baring, the cornerstone of the economy.

The Orders, Baring held, were particularly dangerous in 1807-1808 as England distanced itself diplomatically from Russia and another potential supply of wheat. “During our misunderstanding with Russia,” Baring argued, “the supply from America might be extensively increased.”⁸¹ In this way, Barings saw the Orders as directly opposed to “our interest to promote the consumption of the produce of the soil of America in all parts of the world,” and as an “artificial state” harmful to “a natural state, [a] balance of trade.” Echoing the very premise of an emerging liberal orthodoxy, Barings maintained that “trade, when left alone, will always accommodate itself to the varying balances of difference countries with each other.”⁸²

Baring was hardly alone in his critique of the Orders in Council. He reflected a widely-held belief in England that the fate of its economy was tied to its food. As Baring reported in 1820, “this opinion, he was happy to observe, was now gaining ground.”⁸³ No less than Lord Grenville decried the passage of the 1815 Corn Law with the now-famous passage

Monopoly is the parent of scarcity, of dearness, and of uncertainty. To cut off any of the sources of supply can only tend to lessen its abundance; to close against ourselves the cheapest market for any commodity, must enhance the price at which he purchase it, and to confine the consumer of corn to the produce of his home country, is to refuse to ourselves the benefit of that provision which Providence itself has made for the equalising to man the variations of season and climate.⁸⁴

⁸⁰ *Ibid.*, 106.

⁸¹ *Ibid.*, 146.

⁸² *Ibid.*, 157–158.

⁸³ “Agricultural Distress,” House of Common Debates, May 30 1820. Hansard 1803-2005. <http://hansard.millbanksystems.com/search/Baring?day=1820-05-30>. Accessed March 14, 2013.

⁸⁴ Quoted in Fay, *The Corn Laws and Social England*, 43.

Barings summarized the growing view that the Corn Laws operated against England’s economic and social justice with this succinct appraisal of agricultural and manufacturing distress in 1820:

but what, he would again ask, must become of those multitudes, those beehives of population, that were to be found in our manufacturing towns, if any considerable addition were to be made to that price? Already we stood at double the price of the rest of the world, but with this some hon. gentlemen were not satisfied; would they then wish it to be trebled? It was impossible that any man, calmly reflecting on the principles which formed the basis of our commercial and manufacturing interests, should conceive that they could exist under circumstances so unfavourable....agriculturist had, in fact, as deep an interest in the prosperity of manufactures as the persons more immediately engaged in them—as deep an interest as he had in the cultivation of the land itself. It was the interest of the agriculturists to look to and foster the manufacturers, as it was impossible that the one could improve or decline without producing a corresponding rise or depression on the other...All this seemed to prove that the price of corn could not be forced up by parliamentary enactments, but that it depended on a great number of relative circumstances...The general principle, as he understood it, of the last Corn bill was, to give the farmer a monopoly of the home-market to a certain extent, and up to the indication of incipient scarcity....⁸⁵

For Baring, the condition of British wheat harvests was central to the operation of its economy. One harvest would mean the temporary exportation of capital to procure necessary food. But two or three failed harvests brought about “a second visitation of famine.” In this case, Baring wrote, “we should do our best duty by fostering and promoting our domestic industry, which can alone enable us to meet it.”⁸⁶ Baring was in a sense arguing that England was fool-heartedly relying on the production of a small wheat-producing region when the nation was better suited to apply its money to manufacturing and use the proceeds of their industry to purchase wheat on the international market from nations, like the United States, endowed by nature to produce wheat more cheaply.

Baring’s reaction to the proposed Corn Law of 1815 illustrates a growing sense in England at that time that the economy – both domestic and international – was dictated by the flow of food. The 1815 Corn Law did indeed pass and, as the most protective in all British history, illustrates the continuing political power of the landed elite to control both the political

⁸⁵ Ibid.

⁸⁶ Alexander Baring Ashburton, *The Financial and Commercial Crisis Considered*, 2d ed (London: J. Murray, 1847), 29.

process and the food landscape of early industrial Britain. The debate over the law, however, created a national conversation centered on food and the international economy that culminated in the 1846 repeal of the Corn Laws and a commitment towards free trade in nearly all commodities by the United Kingdom. The Corn Law debate of 1815 forced individuals to clearly articulate their understanding of the domestic food economy and the great potential of the international trade. Indeed, this discussion crystallized free trade ideology and forced the great sages of English economic theory – the Reverend Thomas Malthus and the merchant David Ricardo – into a public discussion over food, manufacturing, nature, and the laws of man.

Food, Land, and the International Trade: The Reverend versus the Merchant

While Parliamentary debates raged in 1814 and 1815 over the shape of Britain’s wheat economy, another occurred in public between two authorities on economic matters. David Ricardo and Thomas Malthus exchanged broadsides throughout 1814 and 1815 over the proposed Corn Laws. Both were committed to the idea of free trade and opening Britain’s domestic market to international exchange, but the experiences of wartime shortages profoundly influenced their disagreement over wheat imports. Malthus, a rural vicar-turned Professor of History and Political Economics at the East India Company College, argued that while free trade in wheat was desirable, the realities of geopolitical competition threatened any nation dependent on the produce of another for its food. Ricardo, a London stockbroker who was concurrently making his fortune speculating in British government bonds prior to the Battle of Waterloo, argued that opening England to free trade would place her in a dominant position in international trade. Following a tradition of benevolent laissez faire ideas that stretched back to Adam Smith, Ricardo held that a Britain open to international trade in wheat would encourage the production

of grain on the Continent and in the United States, eventually leaving those nations dependent on Britain as a source of their surplus wheat. These ideas would springboard Ricardo into national prominence, lead him to become a Member of Parliament in 1817, and contribute to the formation of his political economic theory published two years later as his opus *The Principles of Economy and Taxation*.

Thomas Malthus, of course, became famous isolating the very problems of food supply noticed by Claude Scott and Alexander Baring. In his 1798, *An Essay on the Principle of Population* – written in between the greatest food crises of Britain’s modern era, Malthus noted that the population of England was growing faster than its food supply: “The constant effort towards population... increases the number of people before the means of subsistence are increased...The food therefore which before supported seven millions must now be divided among seven millions and a half or eight millions.” “This...effort,” he wrote, “as constantly tends to subject the lower classes of the society to distress and to prevent any great permanent amelioration of their condition.”⁸⁷ Malthus’ ideas resonated in a time of severe food crises and continues to exert a powerful influence on population and food studies to this day. His ideas were instrumental in Poor Law reform during the 1790s and early 1800s and the development of the Speenhamland System, which tied poor relief to the price of bread until 1834.⁸⁸

For Malthus (and Ricardo) the condition of the land itself played a paramount role in determining the shape of Britain’s wheat economy. They believed the quality of grain producing lands should, in an ideal world, dictate exchange. Malthus wrote in his 1814 free trade opus, *Observations on the Effects of the Corn Laws*, “if the intercourse between the different parts of Europe were perfectly easy and free, it would be by no means natural that one country should be

⁸⁷ T.R. Malthus, *An Essay on the Principle of Population* (Cambridge: Cambridge University Press, 1992), 18–19.

⁸⁸ Fred Block and Margaret Somers, “In the Shadow of Speenhamland,” *Politics & Society* 3 (2003): 4–10.

employing a great capital in the cultivation of poor lands, while at no great distance, lands comparatively rich were lying around ill cultivated.”⁸⁹ Marginal lands kept alive in manufacturing nations like Great Britain were better left unused because the rents of the land – the cost to bring that land up to the production of better lands – represented misallocated capital. Malthus and other free traders knew that the sunk costs of transforming marginal land into productive districts were better allocated in pursuits suited for England’s natural advantages in industry. The costs of draining Fenland, cutting dense forests, and fertilizing poor soils were for free traders such as Malthus and Ricardo a drain on the comparative national wealth. In a harmonious world guided by the laws of nature, nations would effect, according to Malthus, “the transfer of a part of the general supply of Europe, from places where the demand was comparatively deficient, to where it was comparatively excessive.”⁹⁰

Ricardo would come to integrate the condition of land into his theory of comparative advantage, an idea he was developing amid the Corn Law debates of 1815. Ricardo agreed with Adam Smith that the productivity of each nation will mirror the “the soil, climate, and situation” of each.⁹¹ Ricardo then built on Smith’s arguments concerning supply and demand to formulate the economic principle of comparative advantage. Writing during post-Napoleonic War stagnation and arguing for a reduction in tariffs to lower the high price of grain, Ricardo argued that protectionism destroyed Smith’s concept of natural price by ensuring that the cost of wheat was not constant. Ricardo writes that “Dr. Smith’s error throughout his whole work, lies in supposing that the value of corn is constant; that though the value of all others may, the value of

⁸⁹ Thomas Robert Malthus, *Observations on the Effects of the Corn Laws, and of a Rise Or Fall in the Price of Corn on the Agriculture and General Wealth of the Country* (London: J. Johnson and Company, 1814), 14–16.

⁹⁰ *Ibid.*, 17.

⁹¹ Adam Smith, *The Wealth of Nations: An Inquiry into the Nature and Causes of the Wealth of Nations* (London: Harriman House Limited, 2007), 61.

corn can never be raised.”⁹² Protectionism raised the value of wheat by restricting prices to a small pool instead of allowing it to be regulated in the global market by the produce of other nations. For Ricardo, relying on domestic produce for production did not accord with the laws of nature that bestowed certain tracts of land with the ability to economically produce wheat.

Nature remained paramount throughout the 1814/1815 debates over the structure of England’s wheat economy. On the surface, Ricardo argued that comparative advantage rested not on natural gifts – fertile countries may choose to engage in industry – but on economic development. If one country engages manufacturing, the natural economic order dictates that other nations concentrate on agriculture, thereby ensuring a continual flow of agricultural commodities and manufactured goods from areas of differing economic advantage. However, Ricardo further noticed that a nation’s economic development was directly related to the ways in which it ordered both humans and nature. “In different stages of society,” he wrote, “the proportions of the whole produce of the earth which will be allotted to each of these classes, under the names of rent, profit, and wages, will be essentially different: depending mainly on the actual fertility of the soil, on the accumulation of capital and population, and on the skill, ingenuity, and instruments employed in agriculture.”⁹³ For Ricardo, a nation’s economic development was determined by the ways in which it integrated nature (the fertility of the soil) with human economy (the accumulation of capital and population). Comparative advantage, therefore, assumed a fundamental difference between two nations based on how they utilize the natural world.

Malthus and Ricardo came to differ on how they saw the human world – the structures of geopolitics, war, and international economies – influence the natural laws of supply and demand.

⁹² David Ricardo, *On the Principles of Political Economy, and Taxation* (London: John Murray, 1821), 449.

⁹³ *Ibid.*, 1

Malthus came to believe that England was ultimately better served by self-sufficiency. Not only would protectionism protect the domestic wheat economy from the arbitrary imposition of export restrictions from other nations, but limiting the food supply to the national borders meant “a great increase of capital laid out upon the land, and a great consequent extension of cultivation and improvement.”⁹⁴ While limiting consumption to home produce would undoubtedly leave Britain more susceptible to general harvest failure in certain seasons, the general trend would be of increasing production. Protection would encourage agricultural innovation in Britain “in proportion to its natural advantages of soil and situation” which would “afford the means of subsistence to a very great increase of population.”⁹⁵ In Malthus’ interpretation, the proposed Corn Laws would help money and grain flow within the borders of Great Britain no matter the tumult of the international market.

Ricardo believed that relying on the international market would actually place England in a stronger position economically and politically than if the nation relied on domestic produce alone. This opinion grew out of Ricardo’s evolving sense of comparative advantage and rent theory. By limiting consumption to home produce and encouraging the tillage of marginal land “rent would rise on the land previously cultivated, and precisely in the same degree profits would fall.”⁹⁶ Free trade, however, would encourage nations endowed with a comparative or absolute advantage in wheat production to expand their acreage under the assumption that England would absorb their surplus. “If we became a regularly importing country,” Ricardo wrote, “and foreigners could confidently rely on the demand of our market, much more land would be

⁹⁴ Malthus, *Observations on the Effects of the Corn Laws, and of a Rise Or Fall in the Price of Corn on the Agriculture and General Wealth of the Country*, 10.

⁹⁵ Thomas Robert Malthus, *The Grounds of an Opinion on the Policy of Restricting the Importation of Foreign Corn: Intended as an Appendix to “Observations on the Corn Laws”* (J. Murray, 1815), 22.

⁹⁶ David Ricardo, *An Essay on the Influence of a Low Price of Corn on the Profits of Stock, with Remarks on Mr. Malthus’ Two Last Publications* (London: John Murray, 1815), 9.

cultivated in the corn countries with a view towards exportation.”⁹⁷ In Ricardo’s final analysis, a manufacturing country with a large population like Britain would come to dominate the international market and encourage wheat production around the world, insulating themselves from individual restrictions through a market with many sources of wheat. Supply worked in tandem with demand in such a system, providing England with supplies even in the face of international disruptions to trade because the defining characteristic of such a system would be lasting British demand. Supply would always find a way to meet that demand. Ricardo himself pointed to the trade policies of Napoleonic France who, despite its professed commitment to the anti-British Continental System, actually permitted the export of French wheat to Great Britain in between 1806 and 1810 when supplies in the latter failed.⁹⁸

The conversation between Malthus and Ricardo would not only set the stage for the continuing debate on the Corn Laws until 1846, they proved a formative moment in the evolution of free trade theory. In distilling the arguments for and against free trade, Malthus and Ricardo made accessible to the public the insider decisions merchants like Claude Scott had to weigh in moving wheat. They placed England’s food economy within an emerging tradition in western economics, and influenced later generations of economic thinkers that responded to a new wave of domestic crop failures in the 1830s and 1840s by renewing their attacks on the Corn Laws and linking, more clearly than ever before, England’s food landscape to the global laws of nature.

Food, England’s Manufacturing Economy, and the Global Laws of Nature: Richard Cobden as Social Engineer

Richard Cobden did more than any single individual to link food, the Corn Laws, and the plight of England’s economy and working class to the fundamental laws of nature. Building on a

⁹⁷ Ibid., 29.

⁹⁸ David S. Jacks, “Foreign Wars, Domestic Markets: England, 1793–1815,” *European Review of Economic History* 15, no. 2 (August 1, 2011): 277–31.

tradition within classical liberal economic theory, Cobden believed the laws of nature dictated the laws of food and capital. Cobden argued that when the laws of human economy and nature were in discord (as with protectionism) society was in discord as well. While the 1820s had largely seen a rebound of British domestic harvests, the 1830s began another descent into food supply problems.⁹⁹ During this period, Cobden and other free trade politicians took up the arguments of Scott, Baring, Malthus, and Ricardo to argue that England was more dependent on food imports than ever. In the twenty years between the Corn Law debate of 1815 and the publication of Cobden’s first free trade pamphlet in 1835 – *England, Ireland, and America* - the population of cities only grew, manufacturing output exploded, and travelers throughout England’s North began to note the horrors of the “factory system.”¹⁰⁰ One thing hadn’t changed though, workers still needed to eat.

Cobden began and ended his appraisal of England’s maturing industrial economy from one essential truth: “The interest of the public debt cannot be paid except by the co-operation of our foreign commerce; and this cannot be preserved permanently, unless the price of that first element of the cost of our manufactures, *food*, be the same here as with our competitors abroad.”¹⁰¹ Cobden considered food not only important, but “the first element” in the cost of manufactures. This was because cost, in Cobden’s mind, was directly related to price, which was fixed by supply, demand and the cost of labor.

Cobden believed that it was England’s destiny to keep growing in population, that the foreign trade was the only way to support the increase in population, and that foreign commerce

⁹⁹ Charlotte Boyce, “Representing the ‘Hungry Forties’ in Images and Verse: The Politics of Hunger in Early-Victorian Illustrated Periodicals,” *Victorian Literature and Culture* 40 (2012): 421–49.

¹⁰⁰ W. C Taylor, *Factories and the Factory System: From Parliamentary Documents and Personal Examination*. (London: J. How, 1844); W Taylor, *Notes of a Tour in the Manufacturing Districts of Lancashire.*, 3d ed., (New York: A.M. Kelley, 1968).

¹⁰¹ Richard Cobden, *Political Writings: England, Ireland and America, 1835; Russia, 1836. 1793 & 1853* (London: William Ridgeway, 1867), 141.

had to start with an exchange of English manufactures for food. “Every possible facility,” he wrote, “must be given to the increase of population, by the expansion of our foreign trade.” This increase in foreign trade, he maintained, could “only be accomplished by repealing the protective duties on corn.”¹⁰²

Echoing the sentiments of Ricardo, Cobden saw English manufactures as sitting within an international economic order in which the products of industrial labor were exchanged for raw commodities: “provided our manufactures be cheaper than those of our rivals, we shall command the custom of these colonies [Canada] by the same motives of self-interest which bring the Peruvians, the Brazilians, or the Natives of North America, to clothe themselves with the products of our industry; and, on the other hand, they will gladly sell us their commodities through the same all-powerful impulse, provided we offer for them a more tempting price than they will command in other markets.”¹⁰³

If “in lieu of the restrictions put upon the import of corn in 1816, a law had been passed, imposing only such a moderate duty as would ultimately produce the greatest revenue, and which, in our opinion, would be found to be two shillings a quarter. The factory system would, in all probability, not have taken place in America or Germany; - it most certainly could not have flourished, as it has done, both in those states, and in France, Belgium, and Switzerland, through the fostering bounties which the high-priced food of the British artisans has offered to the cheaper fed manufacturer of those countries.”¹⁰⁴ This would encourage the production of wheat in agricultural countries “but, as the increase of their inhabitants would not have been equal to the demand for labour, a great immigration must have taken place from the agricultural

¹⁰² *Ibid.*, 139.

¹⁰³ *Ibid.*, 30.

¹⁰⁴ *Ibid.*, 150.

districts. This would have saved those quarters that frightful ordeal of pauperism and crime with which they have disgraced our modern history.”¹⁰⁵

Hunger lurked everywhere in British society. Cobden believed it was folly for the nation to stop manufacturing and return to an agricultural past. Of the factory system, he wrote “it is in vain for us to think of discountenancing its application to the necessitates of this country; it only remains for us to mitigate, as far as possible the evils that are, perhaps, not inseparably connected with this novel social element.”¹⁰⁶

The Corn Laws were the unnatural mechanism which simultaneously produced hunger in British cities, increased the expense of manufactures by artificially raising the cost of labor, and hindered foreign trade by severely limiting markets for English industrial output. “The present corn laws are founded,” Cobden wrote in *England, Ireland, and America*, “on the principles of limiting, as far as possible, the growth of the population of Britain, within the means of the soil to supply it within subsistence.”¹⁰⁷ He continued, “no candid advocate of a protective duty will deny that it must have this tendency...to restrict the import of corn into a manufacturing nation, is to strike at the life of its foreign commerce.”¹⁰⁸ This was because England, as Ricardo argued, could sit at the center of an international trading order based upon the free and harmonious exchange of England’s manufactures for the food of agricultural nations. Cobden expounded on the theory of comparative advantage:

These commodities are purchased by our cottons, woolens, hardware, and the other articles produced by the manufactures of this country; the growth, to use the term, of the coal and iron of Great Britain – which are, we repeat, the primary sources of all her wealth and power, and the want of which alone prevents other nations of Europe from rivaling her manufacturing greatness. Of course it is known that our agricultural labour supplies a great portion of the food our weavers and other artisans eat, and, therefore, mixes with the result of their industry; but when it is recollected that the cost of food here is from fifty to one hundred and fifty per cent. dearer than other

¹⁰⁵ Ibid.

¹⁰⁶ Ibid., 140.

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

states, it will be admitted that it is not owing to the cheap price at which the farmers supplies the corn of the manufacturer, that the latter is enabled to undersell his foreign competitors.¹⁰⁹

Simply, nature had endowed England with comparatively unproductive agriculture and superabundant mineral wealth, “Her soil has not, in the last forty years, yielded sufficient to supply the necessities of her population...The sterile land and inhospitable climate of Britain are incapable of producing” the luxury goods that so many other countries balance their trade.¹¹⁰ Despite agriculture that struggled to meet the consumptive imperatives of new industrial cities, England was endowed by god with other advantages: “*Our mineral riches are the means by which we alone have been able to incur this debt, and by whose agency only can we at this moment discharge the interest of it.*”¹¹¹ [Emphasis in original]. “The sole way, then, of adding to our numbers,” Cobden concluded, “is to give the freest possible development to the only present superabundant contents of the soil – the mineral products of Great Britain.”¹¹²

Free trade in wheat would serve to lower the global price of food, simultaneously reducing the price of bread in the marketplace and improving England’s balance of trade while providing a greater subsistence base for the laboring and tax-paying public. This population growth, according to Cobden, would take place in the very counties dependent upon manufacturing imports from England, further stimulating labor and domestic economic growth. He notes that a “rapid growth of wealth and increase of numbers must take place throughout the coal and iron districts of England, Wales, and Scotland.” Regarding this population and productivity explosion, wrote Cobden, “there would be no limit to its increase but in the contents of our coal mines, to which geologists assign a duration varying from two to three thousand

¹⁰⁹ *Ibid.*, 143–144.

¹¹⁰ *Ibid.*, 142.

¹¹¹ *Ibid.*, 143.

¹¹² *Ibid.*, 149.

years!”¹¹³ And so the cheap flow of food into England would do more, argued Cobden, than anything else to engineer a liberal, manufacturing-based political economy.

By the 1830s, the food-based arguments of Baring, Ricardo, and Cobden had come to hold much sway in the commercial and manufacturing classes. Quoting the Parliamentary evidence of “an eminent manufacturer,” one pamphlet considered why wages tended to fall in times of scarcity: “one the of the reasons has been put, namely, that two men do as much work as three, in consequence to the high price of provisions; but more than that, all other classes are also impoverished, trade becomes bad, money scarce, and bankruptcies take place.”¹¹⁴ This same pamphleteer expounded: “abundance of food produces general prosperity. Every body having to spend less money in food has more money to spend on other things: the labouring classes clothe themselves when bread is cheap. The demand for everything increases.”¹¹⁵ Manufactures, it was said, expected that a repeal of the Corn Laws would do three things to stabilize England’s manufacturing economy:

“1. That it will not only save them from the utter ruin which threatens them from the refusal of foreign nations to take out manufactures any longer unless we take their produce.

“2. That it will not only save their present export trade, but will greatly extend it, by inducing foreign nations to trade with us, and affording them the means of doing so.

“3. That will greatly extend the home market for Manufactures, by promoting the general prosperity, and enabling the labouring classes to lay out more money in clothing.”¹¹⁶

Others more directly tied the state of British wheat harvests to the overall condition of the economy. “I have always observed,” another Anti-Corn Law pamphleteer wrote, “that when provisions are dear, especially if they continue so for a considerable time, the manufacturing districts fall into great distress, and that extensive loss and ruin is the consequence. It was so in 1829, 1830, and in 1831, and it has been the case in 1839 and the present year [1840]; whereas,

¹¹³ Cobden, *Political Writings of Richard Cobden*, 157.

¹¹⁴ *Is Cheap or Dear Bread Best for the Poor Man?* (London: James Ridgway, 1841), 12.

¹¹⁵ *Ibid.*, 6.

¹¹⁶ *Ibid.*, 8–9.

when provisions were cheap, as in 1834, 1835, and 1836, trade was good, and all classes were well paid; the merchant, the manufacturer, and the operative.”¹¹⁷

Not only did nature conspire against the working people, free traders placed equal blame squarely on the laws of man. “For the poor do not ask for the charity of their countrymen; all they wish is, to be permitted to buy with their own labor what other nations are willing to sell...Why should the law step in and say, ‘You should neither labour nor eat?’ God has provided food for them in other lands; and if no law prevented, they could easily buy it. Can it be right that the law should intercept the bounty of God, and sentence them to perpetual want?”¹¹⁸

Thus for Scott, Baring, Ricardo, Cobden and other free traders, the flow of capital within and from England was dictated by natural forces that produced abundant or deficient crops. Economic distress and riots often coincided with successive failures, and the Corn Laws placed further barriers on how the government and merchants could respond to diminished supplies.

Conclusion: Casting an Eye Towards America

Claude Scott, Alexander Baring, David Ricardo, and Richard Cobden were all influential merchant politicians that sought to grow England’s manufacturing economy by arguing that the international grain trade would reduce the threat of supply failures and power the production of finished goods. They were, of course, interested in their own bottom line. But, recognizing that the “invisible hand” of the market connected individual action to the common good, these merchants and others saw their personal economic performance as tied to the fate of the national economy and international order. As businessmen, politicians, and aspiring social engineers, all

¹¹⁷ Ibid., 13.

¹¹⁸ Baptist W. Noel, *Corn Laws: Selections from a Plea for the Poor* (Manchester, UK: J. Gadsby, 1843), 2.

believed that the Laws of God and Nature favored the flow of goods from regions of abundance to places of scarcity. They argued that the protectionist Corn Laws created systemic disruptions by restricting the sources of food supply, raising the cost of manufactures, and choking off international trade.

The eventual political success of free trade ideology is best understood by relating to the visceral nature of the debates over food in early industrial England. By recognizing the porous boundary our merchants saw between food, economy, politics, and society, historians can see the 1846 Repeal of the Corn Laws and the rise of free trade policy all over the western world in the second half of the nineteenth century as built simultaneously from a liberal economic tradition as well as the material needs of industrializing economies.¹¹⁹

Wheat was central to the national and international imagination of Great Britain during the early industrial era. For many, it was unthinkable to conceive of the factory system without both the mineral energy and the food supply that underpinned it. This idea would come to form the basis for both the political movement against the Corn Laws in the 1830s and 1840s and the personal business decisions of merchants like Alexander Baring and Richard Cobden, who came to be significant investors in the foreign agricultural economies they hoped would support Britain's poor. Beginning with Alexander Baring, British free trade merchants came to see the United States as the ultimate agricultural nation, a nation that could supply both the cotton that worked through machines and the food that worked through laborers. Based upon their understanding of the needs of England's manufacturing economy, the merchants who responded to food crises between 1790 and 1850 also became active investors in the American wheat

¹¹⁹ Scott C. James and David A. Lake, “The Second Face of Hegemony: Britain's Repeal of the Corn Laws and the American Walker Tariff of 1846,” *International Organization* 43, no. 1 (January 1, 1989): 1–29; Paul Sharp, “‘1846 and All That’: The Rise and Fall of British Wheat Protection in the Nineteenth Century,” *Agricultural History Review* 58, no. 1 (May 2010): 76–94.

economy. Despite considerable shortcomings to trade connections and in the face of continuing protection under the Corn Laws, the United States came to be seen as the provident answer to England’s food shortage.

Chapter 3 - The Nature of Exchange: British Merchant Networks, Transatlantic Flows of Capital, and Visions for the American Landscape

In 1848, William Rathbone, a young Liverpool merchant fresh from a visit to the United States wrote his father describing “food in the greatest abundance and variety” throughout the breadbaskets of New York State and Ohio.¹ In that letter, Rathbone asked his father if the family firm might be better served “to have at least some part of our business in grain.”² He acknowledged that such a trade might be profitable because, in the words of his informant, “the United States is a producing country” whose “natural resources as far exceeds England as the sun does the moon.”³ Rathbone’s father, however, was more reluctant. The family had grown rich in the cotton and lumber trades, and they were trades he knew well. The grain business, particularly with the United States, was risky. Rathbone’s father replied he was not “much inclined to venture upon the as yet *terra incognita*, of Breadstuffs, etc., to the neglect of our old Staple Cotton” (emphasis in original).⁴ Clearly, reality outweighed vision.

Between the 1790s and 1850s wheat flowed in fits and starts between the United States and Great Britain. Despite a growing need for imported food in Great Britain and a merchant community desiring free trade, the material conditions of trade made a regular flow between the two nations impossible. In 1800, there were few merchants who engaged in trade between Great Britain and the United States. They focused mainly on exporting manufactured goods and

¹ William Rathbone to Eleanor Rathbone, May 12, 1841. “Rathbone Family Papers”. *University of Liverpool Special Collections*.

² William Rathbone VI William Rathbone V, 28/31 Oct, 1848. “Rathbone Family Papers”. *University of Liverpool Special Collections*.

³ William Rathbone to Eleanor Rathbone, May 12, 1841; Henry Gair to Rathbone Brothers & Co. May 8, 1858. William Rathbone to Eleanor Rathbone, May 12 1841. “Rathbone Family Papers”. *University of Liverpool Special Collections*.

⁴ William Rathbone VI to William Rathbone V, Jan. 26, 1849. William Rathbone to Eleanor Rathbone, May 12 1841. “Rathbone Family Papers”. *University of Liverpool Special Collections*.

capital to the United States, and consigning general merchandise to various European ports.⁵ Few merchants established relationships lasting more than a single sale. In the 1820s and 1830, more Anglo-American merchants, like William Rathbone’s father, began to specialize in cotton shipments and for the first time, American goods regularly made their way to England.⁶ During this period, two dominant flows of capital made their way from Great Britain to the United States: (1) credit and capital to southern banks that facilitated the sale of cotton in New Orleans, Mobile, and Charleston and (2) investments in northern banking institutions and transportation infrastructure connecting the Great Lakes basin to markets in Boston, New York, Philadelphia, and Baltimore. This chapter focuses on the latter.

Prior to the 1850s, British merchants set the stage for a development of American wheat surplus by investing in banking institutions, transportation infrastructure, and forging lasting relationships with key merchants in Boston, New York, Philadelphia, and Baltimore. These networks of capital were based around notions of trust and respectability, and they represented diversified portfolio investments rather than direct investments in the grain trade. To gauge the efficacy of these investments, however, British merchants physically moved across the American landscape. As they interacted with the American landscape and merchant community, British merchants like William Rathbone, became more confident that they could augment their portfolio investments through the direct shipment of wheat when supplies were abundant and prices low in the United States and harvests deficient and prices high in Great Britain.

This chapter focuses on pragmatic decisions of an Anglo-American merchant class who inadvertently set the stage for the explosion of American wheat exports to Great Britain through

⁵ Virginia D Harrington, *The New York Merchant on the Eve of the Revolution* (Gloucester, MA: P. Smith, 1964).

⁶ Sheila Marriner, “Rathbones’ Trading Activities in the Middle of the Nineteenth Century,” *Transactions of the Historic Society of Lancashire and Cheshire*, no. 108 (1957): 105–27; Norman Buck, *The Development of the Organisation of Anglo-American Trade, 1800-1860* (New York: Greenwood Press, 1969), 15–96.

their investments in the American financial and transportation infrastructure prior to 1850. It also acknowledges that merchants who interacted with the American landscape came to hold a vision for future export of wheat to Great Britain based upon the ideals of comparative advantage and free trade detailed in Chapter 2. At the same time that merchants laid a superstructure for trade in the American West, they came to associate the American landscape directly with the fate of England’s manufacturing economy. In this way, British capital slowly and subtly began to set the conditions that would guide the flow of American wheat away from feeding slave populations in the Caribbean towards feeding the booming population of industrial Britain.

British Portfolio Investment in the United States

Prior to the 1840s and 1850, British merchant capitalists investing in the American economy kept a diversified portfolio that sought to manage volatility in the American financial system.⁷ Between 1790 and 1840, transatlantic organizations such as Baring Brothers slowly moved their capital into the American interior. While their investment in the United States was based upon their assumption of the future productivity of American land and agriculture, these companies also had to contend with an undeveloped financial and transportation system. Using Baring Brothers and its managing partner Alexander Baring as an example, we will see how merchant companies slowly moved their capital from national institutions such as the Bank of the United States into state securities that funded canals, turnpikes, and railroads, and finally – by the 1830s – to investments in private merchant organizations, insurance companies, and railroad companies. By filtering their investments through the American economy in this way, Baring

⁷ Mira Wilkins, *The History of Foreign Investment in the United States to 1914* (Harvard University Press, 1989), 49–89.

Brothers helped stabilize America’s financial system, grow its transportation network, and pave the way for direct investments in land, commodities, and trade.⁸

In 1796, Alexander Baring was still a young merchant-in-training as an international agent in the employ of his father. He had yet to be appointed partner in his father’s growing London merchant banking firm (which at the time was named Francis Baring & Co.). He had yet to grow his own fortune or become involved in politics. His task, along with many other agents in his father’s firm, was to scout for potential investments across many international markets. In this role, Alexander came to the United States as a representative of his father’s growing merchant empire.⁹

In the 1790s, Francis Baring & Co. traded various commodities and securities as conditions warranted. The firm traded in British government bonds and helped fund the growing war effort. It also enjoyed a tight connection with the large Amsterdam firm Henry Hope & Co., trading in Continental textiles, cochineal, and bullion. Baring also appreciated the potential of the American economy despite wartime disruptions to trade and a decade-long recession in the 1780s. Just prior to the outbreak of the Revolutionary War in 1774, Baring opened a correspondence with Philadelphia merchants Robert Morris, Thomas Willing, and William Bingham – each of whom would become financial pillars of the American war effort and early national economy.¹⁰ This Philadelphia network would prove vital to helping Alexander move his family firm into the American economy.

In 1796, his father dispatched Alexander to scout the potential of an investment and survey the general state of the American economy. War had dried up many of Francis’

⁸ Ibid., 56–69.

⁹ Peter E. Austin, *Baring Brothers and the Birth of Modern Finance* (London: Pickering & Chatto, 2007), 10–14.

¹⁰ Philip Ziegler, *The Sixth Great Power: A History of One of the Greatest of All Banking Families, the House of Barings, 1762-1929* (New York: Knopf, 1988), 4–25.

investments in Europe and he sought new markets in the United States. Baring’s method during this trip outlines a pattern that would be followed by many subsequent British merchants seeking to invest in the American economy. First, Baring’s father sent along letters of introduction, using the father’s well-established reputation as an access point into American merchant circles. Upon arrival, Alexander used his father’s relationship with William Bingham to expand his network of associates. Third, Baring sought useful information about his potential investments from these individuals, and sought to gauge the risk of particular deals as well as the American economy as a whole. Fourth, he moved through the American landscape and judged its potential for investment. Finally, Baring cemented his relationship with Bingham through marriage with his daughter in 1798.¹¹ These techniques for limiting risk while expanding internationally were standard during this period and were the norm for contemporary merchant bankers such as Hope & Co. of Amsterdam and the Rothschilds of London and followed a pattern in merchant banking stretching back to the Renaissance.¹²

Baring spent the majority of 1796 and 1797 traveling up and down the eastern seaboard. The young nation, according to Baring was “a rising country, a spectacle the most grateful to a liberal mind and the most instructive, whether considered with the eye of the Philosopher, the Politician, or the Merchant. During one of his journeys between Philadelphia and New England in 1796, Alexander Baring stopped in New York City and toured the agricultural districts surrounding.”¹³

¹¹ R.W. Hidy, *The House of Baring in American Trade and Finance: English Merchant Bankers at Work, 1763-1861* (Cambridge, MA: Harvard University Press, 1949), 28–36.

¹² Fernand Braudel, *The Wheels of Commerce*, trans. Sian Reynolds, vol. 2, *Civilization and Capitalism, 15th-18th Century* (New York: Harper and Row, Publishers, 1982); David Hancock, *Citizens of the World: London Merchants and the Integration of the British Atlantic Community, 1735-1785* (Cambridge: Cambridge University Press, 1995); Niall Ferguson, *The Ascent of Money: A Financial History of the World* (London: Allen Lane, 2008).

¹³ David Tearle, *Barings Bank, William Bingham and the Rise of the American Nation: A Transatlantic Relationship from the Revolutionary War through the Louisiana Purchase* (Jefferson, N.C.: McFarland & Co., 2010), 126–137.

At this time, the Middle Atlantic states - particularly the narrow valleys of Pennsylvania, the rolling hills of Maryland and northern Virginia, and New York’s Hudson Valley – were the center of wheat agriculture in the United States. Baring moved thorough a narrow but productive strip of wheat agriculture surrounding the Bay of New York: on Staten Island, Long Island and hugging the shores of the Hudson River all the way north to Albany.¹⁴ This strip was then home to one of the largest breadbaskets in the United States at the time. Over the previous century, wheat agriculture shifted south and west from New England as soil exhaustion and successive outbreaks of black stem-rust enticed farmers in New England to move or shift crops.¹⁵ By the 1790s, farmers in New York were taking advantage of the region’s deep and healthy mix of sandy, loamy, and clay-based soils to produce to yield, in the words of one contemporary, “than is common in England.”¹⁶

Baring saw farms surrounding New York City that were exceptional for their time: large, profitable, and connected to the export trade. In the 1775 book *American Husbandry*, an unknown author describes one such 1600 acre operation “situated partly on the banks of the river Hudson and partly on each side of a small river that runs into it.”¹⁷ After the third year of occupation, the farmer had managed to cut at least 800 acres of forest with which to plant crops. Of those 800 acres, at least half were left fallow at any given time. The two major crops were maize and wheat, of which the farmer planted 100 acres each. There are records of farmers in the region planting their wheat in the furrows prepared for maize, using the plowed stalks of the maize plant as fertilizer for the successive wheat crop. This was often done to save the work of

¹⁴ U.P. Hedrick, *A History of Agriculture in the State of New York* (New York: Hill and Wang, 1933), 66.

¹⁵ Percy Bidwell and John I. Falconer, *History of Agriculture in the Northern United States, 1620-1860* (Washington: Carnegie Institution of Washington, 1925), 92–93.

¹⁶ Harry J. Carman, ed., *American Husbandry*, Columbia University Studies in the History of American Agriculture, No. 6 (New York: Columbia University Press, 1939), 72.

¹⁷ *Ibid.*, 80.

plowing. When wheat was planted alone, it often required two separate plowings in the fall and early spring, a summer fallow period, and liberal applications of manure from grazing cattle as the wheat sprouted in fall.¹⁸ These farms likely sent their grain to local mills often owned by large landowners. They would sell the wheat and the miller would also act as an agent for the landowner, milling the wheat and then sending it down the Hudson or via cart to wharfs in Lower Manhattan.¹⁹ Merchants affiliated with the large land owners, who, on the credit of larger British houses, shipped that flour to the West Indies, Brazil, or the Iberian Peninsula.²⁰ British merchants thus profited from the American grain trade even if they did not actively import wheat into the British Isles.

Between 1795 and 1845, over ninety percent of American wheat was exported as flour.²¹ This is because American flour sold better than American wheat in European and Atlantic markets. Barrels of flour were often sorted according to quality, a practice not yet devised for raw wheat.²² British merchants and bakers thus had a better sense of the product they were purchasing.²³ Wheat, too, fetched lower prices than flour and could not absorb the high costs of transportation.²⁴

This flour trade became the basis of American breadstuffs exports prior to the American Civil War. In some years during the late 1700s, flour was the most valuable product sent into the foreign trade by New York merchants.²⁵ Shippers in Baltimore and New Orleans controlled the

¹⁸ Bidwell and Falconer, *History of Agriculture in the Northern United States, 1620-1860*, 96.

¹⁹ Harrington, *The New York Merchant on the Eve of the Revolution*, 147.

²⁰ *Ibid.*, 177; "Customs and shipping papers," Alexander Hamilton Customs House, Records, 1746-1893, New-York Historical Society, Mss Collections Customs House Papers.

²¹ Morton Rothstein, "American Wheat and the British Market, 1860-1905" (PhD Diss., Cornell University, 1960), 11.

²² William Rathbone VI to William Rathbone V, March 6, 1840. *Rathbone Family Papers*, University of Liverpool Special Collections.

²³ Rothstein, "American Wheat and the British Market, 1860-1905," 46.

²⁴ *Ibid.*, 47.

²⁵ Harrington, *The New York Merchant on the Eve of the Revolution*, 171–172.

flour trade with the Caribbean and Brazil while merchants in Philadelphia, New York, and Boston traded most consistently with merchants in Holland, France, and the Iberian Peninsula. Prior to the opening of the Erie Canal in 1825, Baltimore was the nation’s leading breadstuffs exporter.²⁶ In the 1840s and 1850s, Baltimore, Richmond, and Alexandria supplied some 70 percent of the wheat and flour exported from the United States to the West Indies. The mid-Atlantic wheat-producing region also accounted for 80 percent of South America’s wheat and flour imports during this period. New Orleans merchants almost exclusively laid their wheat down in Cuba, which received upwards of 90 percent of its necessary imports from the Mississippi port in the 1840s and 1850s.²⁷

Given his knowledge of the Atlantic economy, Baring knew that farms along the eastern seaboard sat within a larger Atlantic food economy. In the 1790s and early 1800s, Hudson River flour was largely eaten by slaves on sugar plantations or Iberians struggling through war. Wheat consumed by slave powered the demanding labor that went into growing and milling sugar cane. Cane sugar produced from human labor then made its way back to England where, in the early 1800s, it was drizzled over British-grown wheat bread in the form of treacle, a syrupy molasses-like substance that supplemented the diet of the English working class.²⁸ The Orders in Council made it impossible for British merchants like the Barings to profit by moving supplies and capital throughout the Atlantic economy. The Orders prevented, in his words, “the assistance of

²⁶ Rothstein, “American Wheat and the British Market, 1860-1905,” 18.

²⁷ John G. Clark, *The Grain Trade in the Old Northwest* (Westport, CT: Greenwood Press, 1966), 181–182.

²⁸ Sidney Wilfred Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Viking, 1985), 32–61, 117–133. It is likely given that human bodies burn milled sucrose faster than grain starch, that sugar imports did not contribute as effectively to daily work in factories as did slower-burning grain starch.

capital” from moving “the value of produce of [American] soil” to rectify “the want of that produce in the West Indies.”²⁹

Baring’s 1796 trip, the connections he forged, and his interaction with the American landscape had dramatic implications for the Anglo-American economy. Upon return to England, Baring – recently made a managing partner of his father’s firm – steered the organization towards investment in the United States. According to business historian Ralph Hidy, American “economic potentialities increasingly attracted the attention of the [firm’s] partners from the 1790’s onward.”³⁰ Barings invested in American land in Maine and Pennsylvania.³¹ Despite rampant economic uncertainty and systemic lack of cash, American land, Barings believed, could be a sound investment if attached directly to a larger network of investments in the financial and transportation system. The American economy was the most rapidly developing in the world, driven by vast natural resources opened to the world economy through market expansion. It enjoyed a relatively stable government with a central banking institutions, and legal system and usury laws similar to that of England. The young nation housed a large and growing merchant marine and a plethora of natural ports and a growing inland transportation system to bring goods to port.³²

Between 1800 and the 1830s, the newly-minted Baring Brothers & Company (so named when Alexander and his brothers became partners in their father’s firm) became the largest single British merchant firm operating in the American economy. Just as Francis delegated much authority to his agents, Baring delegated much of the decision-making authority with

²⁹ Alexander Baring Ashburton, *An Inquiry into the Causes and Consequences of the Orders in Council: And an Examination of the Conduct of Great-Britain Towards the Neutral Commerce of America*, Miscellaneous Pamphlets, v. 224, No. 4 (New York: John Bleeker, 1808), 53–54.

³⁰ Hidy, *The House of Baring*, 3.

³¹ Austin, *Baring Brothers and the Birth of Modern Finance*, 137–154.

³² “Joshua Bate Diary,” Dec. 8, 1841. *ING Barings Corporate Archive*. DEP 74, Vol 3.

regards to his growing business in the United States to two Americans: Joshua Bates and Swinton Holland. It was Bates’ job more than anyone else to funnel Baring’s money to the United States. Bates and Holland decided whether investment would go to finance debt or securities exchange, or to fund trading operations. If it was trade, they had to decide whether to purchase wheat, tobacco, or cotton. Prior to the 1850s, they chose overwhelmingly to trade in tobacco and cotton.

The brokering of American securities for commission comprised the major effort by the British firm.³³ Baring Brothers spent much of their time and money investing in American financial institutions for much of the first twenty years of their involvement in the U.S economy. At first, the company restricted its direct investments in the United States to the federal government, and by 1805 they owed nearly two-fifths of the stock of the First Bank of the United States. Over the following decade, however, they increasingly moved their investments further west and into smaller banking institutions and state bonds. This meant expanding their investments outside of Philadelphia (the center of their financial investments) and New Orleans (the center of their commodity trade)– into their secondary capital markets of the time (New York, Boston, Baltimore). Bates also corresponded with agents that would employ their considerable knowledge about local conditions to inform and advise Baring on sound investments. While agents in Charleston and New Orleans would increasingly steer Barings toward lucrative deals in cotton, those in Boston, Baltimore, and New York would come by a wider range of investments that would include state bonds, canal bonds, and railroads³⁴.

By the 1820s Baring Brothers established an internal command structure that was best suited to the quick pace (and volatility) of economic development in the United States. Bates

³³ Hidy, *The House of Baring*, 3.

³⁴ Ralph W. Hidy and Muriel E. Hidy, “Anglo-American Merchant Bankers and the Railroads of the Old Northwest, 1848-1860,” *The Business History Review* 34, no. 2 (July 1, 1960): 150–69, doi:10.2307/3111545.

and his correspondents operated on the widely-held belief that, while the American financial system fluctuated year-to-year, investment in the United States was less risky over the long term because of the latent productivity of American land. Increasingly, Baring Brothers’ investment strategy in the United States focused on the buying and selling of American credit from American banks to European financial houses. Tellingly, the firm never displayed a clear distinction between commerce in merchandise and financial deals. While the firm increasingly focused on the latter, its partners, representatives, and agents had not shaken the belief that all credit came directly from commodity trading.³⁵ Baring recognized that the strength of American investments were based on undeveloped land that could be turned towards cash crop production.³⁶ As such, Baring employed both commercial (by advancing firms credit on which to transport raw material to Great Britain) and financial (purchasing credit of local banks funding commercial development and transportation infrastructure) credit operations in the United States from 1820 to 1850.

Baring Brothers emerged as the largest financial underwriter of American canal construction. Through local representatives, Baring Brothers heavily underwrote canal projects in New York and Ohio. In New York, a state-appointed commission oversaw the financial aspects of the Erie Canal and borrowed money from foreign investors based on the state’s credit. Swinton Holland directed a large proportion of the loan towards Baring Brothers.³⁷ In 1823, the firm placed £200,000 Bank of New York stock originally issued to fund the construction of the

³⁵ Hidy, *The House of Baring*, 131.

³⁶ *Ibid.*, 56.

³⁷ New York State initially awarded a loan of \$600,000 in May 1822 to the Mechanics and Farmers Bank and the New York State Bank. However, Holland bought these loans from the New York Banks so that, over the course of fifteen months, the bulk of the loans were transferred to British financial institutions such as Barings. See Nathan Miller, *The Enterprise of a Free People: Aspects of Economic Development in New York State During the Canal Period, 1792-1838* (Ithaca, NY: Cornell University Press, 1962). 104-107.

Erie Canal.³⁸ This investment was part of a larger New York State loan of \$600,000 awarded to the Mechanics and Farmers Bank and the New York State Bank in May, 1822. Soon, however, Swinton Holland began buying these issues from the New York banks so that, over the course of fifteen months, the bulk of the loans transferred to Baring Brothers. By 1824, Baring Brothers held a total of \$322,923 of outstanding loans from the State of New York – over half the original issue to build the canal.³⁹ This at a time when the total reserve capital of the entire firm oscillated between £200,000 and £622,000, and their dividend profit oscillated between of £120,000 in 1825 and a loss of £56,000 in 1826, these investment made up not only a significant portion of the funds required to build the Erie Canal, but a significant proportion of the operating funds of Baring Brothers itself.⁴⁰ In Ohio, Baring Brothers followed much the same business plan of buying credit issued by the state government or its attendant banks.⁴¹

Baring Brothers’ interest in New York and Ohio went well beyond their brokering of state securities, they also were the key investors in American financial institutions that financed settlement in the interior. In 1834, Baring Brothers held 1,500 shares of the New York Life Insurance and Trust Company. They were by far the largest single investor. New York Life focused its efforts in real estate mortgages in Ohio and Indiana, and in 1836 acquired the rights to the vast Holland Land Purchase in western New York, which included the Genesee Valley, then the center of American wheat production.⁴² In 1838, Baring Brothers opened a new line of credit to the Ohio Life and Trust Company, a significant underwriter of canal projects in that state. Baring Brothers took as collateral one million dollars worth of state bonds that the bank

³⁸ Ziegler, *The Sixth Great Power*, 76.

³⁹ N. Miller, *The Enterprise of a Free People: Aspects of Economic Development in New York State during the Canal Period, 1792-1838* (Ithaca, NY: Cornell University Press, 1962), 106.

⁴⁰ Ziegler, *The Sixth Great Power*, 75–77, 98.

⁴¹ H.N. Scheiber, *Ohio Canal Era: A Case Study of Government and the Economy, 1820-1861* (Athens, OH: The Ohio University Press, 1969), 130–151.

⁴² Wilkins, *The History of Foreign Investment in the United States to 1914*, 63.

had just purchased.⁴³ Baring Brothers money thus helped construct the Erie Canal and provided the working capital necessary for American banks and merchants to fund the settlement of the Great Lakes Basin.

Merchants, Respectability, and The Transportation Revolution

Let’s follow Baring Brothers’ investment in the American economy by reconstructing the merchant network through which it flowed. Baring Brothers took a conservative approach to its investment in the American economy by (1) establishing strategic relationships with key New York City merchants, and (2) extending credit to these trusted merchants, tasking them to apply their knowledge to make a profit. While Baring Brothers left strategic matters of investment to managing partners such as Holland and Bates they extended credit through associate firms based in the United States that were controlled by a company representative. The New York mercantile and financial firm of Prime, Ward, King, and Co., with Thomas W. Ward a partner both in the US firm and a Barings agent after 1832 proved a crucial intermediary in Barings investment strategy in the United States. Intermediary firms would buy commodities with credit or capital advanced from their associates in London. It is through Prime, Ward, King that Baring Brothers money filtered into the American cotton, tobacco, and wheat trades.

Prior to the 1830s, the vast majority of American wheat was produced near the coast. Before the construction of the American canal network between 1820 and 1860, it was prohibitively expensive to ship large quantities of wheat from the American interior to its major ports. It cost a Pennsylvania farmer \$1 to ship a barrel of flour 79 miles to Philadelphia. If a merchant purchased a bushel of wheat in the sleepy fishing village of Buffalo in 1815 for 50 cents, it would cost between 75 cents and \$1 to ship that bushel to New York City. The cost of

⁴³ Harry N. Scheiber, *Ohio Canal Era*, 144.

transportation became greater with distance. The same wheat was four or five times more expensive in New York City than in Cincinnati or Pittsburgh.⁴⁴ Transport was, in short, more expensive than the wheat itself.

General commission firms like Baring Brothers and lower-volume specialists like Prime, Ward, King operated within interlacing networks of credit. There were two types of bills drawn against commodities at Liverpool and London prior to the 1850s. The first was the original bill between the commission merchant or broker and the shipper. The second was a modified contract of exchange once the goods arrived in port, which may have been between the two original parties or with modified to include third. Sometimes these contracts reflected lower prices and loss, other times, they sought adjust to higher prices and better chance for profit at various markets. This two-tiered system allowed commission merchants or brokering merchants to respond to changes in price, but often did little to insulate the actual owner of the grain from fluctuations, as they were bound to the original contract regardless of the second.⁴⁵ Additionally, the commission merchant or broker was free to sell the original bill of exchange to a third party for a profit, but the shipper – as holder of the debt – had no such room to maneuver. This is the complex system that Baring Brothers sought to insulate themselves from by providing credit to Prime, Ward, King, allowing them to engage in the actual trade while Baring Brothers profited from interest on the original advance.

Due to the great complexity of the transatlantic money market and commodities exchange prior to the 1830s and 1840s, trade was predicated upon commonly-held notions of trust and respectability. Amid the dizzying array of contracts, prices, and markets, merchants at all levels of the trade often made their decisions based on whether or not they could trust a particular

⁴⁴ Clark, *The Grain Trade in the Old Northwest*, 11.

⁴⁵ Buck, *The Development of the Organisation of Anglo-American Trade, 1800-1860*, 24–25.

merchant. Take the career of Prime, Ward, King’s managing partner, James G. King, as an example.

James G. King was, in 1823, an American living in Liverpool, England. His father was Rufus King, Massachusetts politician and signer of the U.S. Constitution. James King worked in a small banking establishment with Archibald Gracie, scion of a Scottish shipping family. Gracie’s father had leveraged shipping concerns in New York with business partnerships in England, Virginia, Mobile, and New York City. Illustrative of this family’s transnational nature, Archibald Gracie III – grandson of a Scottish shipper and son of a New York merchant – fought and died for the Confederacy in the trenches of Petersburg in 1864. Before he died, he managed the Baring Brothers-owned Bank of Mobile.⁴⁶ King himself would become a central figure in the rise of the New York financial community. Through his partnership in Prime, Ward, King, he rose to become president of the Erie Railway. He finished his career as a politician, representing Weehawken, New Jersey as a Whig from 1849 to 1851. Upon his death in 1853, King left “a large property and a great financial name.”⁴⁷

Through the Gracie family, King was introduced to a wide web of capital that stretched across the Atlantic. King himself had already spent many years in England training for business, and he married into the Gracie family in 1812. Working to connect the tobacco producing region around Petersburg, Virginia with the capital and shipping markets of New York and England, King earned himself a reputation as a solid and trustworthy business partner throughout the 1810s and 1820s. He was even approached by John Jacob Astor for the chief directorship of the

⁴⁶ Walter Barrett, *The Old Merchants of New York City*, Second Series (New York City: Thomas R. Knox & Co., 1885), 321–323.

⁴⁷ *Ibid.*, 13.

American Fur Company. Declining that offer, King instead solicited the New York merchant Nathaniel Prime upon recommendation from Astor.⁴⁸

In the absence of a reliable flow of information, personal reputation was key to inclusion in the elite circles of the Anglo-American economy. By 1824, King was able to bank his entire future on the reputation and trust earned in previous deals. He wrote Nathaniel Prime in May 1823 that his “family’s interest will require my going to the United States, to endeavor to reestablish my concerns in business.” Leaving the Liverpool firm in Gracie’s hands, King returned to New York feeling “abundantly satisfied that, if aided a little at the onset, by my friends, that I shall succeed in procuring a respectable support for my family – by commission business here.”⁴⁹ In order to do this, King had to obtain the trust of some local firm. He contacted Prime in the hopes of using his own personal network as collateral in a mutual exchange. New again to New York, King knew that “confidence must exist in my stability before I can expect to be entrusted with such important concerns.”⁵⁰

In 1824, Prime and King formed a new merchant firm called Prime, Ward, and King.⁵¹ Nathaniel Prime numbered as one of the few Barings correspondence in New York during the 1810s.⁵² Indeed, it was largely upon the business of Prime, that Baring Brothers became increasingly interested in the New York market. King entered into the partnership at this crucial moment. From his office in Weehawken, New Jersey, King directed much of the firm’s interest in developing the New York commercial hinterland. Prime, Ward, and King, especially, ascended to the top of the American financial world by drawing on the accounts of Baring

⁴⁸ *The American Merchant*, vol. 1 (Bryant & Stratton, 1858), 274.

⁴⁹ James G. King to Nathaniel Prime, May 16, 1823. “Prime Family Papers,” *New-York Historical Society*.

⁵⁰ *Ibid.*

⁵¹ The partnership originally came together as Prime, Ward, Sands, and King, but with the death Sands in 1826, the firm reverted to Prime, Ward, and King. *The American Merchant*, 1:275.

⁵² Hidy, *The House of Baring*, 49.

Brothers, by, in their words, taking “advantage in using the power you [Baring Brothers] thus concede to us” in return for their “utmost caution and exactness.”⁵³ This money was essential to their operation for, as Prime, Ward, and King would constantly complain: “money here continues scarce – and dear.”⁵⁴

At this time, British banks required a steady stream of letters from American agents detailing the contours and changes within particular trades. Prime, Ward and King would send Baring Brothers letters on the state of commodities and money exchange and asking in return “We look with some interest at the present State of Europe – [and] we shall feel obliged by your communications as heretofore on the State of things.”⁵⁵ Throughout the 1830s, Prime, Ward and King sent recommendations for investments they saw as necessary for the development of the American interior: state bonds, canal securities, and insurance/financial institutions. Periodically, they would send newspapers clippings related to their investments using Baring Brothers credit, as in their 1832 investment in the New York State that would “enable certain parties to open a canal between the Susquehanna River and our Grand Canal.”⁵⁶ They also funded western canals indirectly through state bonds, as Baring Brothers had done throughout the 1820s with the Erie Canal. In 1832, Prime, Ward and King brokered a Baring Brother purchase of \$500,000 worth of Indiana State stock floated by that state’s land commission office in New York City.⁵⁷

⁵³ Prime, Ward, King & Co to Baring Brothers & Co, Jan. 23, 1830. ING Barings Archive, London, UK. House Correspondence, North America, HC5.2.16.1.

⁵⁴ Prime, Ward, King & Co. to Baring Brothers, Aug. 24, 1836. ING Barings Archive, London, UK. House Correspondence, North America, HC5.2.16.1.

⁵⁵ Prime, Ward, King & Co. to Baring Brothers & Co., July 23, 1830. ING Barings Archive, London, UK. House Correspondence, North America, HC5.2.16.1.

⁵⁶ Prime Ward, King & Co to Baring Brothers & Co., Jan. 23, 1830; Prime, Ward, King & Co. to Baring Brothers & Co., March 18, 1832. ING Barings Archive, London, UK. House Correspondence, North America, HC5.2.16. This would eventually become the Chenango Canal, part of New York’s Erie Canal system.

⁵⁷ Prime, Ward, King & Co to Baring Brothers & Co, July 24, 1832. ING Barings Archive, London, UK. House Correspondence, North America, HC5.2.16.1.

Prime, Ward, King served as Baring’s crucial intermediary in the American economy during the 1830s, synthesizing information about outstanding investments and prospects for trade and profit. By the mid-1830s, Prime, Ward and King were trading the largest proportion of American securities for Baring Brothers.⁵⁸ In 1838, Prime, Ward and King enjoyed such a position in the Baring Brothers’ network that they were entrusted to sell £1,000,000 sterling forwarded to the United States from the Bank of England via Barings in an attempt to inject money into the American economy and resume hard specie payments by firms struggling in the wake of the Panic of 1837.⁵⁹

Before getting into this transaction, let me briefly sketch the hierarchy of money and information as I have described it. At the top was Baring Brothers. Centered in London’s financial district and facilitating hundreds of transactions all over the world, Baring Brothers focused their attention on the United States portfolio largely through the efforts of Swinton Holland and, following Holland’s death, Joshua Bates. Bates primarily corresponded with a number of merchant organizations that represent the next link in the chain. These organizations – including Prime, Ward, and King; Grinnel, Minturn & Co., and Howland, Aspinwall & Co., were primarily partnerships, meaning they could legally draw upon a wider credit base in order to facilitate larger transactions. These merchant firms were a complex organism. Part bank, part consignment merchant and part shipper, their primary responsibility was to isolate potentially favorable investments, deals, and partnerships and use Barings-advanced money to facilitate deals with smaller merchants. These smaller merchants often single individuals or partnerships with fewer capital reserves were often the ones making the actual purchase of land or

⁵⁸ Hidy, *The House of Baring*, 199.

⁵⁹ Hidy, *The House of Baring*, 243–245.

commodities.⁶⁰ And since they were often American, historians tend to lose sight of the fact that the origin of the money to make these deals happen often came directly from London.⁶¹

Throughout the mid-1830s, Prime, Ward, and King had facilitated the transshipment of wheat from New York and Ohio to Liverpool and Amsterdam, Holland. Sometimes, they forwarded wheat on their own account, thereby assuming the majority of the risk due to damage or destruction. Other times, they simply provided credit on which smaller merchant to forward the wheat.⁶²

Back to our transaction. In December of 1837, Barings extended a single merchant, John A. Stevens of New York City an enormous sum of £250,000 to be housed as credit with the American merchant firms Prime, Ward, King and Goodhue & Co. as well as with the Barings home bank in London.⁶³ Stevens used this capital to become an original shareholder in New York City’s Bank of Commerce in 1838. It was Steven’s task to scout investments and draw upon those accounts when he isolated prospects. He invested large sums in the Barings-affiliated Bank of Mobile. And he began to invest in the American interior. In 1838, Stevens reported to Joshua Bates that “the future of the State of Ohio may now be considered strong.”⁶⁴ Between this time and the early 1850s, Stevens used his credit housed with Baring Brothers and Prime War King to broker Indiana, Ohio, and New York State Bonds and invest in the private bonds of the Attica and Hornellsville; the Buffalo, Corning, and New York; and the Ohio and Pacific Railroad companies.⁶⁵

⁶⁰ Buck, *The Development of the Organisation of Anglo-American Trade, 1800-1860*, 34–62.

⁶¹ Richard Bense, *Yankee Leviathan: The Origins of Central State Authority in America, 1859-1877* (Cambridge: Cambridge University Press, 1990).

⁶² John Austin Stevens to Thomas W. Ward, Sept. 27, 1837. “John Austin Stevens Papers.” *New-York Historical Society*.

⁶³ John Austin Stevens to Thomas W. Ward, Dec. 9, 1837. “John Austin Stevens Papers.” *New-York Historical Society*.

⁶⁴ Joshua Bates to J.A. Stevens, June 3, 1837. “John Austin Stevens Papers.” *New-York Historical Society*.

⁶⁵ Box 1853-1861. “John Austin Stevens Papers.” *New-York Historical Society*.

The transaction among Baring Brothers, Stevens, and Prim, Ward and King illustrates the growing scale and scope of British money operating within the American economy in the 1830s and 1840s. By the 1830s, the portfolio investments of Barings and other Anglo-American merchant banks such as Brown Brothers contributed to the growth of the American economy and transportation system variously known as the Transportation or Market Revolution.⁶⁶ The networks of merchants and capital formed around these keystone merchant banking institutions set the stage for a dramatic growth in the economic productivity of the American interior in the 1830s and 1840s. Investments in banking institutions, state bonds, canal bonds, and farm mortgages not only left Baring Brothers with a diversified, comparatively risk-free portfolio, these investments also served to guide settlers and capital towards the American interior. As the main mechanism through which British money made its way into the American economy between 1800 and the 1850s, Baring Brothers was instrumental in stimulating the surplus production of American wheat. As Barings and others stabilized the American interior economy, more British and American merchants sought to move their money west into the grain frontier. As these merchants scouted investments, they began to slowly link the production of American wheat to the greatest consuming market in the world: England.

A Vision for Anglo-American Free Trade

The American wheat frontier did not move west in an unbroken line, nor was wheat a singularly “frontier crop” grown by farmers upon settlement but discarded later when better opportunities presented themselves. Instead, wheat was the consummate market crop.⁶⁷ Wheat agriculture popped up in specific rivers valleys based on their access to larger markets and the

⁶⁶ George Rogers Taylor, *The Transportation Revolution, 1815-1860* (White Plains, NY: M.E. Sharpe, 1951); Charles Grier Sellers, *The Market Revolution: Jacksonian America, 1815-1846* (New York: Oxford University Press, 1991).

⁶⁷ Bidwell and Falconer, *History of Agriculture in the Northern United States, 1620-1860*, 5–70.

stability of market and financial conditions. There were wheat clusters instead of one wheat frontier. Additionally, farmers often attempted to plant corn first rather than wheat.⁶⁸ This was because (1) corn could be grown on compacted land only roughly plowed and (2) it could be fed to hogs which could preserve the energy in muscle mass as it walked to market.⁶⁹ Farmers only turned to wheat when their farm was connected to market by quick transportation infrastructure and could thus fetch a profitable price at harvest time. Additionally, wheat required mills, which required capital – and most of the grain exported from the West between the 1820s and 1850s was milled and sent in flour barrels.⁷⁰ This meant that wheat agriculture sprouted at specific times and places due to a convergence of transportation, cheap land prices, capital investments, and milling infrastructure. It was anything but a frontier crop. It was, in fact, a sign of significant market penetration.

Richard Cobden witnessed this market penetration firsthand on his journey through New York and Ohio in 1836.⁷¹ We know from his publication of *England, Ireland, and America* one year prior that Cobden came to the United States with nascent free trade ideas already swirling around his head. He saw the United States as a potential industrial rival with Great Britain. He saw bread prices as directly influencing industrial production and stability in Britain. Combining these two viewpoints, Cobden envisioned a food-producing United States as the best way to preserve Great Britain as the world’s sole industrial power through the elimination of its greatest manufacturing rival by transforming them into England’s breadbasket.

Cobden crossed the Atlantic in June, 1836 and entered into a United States displaying the vital economic signs of a half-century of investment from British banks like Baring Brothers.

⁶⁸ Clark, *The Grain Trade in the Old Northwest*, 13.

⁶⁹ Bidwell and Falconer, *History of Agriculture in the Northern United States, 1620-1860*, 16–34.

⁷⁰ Clark, *The Grain Trade in the Old Northwest*, 17, 26.

⁷¹ Nicholas C. Edsall, *Richard Cobden: Independent Radical* (Cambridge, MA: Harvard University Press, 1986).

Displaying what one biographer called “an excellent sense of place,” Cobden spent much of his trip surveying the yet-unfinished landscape of the United States within the context of its future productivity.⁷² He arrived in New York Harbor impressed by both the beauty and potential wealth of the region. In fact, the wealth augmented the natural beauty of the harbor: “What beauty will this inner bay of New York present centuries hence when wealth and commerce shall have done their utmost to embellish this scene!”⁷³

Journeying down the coast through Philadelphia, Baltimore, and Washington, Cobden then swung out west to the Ohio River Valley. It was here his vision for the American interior became clear. Cobden visited the Ohio Valley in 1836 just as it’s wheat agriculture began to explode. Most of the wheat regions that Cobden journeyed through in his traveled were the same regions invested in by Baring Brothers and their New York associates. New York, Ohio, and Indiana – with their Baring-backed canals, state securities, and farm mortgages - in particular were the center of American wheat agriculture from the 1830s to the 1870s. Farmers preferred to move into these areas because land and transportation prices were generally lower than regions further west and soils were more productive than the exhausted soils of the east.⁷⁴ The center of wheat agriculture in the United States by this time was no longer the Hudson River Valley as it had been when Alexander Baring traveled through that region in 1796. Rather, interior valleys such as the Genesee and Shenandoah were the centers of production with famers in the smaller valleys further west like the Maumee, Scioto, and Wabash quickly ramping up their production.

⁷²Ibid., 17–18.

⁷³Cobden Diaries, June 6, 1835. British Library.

⁷⁴Bidwell and Falconer, *History of Agriculture in the Northern United States, 1620-1860*, 30–111.

Cobden’s visit thus came amid a great economic and demographic shift of the settlement of the Ohio and Great Lakes Basin.⁷⁵ Farmers left, by and large, the New England eastern New York river valleys and moved into the Great Lakes basin. New York’s Genesee Valley became a major center of wheat production following the completion of the Erie Canal in 1825 and the growth of Rochester as a major milling center in the early 1830s.⁷⁶ As farmers in New England and the Hudson Valley repeatedly planted wheat every year without adding much in the way of fertilizer, successive crops leached soils of essential minerals while the rolling terrain of both regions contributed to soil erosion following the removal of forest cover.⁷⁷ Since hired labor was difficult to come by for much of the nineteenth century, farmers often found it was economically prudent to move to virgin soils instead of hiring additional labor and transition to mixed husbandry and fallow system.⁷⁸ In a sense, minerals of the deep soils west of the Alleghenies stood in for the muscle energy of hired labor.

Migratory farmers settled first in the wooded river valleys of New York and Ohio. They often assumed that trees indicated fertility while prairies and grassland came from impoverished soils.⁷⁹ Among the first river valleys settled in Ohio were the Scioto, Maumee, and Miami. This settlement happened quickly. In 1835, Ohio farmers already exported 3.5 million bushels of wheat out of the state, farming rich river bottomlands.⁸⁰ Cobden noticed this, commenting in Ohio that the lands on these river bottoms were “of excellent quality.” These settlements,

⁷⁵ William Wyckoff, *The Developer’s Frontier: The Making of the Western New York Landscape* (New Haven: Yale University Press, 1988).

⁷⁶ D. Shaw, *City Building on the Eastern Frontier: Sorting the New Nineteenth-Century City* (Baltimore: The Johns Hopkins University Press, 2004).

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⁷⁸ Clark, *The Grain Trade in the Old Northwest*, 3.

⁷⁹ *Ibid.*, 26; Annette Kolodny, *The Lay of the Land: Metaphor as Experience and History in American Life and Letters* (Chapel Hill: University of North Carolina Press, 1975); Conevery Bolton Valencius, *The Health of the Country: How American Settlers Understood Themselves and Their Land* (New York; Oxford: BasicBooks; Oxford Publicity Partnership, 2003). Bidwell and Falconer, 158

⁸⁰ Clark, *The Grain Trade in the Old Northwest*, 21.

however, were often crude. Everywhere, he found “the stumps of the trees are everywhere above the grasses and the corn.” He also recorded “the roads everywhere are difficult.”⁸¹ The acceleration of this wheat belt could not have escaped Cobden. Four years after his visit, in 1840, Ohio led the nation in wheat production.⁸² Of the western regions, the Genesee Valley and the river valleys of Ohio were by far the largest producers during the 1830s. Indiana did not become a major producer until the 1840s, nor did Illinois.⁸³

Farmers in the West sent their wheat to a curious hodgepodge of markets in the 1830s. Genesee Valley wheat went to Boston before the 1840s.⁸⁴ Farmers on the Scioto, Maumee, and Wabash Rivers generally loaded their wheat and flour onto flatboats until reaching the Ohio River, where it was loaded onto larger flat or steamboats and transported to the market in New Orleans where it went to feed the slave populations of Cuba.⁸⁵ Increasingly after the completion of a canal network in Ohio in the 1820s and 1830s, this flow south slowly began diverting north and east towards the Great Lakes and Erie Canal.⁸⁶

As Cobden was quick to note, the seasonal flow of rivers was a limiting factor in economic development of the American West. He also noted that this variability could be rectified in the future. “The Ohio [River],” he wrote in his diary, “generally is about 450 yds in width – is not navigable for two or three of the summer months but may be made so.” Both the Ohio and Mississippi Rivers were often at low water, exposing sand bars and snags that could damage or destroy an entire shipment of wheat. Between 1822 and 1827, the cost of these tree snags alone amounted to a staggering \$1.3 million. The federal government instituted a massive

⁸¹ Cobden Diaries, June 17, 1835. British Library.

⁸² Clark, *The Grain Trade in the Old Northwest*, 8.

⁸³ *Ibid.*, 21–27.

⁸⁴ Neil Adams McNall, *An Agricultural History of the Genesee Valley, 1790-1860* (Philadelphia: University of Pennsylvania Press, 1952), 121.

⁸⁵ Clark, *The Grain Trade in the Old Northwest*, 47.

⁸⁶ *Ibid.*, 19.

engineering effort to remove these impediments of trade, but it was slow in coming: 183 steamboats based in St. Louis were lost on the Mississippi between 1839 and 1843.⁸⁷ These conditions form the basic reason for canals and railroads, which over the course of the 1830s and 1840s, slowly re-oriented the trade of the Northwest towards toward the Great Lakes, Buffalo, and New York.

Hydrologic variability also shaped the price of wheat in western markets. Cash-poor farmers had to sell their crops as soon as they were harvested to obtain cash, settle debts, or barter for manufactured goods.⁸⁸ They loaded wheat grown along river bottoms onto their watercourses en masse after harvest. This scramble to cash in was further complicated by the seasonal flow of Ohio tributaries such as the Wabash River, which was unnavigable save for a few short weeks in the spring and fall. Since much of the wheat grown in this region was winter wheat and harvested in the spring, farmers and merchants scrambled to get their wheat and flour to market before the river became impassable in summer. The result was the “Wabash glut” at the New Orleans market, where vast quantities of wheat arrived in that city at virtually the same time, causing a dramatic drop in price. Most shippers and farmers lost money in this glutted market.⁸⁹

Cobden paid close attention to the canals and railroads then springing up throughout the northern wheat belt. Because the wheat had few reliable natural outlets, canals and railroads could realize “vast profits” at “particular places.”⁹⁰ Journeying along the Erie Canal corridor eastward from Ohio, Cobden noted the canal’s “great traffic of boats for goods and

⁸⁷ Ibid., 37–38.

⁸⁸ Ibid., 42–43.

⁸⁹ Ibid., 24–25.

⁹⁰ Cobden Diaries, June 17, 1835. British Library.

passengers.”⁹¹ Buffalo was, in his words, “a bustling place,” already in 1835 a large wheat port of growing importance that received a majority of the wheat grown along rivers and canals that fed the Great Lakes.⁹² Given his proclivity towards tracing landscapes and attaching them to broad economic processes, Cobden undoubtedly realized that much of the wheat produced on the excellent land of Ohio river valleys was coursing through New York through the bustling business nodes of Buffalo and New York City. The same day that he passed “several times over the Erie Canal” on a stagecoach and noticed the traffic upon the canal, he discussed with his travel companions shipping rates on the canal, which he was told “for stage line boats is four cents a mile” and the great fever for western lands occasioned by the Erie: “In the coach Judge Wright has been to Illinois buying 15,000 acres of prairie land.”⁹³

Cobden undoubtedly placed his experience with the American landscape within his understanding of the global wheat economy and the prospects for the British manufacturing system under free trade. Cobden, who had also published on Russia in 1838 and journeyed throughout the Mediterranean in 1837, was in a unique position to comment on the international trading system. Having a deep-seated family connection to British agriculture, membership in the Manchester textile community and extensive travels to the growing wheat producers of the United States, Canada, and Russia, Cobden had a more extensive knowledge of realities and potentials the world’s food economy than arguably anyone else in Great Britain by the late 1830s. While he noted there were many natural and human forces in the way of a steady and cheap flow of grain to Great Britain, he increasingly began to acknowledge the greatest obstacle of them all was the Corn Laws themselves. He began to acknowledge the vast potential of an Anglo-American grain trade, and the immoral barrier of the Corn Laws in preventing the vast

⁹¹ Cobden Diaries, June 26, 1835. British Library.

⁹² Cobden Diaries, June 21, 1835. British Library

⁹³ Cobden Diaries, June 26, 1835. Cobden Diaries. *The British Library*.

produce of the United States from feeding the manufacturing populace of Britain. As he would write to an Anti-Corn Law colleague in 1842, “Until we get back our trade with the United States again there can be no general prosperity, or full employment for the people.”⁹⁴

American Land and Anglo-American Wheat

By the 1840s, the financial and economic conditions were in place to allow individual Anglo-American merchants to consider transporting American wheat to British markets. Considerable barriers remained, however. Population growth in the East provided for a large domestic market and internal improvements reduced transportation costs from the new production areas of the Great Lakes Basin to New York, Philadelphia, Baltimore, and New Orleans. Much of the wheat crop was distributed by merchants in these markets to the cities and towns of the East and to the slave plantations of the South. Merchants guided what surplus remained to various international markets based on price. The best markets for merchants exporting American wheat remained the Caribbean and South America into the 1840s. Many British firms at this time concentrated on moving cotton from the United States to Great Britain. Nevertheless, due to British capital investments in the northern economy and the merchant network through which it flowed, certain merchants – like William Rathbone who opened this chapter - began to see American exports of wheat to Great Britain as a way to potential profit in the future.

In 1840, William Rathbone was an apprentice of Baring Brothers. Two years prior, his father had secured him the position in order to learn the practice of bookkeeping and to establish himself within respectable business society. When recalling this apprenticeship later, William

⁹⁴ Richard Cobden to Arnold Konig, Dec. 2 1842 in Richard Cobden, *The Letters of Richard Cobden*, ed. Anthony Howe (Oxford: Oxford University Press, 2007), 303.

remarked that “this was a most important year of my life.”⁹⁵ In his year at Baring Brothers he became intimately connected with the partners of the firm, and it was one such partner, Joshua Bates, whom William accompanied to the United States in 1841 and again one year later.

William Rathbone traveled to the United States to scout investments for Baring Brothers and his family firm, Rathbone Brothers & Company (Rathbone Brothers). The primary objective for William’s first trip was to use Bates to gain access to New York’s merchant society and begin to forge deals that would enhance Rathbone Brothers’ access to American markets in tobacco and cotton. Rathbone spent the first month of his trip “calling on” his father’s correspondents, using face-to-face meetings as a way to lay the groundwork for future deals.⁹⁶ These meetings were essential for, just as the Baring Brothers’ network, the Rathbone’s business revolved around evaluating merchants’ reliability in lieu of consistent reliable information on the state of crops and potential investments. Rathbone reported back to his family on the list of merchants he met in New York: “I have received attention from in New York...Mr. Walker, Mr. Goodhue, Mr. J.G. King, Mr. Jno and Saml Ward, Mr. Hicks, Mr. P. Perit, and Mr. Gallatin.”⁹⁷ In particular, Rathbone spent much of his time with two partners of Prime, Ward, King: James G. King and Samuel Ward. Here is where Rathbone’s association with Baring Brothers paid off. In May of 1841, he visited King’s house “on the other side of the Hudson” and received in return “a general invitation to his house.”⁹⁸ House calls were not only about society, they were about gaining access to elite merchant circles. In word where mercantile business mixed so often with

⁹⁵ Eleanor Rathbone, *William Rathbone: A Memoir*, 1st ed. (London ;;New York: Macmillan, 1905), 94–95.

⁹⁶ William Rathbone VI to William Rathbone V, April 26, 1841; William Rathbone VI to Eleanor Rathbone, April 26, 1841. “Rathbone Family Papers”. *University of Liverpool Special Collections*.

⁹⁷ William Rathbone VI to Eleanor Rathbone, May 3, 1841. “Rathbone Family Papers”. *University of Liverpool Special Collections*.

⁹⁸ William Rathbone VI to Eleanor Rathbone, May 3, 1841. “Rathbone Family Papers”. *University of Liverpool Special Collections*.

social niceties, this invitation was an endorsement of both young William Rathbone and his family’s firm as a member of Baring Brothers’ American inner circle.

Following these visits, Rathbone sent a constant stream of information regarding the state of trade and the reputation of particular merchants, all designed to provide his father with the knowledge necessary to make strategic investment in the American economy. He passed information not only about the reliability of merchants, but also in their commodity of specialty. Rathbone informed his father on the merchants who specialized in commodities, noting that “In looking to the NY Houses likely to increase your business...Hicks and Co., Goodhue and Co. & L. Fowler are most likely to meet your views – As the richest in proportion to business H&C (Hicks and Co.) in times of monetary pressure could probably act to most advantage and are the most likely to operate in grain.”⁹⁹

One year later, Rathbone traveled back to the United States, again with Bates, with a more concrete plan in place: venture inland to scout for potential investments in the American interior. At the beginning of his trip, wheat was not the object of his interest, as his family’s interest in tobacco and cotton remained paramount.¹⁰⁰ His interaction with the American landscape forced him to re-evaluate this emphasis. During this trip, Rathbone traveled across the Erie Canal, into western New York and Ohio, and saw firsthand the vast potential of American wheat agriculture in the Great Lakes Basin. Like Cobden, Rathbone was struck by the “unfinished state of things” and the large swaths of “indifferently cultivated” land.¹⁰¹ But this agricultural system masked the land’s potential as a source of food. Commenting on the

⁹⁹ William Rathbone to Rathbone Brothers & Co, No date, “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

¹⁰⁰ William Rathbone VI to William Rathbone V and James Powell, May 23, 1842. “Rathbone Family Papers”. *University of Liverpool Special Collections*.

¹⁰¹ William Rathbone to Eleanor Rathbone May 9, 1841. “Rathbone Family Papers”. *University of Liverpool Special Collections*.

landscape of New York State, Rathbone relayed ““There certainly never was a country for which nature had done so much as she had for this, navigable rivers, in all directions, a seas coast abounding in most beautiful harbours... food in the greatest abundance and variety.”¹⁰² To Rathbone, this naturally-endowed potential was the true quality of the American landscape, one that had to be unlocked “by [a] most enterprising and industrious and intelligent race of men” and channeled “by British capitalists.” “All these natural advantages,” wrote Rathbone, “wanted but the aid of capital to make them available.”¹⁰³

Even if it wasn’t his starting objective, the 1842 trip left Rathbone with a vision for his family firm to become more involved in the grain trade. This view he summed up in an 1848 letter to his father in which he explained “I shall be much pleased if, after reconsidering the matter, you come to the conclusion that the trade in American Breadstuffs an article good, of ready and universal sale, a large choice of buyers therefore, insurable (in America) with the particular average and on account from the North, where morals are better and means are greater than in the Cotton regions.”¹⁰⁴ The “greater means” in this case likely referred to the financial and transportation structure built by the Baring Brothers network in the preceding twenty years. The result was that Rathbone could look at the northern wheat frontier as a sound investment like southern cotton.

Rathbone understood that wheat represented an investment that could stand well over time. Humans did need to eat, after all. He related this bodily function directly to the function of England’s economy, however. He wrote his father in 1848 that “England has hitherto been

¹⁰² William Rathbone to Rathbone Brothers & Co, May 21, 1841. “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

¹⁰³ William Rathbone to Rathbone Brothers & Co, May 12, 1841, “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

¹⁰⁴ William Rathbone to Rathbone Brothers & Co, Dec. 2/26, 1848, “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

living on her stocks of produce and decreasing them,” making importation necessary.¹⁰⁵

Knowing from his growing business connections that the “Consumption of Wheat...in Great Britain may prove enormous,” Rathbone considered the inverse relationship between falling domestic supply and growing population a place for potential profit.¹⁰⁶ This realization prompted Rathbone to lobby his father for his family’s expansion into the wheat trade: “I prefer to have at least some part of our business in grain for the Mills which consume it are the last put on short allowances and death is the only stoppage they know. It is therefore saleable when hardly anything else is.”¹⁰⁷ This was at once a statement of business strategy and an articulation of an economic vision, born from an assumption that human economies are powered by the food that courses through them. Food can weather economic downturns better than any commodity because economies are powered by humans who need food to labor and produce capital.

Despite his father’s reluctance, William Rathbone began to conduct a small trade in wheat between the United States and England in the 1840s. During his 1842 trip, Rathbone reported that “the wheat crop is expected to be unusually abundant and the weather has been favorable to all sorts of produce.”¹⁰⁸ Shortly thereafter, Rathbone forged an association with Ross T. Smyth, a Liverpool importer who had previously concentrated on importing Irish wheat. Together, Smyth and Rathbone formed Ross T. Smyth & Co. which in the coming years would become the largest wheat importing firm in Liverpool.¹⁰⁹ Making use of Rathbone’s New York business connections, the firm began importing wheat soon after his 1842 visit. This business

¹⁰⁵ William Rathbone to Rathbone Brothers & Co, Jan. 18, 1848. “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

¹⁰⁶ William Rathbone to Rathbone Brothers & Co, June 26, 1855. “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

¹⁰⁷ William Rathbone to Rathbone Brothers & Co, Oct. 28/31, 1848. “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

¹⁰⁸ William Rathbone VI to William Rathbone William V to James Powell, William Rathbone to Rathbone Brothers & Co, June 2, 1842, “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

¹⁰⁹ George Broomhall and John Hubback, *Corn Trade Memories Recent and Remote*. (Liverpool: Northern Publishing Co., 1930), 172–173.

was done entirely within the Baring Brothers network, consigned with the New York and Barings-affiliated firms of Hicks & Co and Suydam, Sage & Co.. These shipments were not small: one 1842 deal between Suydam and Sage and Ross Smyth was contracted for 4,000 barrels of flour.¹¹⁰ Another with Hicks & Co amounted to 14,000 barrels.¹¹¹ During these early years, Rathbone constantly sought ways of expanding into the grain trade: asking associates for information from “corn circulars going some years back” or engaging in small deals “or take a little additional to secure new connections.”¹¹²

Rathbone was not only British citizen swayed by the prospects for the American wheat economy and its relationship to the British market. Throughout the early 1800s, a large and popular body of travel literature on the United States focused on the natural advantages of the United States. Approximately two hundred published accounts of British subjects touring the United States from the late 1830s to 1860 exist.¹¹³ Many of these published accounts fall into the category of “business tourism” – scouting for investments, relaying potential deals, or protecting investments and business rights already in place. Some these accounts, such as those published by Basil Hall, Fanny and Anthony Trollope, and Charles Dickens, were quite popular and widely read in England.¹¹⁴ Assuming these published accounts represent but a small fraction of the total number of travelers during this time period, a very considerable number of British individuals journeyed throughout the U.S. in the half-century prior to the American Civil War. While it was

¹¹⁰ William Rathbone VI to William Rathbone V and James Powell, May 26, 1842. “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

¹¹¹ William Rathbone to Rathbone Brothers & Co. Oct. 21, 1848. “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

¹¹² William Rathbone to Rathbone Brothers & Co, Oct. 10, 1848. “Rathbone Family Papers, American Business”. *University of Liverpool Special Collections*.

¹¹³ See Max Berger, *The British Traveller in America, 1836-1860* (New York: Columbia University Press, 1943).

¹¹⁴ Basil Hall, *Travels in North America, in the Years 1827 and 1828* (Philadelphia: Carey, Lea & Carey, 1829); Fanny Trollope, *Domestic Manners of the Americans* (London: Whittaker, Treacher & Co., 1832); Anthony Trollope, *North America* (New York: Knopf, 1951); Charles Dickens, *American Notes*, Modern Library ed. (New York: Modern Library, 1996); Allan Nevins, *America Through British Eyes* (New York: Oxford University Press, 1948).

popular to remark on the unfinished nature of the American landscape, most also realized that within this uncouth appearance lay an opportunity.¹¹⁵ Many, like one traveler, saw in America the potential for “the unexampled prosperity of the Anglo-American nation continue, and the progressive development of her resources.”¹¹⁶

Others travelers linked Anglo-American connections more directly to grain. Traveler James Robertson noted during his trip that New York’s “exports are comprised of gold, breadstuffs, provision, &c., by far the greater portion of which is sent to Great Britain.”¹¹⁷ With a bit more rhetorical flourish, Anthony Trollope related his experiences in Buffalo and Chicago in 1862, “I saw the wheat running in rivers from one vessel into another, and from the railroad vans up into the huge bins on the top stores of the warehouses ; — for these rivers of food run up hill as easily as they do down.” He saw this river running right towards England. “The grand markets,” he wrote, “to which the western States look and have looked are those of New England, New York, and Europe.” And in these cities and across the land, Trollope took a lesson: “the State of New York, which, thirty years ago, was famous chiefly for its cereal produce, is now fed from these States [now] New York city would be starved if it depended on its own State; and it will soon be as true that England would be starved if it depended on itself.”¹¹⁸ By the 1850s, the British nation began to look increasingly to the United States as a potential source of its food. Such a vision was not possible in 1796 when Alexander Baring first came to the United States.

¹¹⁵ C. Mulvey, *Anglo-American Landscapes: A Study of Nineteenth-Century Anglo-American Travel Literature* (Cambridge: Cambridge University Press, 1983).

¹¹⁶ Henry Tudor, *Narrative of a Tour in North America...2 vols.* (London: James Duncan, 1834), viii-ix.

¹¹⁷ James Robertson, “A Few Months in America: Containing Remarks on Some of Its Industrial and Commercial Interests”, in Kenneth T. Jackson and David S. Dunbar, eds., *Empire City: New York Through the Centuries* (New York: Columbia University Press, 2002), 229

¹¹⁸ Trollope, *North America*, 147–151.

Conclusion

Between 1790 and 1850, British capital laid the groundwork for American wheat surplus and British interaction with the American landscape served to connect the wheat markets of both nations the minds of merchants. Crucial in both processes was the development of a network of Anglo-American merchants based upon the British merchant bank Baring Brothers. Using measures developed by general merchants since the Renaissance Alexander Baring, James G. King, Richard Cobden, and William Rathbone participated in a process that would set the stage for the growth of a transatlantic free trade movement in the 1830s and 1840s and the explosion of exports from the United States to Great Britain in the 1850s and 1860s. Cobden and Rathbone, in particular, operated at the center of these events.

The development of the Anglo-American grain trade came about largely by through the pragmatic decisions of a transatlantic merchant network to manage the risks of the undeveloped American economy. Prior to the 1830s and 1840s, most British investment in the American economy did not revolve around wheat. A small portion of the American wheat crop was exported and most production stayed local or regional. What little grain was exported headed to the slave populations of the Caribbean and South America. Even when American grain flowed to Europe, it largely went to Spain, Portugal, and France. Prior to the 1850s, most wheat imported into London came from Russia and Prussia through merchant houses operating on the opportunistic model developed by Claude Scott and others more than a generation earlier.¹¹⁹

The merchant network developed in the 1820s and 1830s based around the portfolio and trade investments of Baring Brothers, Brown Brothers, and other transatlantic merchant firms set the stage for the quick take-off of American wheat exports after the 1850s. By providing capital to fund the development of the northern financial and transportation system, these merchant

¹¹⁹ Rothstein, “American Wheat and the British Market, 1860-1905,” 110–154.

firms and their associates created fertile conditions for the production of a surplus wheat crop and its efficient transportation to the seaboard. In an attempt to manage their risk in a shaky American economy, Baring, King, and Rathbone all laid the vital groundwork for the convergence of the American and British wheat economies that would take place in the 1870s and 1880s.¹²⁰

These investments and networks did not take place apart from the food landscapes that sustained them. Time and again, British merchants traveled through the American countryside and were struck at the abundance of crops and natural outlets for produce. As either British agents or British citizens, these merchants could not help but relate the condition of the American countryside to the triumphs and difficulties of England’s manufacturing economy. As businessmen, it was clearly evident to them that the United States was rich in agriculture but poor in capital while Great Britain was capital rich but struggled under the weight of periodic food shortages.

These connections became all the more clear in the 1830s and 1840s as (1) the American transportation and financial system opened up agriculture in the Great Lakes Basin and (2) the British economy struggled under the weight of successive harvest failures that would come to be known as “the hungry forties.”¹²¹ By the late 1830s, canals and ample capital had stimulated the growth of an American surplus of wheat which could not be marketed abroad due to the British Corn Laws.¹²² It is no surprise, then, that the free trade movement in both countries came to be focused on wheat during this period. Just as capital and trust moved around the transatlantic

¹²⁰ M. Ejrnaes, K.G. Persson, and S. Rich, “Feeding the British: Convergence and Market Efficiency in the Nineteenth-Century Grain Trade,” *Economic History Review* 61, no. S1 (2008): 140–71.

¹²¹ G. Kitson Clark, “The Repeal of the Corn Laws and the Politics of the Forties,” *The Economic History Review* 4, no. 1 (January 1, 1951): 1–13; Jeffrey G Williamson, “The Impact of the Corn Laws Just Prior to Repeal,” *Explorations in Economic History* 27, no. 2 (April 1990): 123–56.

¹²² Julian P. Bretz, “The Economic Background of the Liberty Party,” *The American Historical Review* 34, no. 2 (January 1, 1929): 259.

merchant network, so too would the free trade movement cycle its ideas between the two countries and share ultimate victory in the fateful year of 1846.

Chapter 4 - This Mighty Instrument of Concord: Wheat in the Transatlantic Free Trade/Free Labor Debate, 1830-1846

Following three decades of British portfolio investment in the United States, a collection of transatlantic farmers, businessmen, lawyers, and politicians came to see trade in wheat between the United States and Great Britain as a panacea for the economic and political problems in both countries during the 1830s and 1840s. These individuals fixed their beliefs around the overlapping goals of free trade and anti-slavery. They publicized their beliefs and convinced many on both sides of the Atlantic an Anglo-American grain trade was not only possible, it was inevitable. This free soil, free trade campaign comprised the major early connective tissue between the wheat producers of the United States and a potential British market.¹

The repeal of the British Corn Laws in Great Britain and the beginnings of a political free soil, free trade movement in the United States sprang from a transatlantic network of merchant politicians who sought to sell American wheat on the British market in return for manufactured goods. Putting to work the idea of comparative advantage, these individuals – including Richard Cobden, Charles Villiers, Jonathan Sturges, Joshua Leavitt, and William Rathbone – held a political economic vision that sought to create a natural harmony of trade between the United States and Great Britain based on the agricultural surplus of the former and the manufacturing prowess of the other. These individuals saw nature as a global human-centered system, where an abundance of resources in one region would make up for the deficit in another. They believed

¹ Free soil ideology sprang from a desire to retain political control of the federal government by limiting the expansion of slavery into the territories. Historians have recognized that this anti-slavery political action was more pragmatic and political than evangelical abolitionism. See Michael A. Morrison, *Slavery and the American West: The Eclipse of Manifest Destiny and the Coming of the Civil War* (Chapel Hill: University of North Carolina Press, 1997); Richard O. Johnson, *The Liberty Party, 1840-1848: Antislavery Third-Party Politics in the United States* (Baton Rouge: Louisiana State University Press, 2009), 1–13.

that if human laws could map on to these divinely-inspired laws of nature, human societies and economies could function in complete harmony.²

British and American free trade partisans did not fail to notice the considerable growth in the surplus production of American wheat in the 1840s and 1850s. These individuals also observed rampant harvest failures in Great Britain accompanied by working-class volatility and a slump in the international economy beginning in the mid-1830s. Free trade, abolitionist merchant-politicians in both countries reached out to each other in an attempt to produce a united front that would lobby both governments to repeal the protectionist laws they saw as unnaturally upholding a dominant class of landowners in both countries.³

The idea of free and fair wage labor and a natural flow of trade goods underpinned both the British Anti-Corn Law movement and the American free soil campaign of the 1840s and 1850s. In Great Britain, Richard Cobden stitched together a group of merchants and politicians from London and the industrial North to argue that England’s economy and the lives of wage-earners would benefit from the lower cost of food that would come with free trade. They believed that workers could use their wages to buy more manufactured goods. In the United States, wheat producers (that is, wheat farmers and merchants) tied the free wage system with the explosion of wheat surplus in the United States. They believed that the Corn Laws incentivized American slavery and lead to the political dominance of the “cottonocracy” by cutting off American wheat surplus produced from wage labor from the British market and enriching southern cotton producers. The perspectives of merchants and politicians in both countries grew out of the three central tenants of anti-Corn Law free trade in the nineteenth century: (1) nature

² Ian Simpson Ross, *The Life of Adam Smith* (Oxford; New York: Clarendon Press ; Oxford University Press, 1995), 32–56; D. Worster, *Nature’s Economy: A History of Ecological Ideas*, vol. 2nd (Cambridge: Cambridge University Press, 1994), 5–37.

³ Simon Morgan, “The Anti-Corn Law League and British Anti-Slavery in Transatlantic Perspective, 1838-1846,” *The Historical Journal* 52, no. 01 (March 2009): 87–107.

was a global system, (2) food supply dictated socio-economic performance, and (3) exchange based on comparative advantage achieved natural and economic harmony.

Nature as idea *and* physical process played an important guiding role in the ascendancy of free trade in the Anglo-American world in the 1830s and 1840s. Slavery and protectionism were both sins against nature according to free traders. Nature favored the free exchange of the products of wage labor.⁴ The global idea of a natural order employed by free trade merchant-politicians, seemed to map on to large-scale North Atlantic weather processes and the physical productivity of American agriculture during the 1830s and 1840s. The eventual repeal of the Corn Laws and the solidification of a network of merchants committed to realizing the vision of free trade through the exchange of American wheat for British manufactured goods and capital cannot be fully explained without describing the ways in which merchant politicians thought about nature and how natural processes shaped the timing and course of the transatlantic free trade debate.⁵

The network of free soil free trade merchants who succeed in opening the wheat markets of the United States and Great Britain to each other in 1846 was the manifestation of developments outlined in the previous two chapters: (1) the development of free trade ideology as cure to volatility of English manufacturing economy and (2) the development of transportation and finance networks that encouraged American surplus. During a renewed cycle of harvest failures in the 1830s and 1840s in England, merchants and politicians again began to discern the relationship between the manufacturing economy and the price of wheat. During this period, merchants and politicians connected the explosion of working-class volatility and economic

⁴Harold James, “Globalisation, Empire and Natural Law,” *International Affairs* 84, no. 3 (2008): 421–36.

⁵ R.M. Young, *Darwin’s Metaphor: Nature’s Place in Victorian Culture* (Cambridge: Cambridge University Press, 1985); Mark Stoll, *Protestantism, Capitalism, and Nature in America* (Albuquerque, NM: University of New Mexico Press, 1997); B.T. Gates, *Kindred Nature: Victorian and Edwardian Women Embrace the Living World* (Chicago: University of Chicago Press, 1998).

downturn as a result of the Panic of 1837 to the folly of relying on a small region for the production of wheat which inevitably raised the price of food – especially during failures – thus contributed to the stresses of the working-class. They employed the idea of comparative advantage to focus their attention squarely on the Corn Laws and the protective system that cut off Great Britain from the exploding wheat production of the United States.

The Corn Laws Regain New Saliency

By the late 1830s Richard Cobden argued publically that relying on domestic harvests to feed England’s growing population was producing economic downturn and working-class volatility. Following his publication of *England, Ireland, and America* and his return from the United States, Cobden jumped headlong into politics. He became a city alderman for Manchester in 1836 and unsuccessfully ran for Parliament for Stockport in 1837 on a free trade, liberal platform. Cobden surveyed the political and economic situation of the 1830s – marked by successive wheat harvest failures, transatlantic economic panic in 1837, and growing working class agitation and concluded that the greatest ill befalling the British nation was a lack of steady, affordable food. The triple threat of crop failures, economic downturn, and working-class strife in Britain during the 1830s and 1840s opened the way for a key group of individuals to position free trade in wheat with the United States as the answer the Britain’s food deficit and to highlight the extent to which the Corn Laws operated against the laws of nature. As the primary caloric nourishment for Britain’s population, wheat took center stage in this debate.⁶

Cobden published *England, Ireland, and America* and visited the United States on the heels of a period of remarkably warm and dry weather in England. The bountiful harvests of the

⁶ John Burnett, *Plenty and Want: A Social History of Diet in England from 1815 to the Present Day*, Rev. ed. (London: Scolar Press, 1979); Christian Petersen, *Bread and the British Economy, c1770-1870* (Hants, UK: Scolar Press, 1995).

1820s and early 1830s resulted in a period of low grain prices.⁷ In 1835, grain prices dropped to a fifty-five year low.⁸ Nevertheless, Cobden was committed to growing manufactures via free trade, to moving the English economy away from reliance on the “the sterile land and inhospitable climate” that had long supported agriculture and to “on our mineral riches.”⁹ Cobden of course knew that for much of English history the nation was a producer of bountiful wheat harvests. Industrialization, however, changed the equation. A new economic and natural order emerged, one that Great Britain ignored at its peril. “The coal and iron of Great Britain,” Cobden wrote, were “the primary sources of all her wealth and power.” These minerals fostered a “rapid rise in the population and wealth.” England was no longer able to flourish based on domestic agriculture alone.¹⁰ Shifting the economic focus of the country to manufacturing, Cobden argued, was in Britain’s best interest. Manufacturing allowed Britain to use its mineral endowments to build her economy and exchange manufactures with agricultural nations blessed with rich soils and deep harbors. In this way, a dual market would emerge: a market for finished goods in agricultural nations and a market for food and raw materials in England. Under the protectionist Corn Laws, however, Britain continued to “disdain to avail ourselves of the privileges which nature offers to us.”¹¹ While Cobden developed these ideas amid the fine harvests of the early 1830s, nature would soon provide him with steady evidence that relying on English wheat alone to feed industrialization would cause rampant hunger, economic stagnation, and working-class strife.

⁷ J. M. Stratton, Jack Houghton Brown, and Ralph Whitlock, *Agricultural Records, A.D. 220-1977*. (London: J. Baker, 1978), 98–102.

⁸ Petersen, *Bread and the British Economy*, 276–306.

⁹ Richard Cobden, *Political Writings: England, Ireland and America, 1835; Russia, 1836. 1793 & 1853* (London: William Ridgeway, 1867), 149.

¹⁰ *Ibid.*, 13.

¹¹ *Ibid.*, 7.

As Cobden coalesced the disparate interests manufacturing and free trade into the Anti-Corn Law movement, a conveyor-belt of cold wet weather streamed off the North Atlantic enabling Cobden and free traders alike to use nature as evidence of protectionism’s folly.¹² Following the bumper crop of 1835, there were a series of exceptionally hard winters and wet growing seasons. Harvests were poor between 1836 and 1839.¹³ 1836 was a “backward harvest” following a “unusually severe” winter and wet spring. A long, cold spring produced a below-average crop in 1837. 1838 opened with “a period of frost that lasted for nearly two months” and a cold, wet summer produced yet another poor wheat crop. There was “much snow in the middle of May,” 1839, and when “rain fell almost incessantly in July,” many crops were badly damaged.¹⁴ Short crops continued into the early 1840s – giving rise to the term “hungry forties” – a period of reduced harvests all over Europe and Asia.¹⁵ By 1841, in the wake of heavy September rains, many in the England’s industrial north sought poor relief and food handouts.¹⁶ In the Black Country near Birmingham, large numbers of workers lived under near starving conditions.¹⁷

Cobden and others saw the ripple effect the Corn Laws and these poor harvests had on the British economy. The 1828 Corn Law, which shaped the country’s response to these poor harvests, encouraged the dramatic rise in wheat prices during shortages through its “sliding scale” of duties. Due to these Laws, while flour was imported into Great Britain from the United

¹² G. Kitson Clark, “Hunger and Politics in 1842,” *The Journal of Modern History* 25, no. 4 (December 1, 1953): 355–74; A. Briggs, *Chartist Studies* (London: Macmillan and Co., Ltd., 1960), 10–32; James Vernon, *Hunger: A Modern History* (London England: Belknap Press of Harvard University Press, 2007), 13–43; Charlotte Boyce, “Representing the ‘Hungry Forties’ in Images and Verse: The Politics of Hunger in Early-Victorian Illustrated Periodicals,” *Victorian Literature and Culture* 40 (2012): 421–49.

¹³ Stratton, Brown, and Whitlock, *Agricultural Records, A.D.220-1977.*, 104–105.

¹⁴ *Ibid.*

¹⁵ Willard Long Thorp, *The Business Annals of England* (London: National Bureau of Economic Research, 1926), 160–161.

¹⁶ Herbert J. Wunderlich, “Foreign Grain Trade of the United States, 1835-1860,” *The Iowa Journal of History and Politics* 33 (January 1835): 57.

¹⁷ Briggs, *Chartist Studies*, 8.

States, primarily from New York, the imported flour was often forced into bonded warehouses where much of those supplies deteriorated due to poor storage conditions.¹⁸ Additionally, the sliding scales rewarded holders of wheat in bond to wait until prices rose so high that the duty for distributing wheat domestically would drop to near zero. According to one expert on the Corn Laws, the “tendency” of the 1828 Corn Law was “to foster a spirit of gambling speculation...by holding back from the market. “The average price,” he continued, “can be raised only 7s. higher, the duty would be only 1s., amounting to £40,000 for the whole, and making a difference to the holders of £786,000 in the fall of duty, and £280,000 by the advance of prices – a pretty speculation.” By this time, however, wheat was often unaffordable for the poorest of the working-classes, such as the large Irish population of Manchester and Liverpool, or the starving workers of Birmingham. “Thus,” the writer glumly concluded, “immense fortunes are realized to the sagacious and lucky, while the price of food is kept unnaturally high; and yet the government receives but little revenue from the duty.”¹⁹ As another reporter aptly described:

The effects of the [1828] corn law is this: whenever prices rise considerably, the dealers in grain ascertain by sending agents over the kingdom what are the prospects of the coming crop. If they are unpromising, then orders are forthwith sent to the foreign markets to purchase grain, to be imported and held in bond until the price can be raised high enough to reduce the duties. This requires to be done as rapidly as possible, and hence the grain of the nearest markets is first brought up, such as Rotterdam, Danzig, &c. This is bought on credit, but as these countries take but few manufactured goods from England, they day of payment produces a rapid export of specie. This soon begins to drain the Bank of England, which, being the grand regulator, is obliged above all other things to regulate itself.²⁰

By encouraging the export of capital to obtain food imports and by reducing the food available to power human labor, the crop failures of the 1830s and 1840s contributed to a general economic downturn within Great Britain. Cobden received such news from a correspondent in 1842: “the State of trade is very deplorable – do not doubt if there is a means of selling Mills and

¹⁸ Thomas P. Martin, “The Upper Mississippi Valley in Anglo-American Anti-Slavery and Free Trade Relations: 1837-1842,” *The Mississippi Valley Historical Review* 15, no. 2 (September 1928): 205, doi:10.2307/1895645.

¹⁹ Joshua Leavitt, *Memorial of Joshua Leavitt, Praying the Adoption of Measures to Secure on Equitable and Adequate Market for American Wheat: February 27, 1841, 1841*, 12.

²⁰ *Ibid.*, 14.

Manufacturers there would be plenty of Manufactories broken up.”²¹ The 1815 and 1828 Corn Laws worked to favor the export of capital at fragile times, during famines or high price to buy wheat abroad at higher prices. Following crop failures in the late 1830s, the Corn Laws triggered a period of grain imports at inflated prices that failed to stem hunger in industrial cities and weakened an economy already laid low by a transatlantic economic downturn in 1837. Recall that even Alexander Baring, who had by this time altered his viewpoint on free trade to a protectionist stance more in line with his peerage, supported lower duties on wheat. In the wake of successive failed harvests, Baring argued, “gold must go out for food” and, as the Bank Charter Act of 1844 restricted the use of bills by every bank but the Bank of England, the drain of “four or five millions of gold from the bank created a general monetary “scarcity” around England which restricted trade and prevented investment.”²²

Viewed from the London counting house of Baring Brothers or from Cobden’s Manchester home, the transatlantic Panic of 1837 and ongoing downturn into the 1840s revolved around food production and international trade.²³ American economic historians have noted that the Panic of 1837 was an international phenomenon that ultimately stemmed the collapse of a complex web of investments and credit stretching into the American wheat and cotton frontiers.²⁴ This web expanded or contracted depending on the supply of American commodities and the

²¹ Thomas Ashworth to Richard Cobden, June 8, 1842. “Papers of Richard Cobden,” *The British Library*.

²² Alexander Baring Ashburton, *The Financial and Commercial Crisis Considered*, 2d ed (London: J. Murray, 1847), 36–37.

²³ J.D. Chambers and G.E. Mingay, *The Agricultural Revolution, 1750-1880* (London: B.T. Batsford, Ltd., 1966). 151. Chambers and Mingay argue that throughout this period, Great Britain was in the midst of an ‘Agricultural Revolution.’ British agricultural historians have noted that scientific farming, new rotation practices, and growing use of fertilizer caused domestic wheat output to grow 255 percent between 1750 and 1850. In this light, the economic downturn of the late 1830s was but a short drop in agricultural output. The point however, remains that free traders used this temporary drop in production to position themselves as champions of the working and agricultural poor. See M.E. Turner, J.V. Beckett, and B. Afton, *Farm Production in England, 1700-1914* (Oxford: Oxford University Press, 2001).

²⁴ Peter Temin, *The Jacksonian Economy* (New York: W.W. Norton & Company Inc., 1969); Jessica M Lepler, *The Many Panics of 1837: People, Politics, and the Creation of a Transatlantic Financial Crisis* (New York: Cambridge University Press, 2013), 10–13.

British demand. During the mid-1830s it seemed to businessmen and politicians on both sides of the Atlantic that their economies were dependent on weather in Britain. No less an authority than Daniel Webster, visiting England in 1839 amid these crop failures, remarked “if there is a frost in England fifteen days later than usual, or a few days drought, or ten days cold instead of dry and warm, every exchange in Europe and America feels the consequence.”²⁵ Responding to domestic crop failures, British wheat merchants imported growing quantities of wheat from the Continent, Russia, and the United States – draining the British economy of money and creating inflation elsewhere. This drain of bullion weakened the British banking system, caused a lack of credit, and initiated a wave of bank and merchant failures throughout the Anglo-American world.²⁶

Cobden and other Anti-Corn Law partisans saw poor harvests and economic downturn translate directly into an increase in working-class volatility. By 1830, Great Britain was undergoing a radical change in its food economy. Encouraged by the 1828 Corn Law, grain merchants opened new regions of supply in Poland, France, Southern Russia, and Canada. Workers became dependent upon the market price of bread for their nourishment.²⁷ Workers across England were more dependent on wheat than ever before.²⁸ In this context, wheat crop failures gave rise to a nation-wide “language of hunger” that concentrated much of the working-class plight in their (in)ability to find enough food.²⁹ For contemporary critic Thomas Carlyle, the ills of industrialization crystallized to produce Chartism, which boiled over from “the bitter

²⁵ Leavitt, *Wheat Memorial*, 16.

²⁶ G.E. Mingay, *Land and Society in England, 1750-1980* (London: Longman Group Limited, 1994). *Wheat Memorial* 14-20.

²⁷ E. P. Thompson, “The Moral Economy of the English Crowd in the Eighteenth Century,” *Past & Present*, no. 50 (February 1, 1971): 76–136, <http://www.jstor.org/stable/650244>; B. Seebohm Rowntree, *Poverty: A Study of Town Life* (New York: Howard Fertig, Inc., 1971); John Bohstedt, “The Moral Economy and the Discipline of Historical Context,” *Journal of Social History* 26, no. 2 (December 1, 1992): 265–84.

²⁸ Petersen, *Bread and the British Economy*, 186–206; E. J. T. Collins, “Dietary Change and Cereal Consumption in Britain in the Nineteenth Century,” *Agricultural History Review* 25 (January 1975): 97–115.

²⁹ Briggs, *Chartist Studies*, 9.

discontent grown fierce and mad, the wrong condition therefore or the wrong disposition, of the Working Classes of England.”³⁰

All over England, radicals and conservatives alike were describing volatility in England as a matter of food. Alexander Baring placed blame at the export of specie required to obtain food after successive harvest failures. Richard Cobden noted that manufacturers did not have adequate overseas markets for their products because agricultural nations, those who were most likely to need British manufactures, were unable to exchange their bread and provisions for finished products. Politics, even, came under the broad rubric of food. For many in the working classes, political enfranchisement was not couched in the language of liberty or freedom, but of material want and food monopoly. Minister and reform-minded activist Joseph Rayner Stephens spoke in front of a large crowd on Kersal Moor in Manchester in favor of the People’s Charter which advocated for universal suffrage. “This question of universal suffrage,” he railed, “was a knife and fork question after all; this question was a bread and cheese question.” Stephens reflected the belief of many Chartists who saw suffrage first and foremost as a method of reducing want. Suffrage, Stephens went on, would ensure “that every working man in the land had a right to have a good coat to his back, a comfortable abode in which to shelter himself and his family, a good dinner upon his table, and no more work than was necessary for keeping him in health, and as much wages for that work as would keep him in plenty, and afford him the enjoyment of all the blessings of life which a reasonable man could desire.” That this statement was followed by tremendous applause and cheers demonstrate the wide acceptance of such a stance.³¹ Lack of food was the central wrong: a symbol of the aristocracy’s power over land, the corrupt political process, and the capitalist control over the necessities of life. Working-class

³⁰ Thomas Carlyle, *Chartism*, 2nd ed. (London: James Fraser, 1840), 2.

³¹ *Northern Star*, Sept. 29, 1838; n.a., *The Annual Register, or a view of the History and Politics of the year 1838* (London, J.G.F Rivington, 1839), 311.

radical William Cobbett assumed as much when he challenged “I defy you to agitate a fellow with a full stomach.”³²

For Cobden, Chartism was both a result of the Corn Laws and a movement that had to be, and could be, bottled up if the nation committed to cheap bread and affordable food prices. Chartism, a pan-working class movement designed to increase the political power of the unrepresented masses, attempted to improve the material conditions of the working class through universal male suffrage.³³ As one British labor historian puts it “working-class radicalism in early-Victorian England embodied not only a protest against hunger and want, but also for a demand for the creation of a new and better society” that would turn those material wants into reality.³⁴ The movement used a host of mobilization strategies including publications, reading societies, and (most ominous for conservative onlookers) large public gatherings featuring revolutionary speeches.

As harvest failures continued into the early 1840s, Richard Cobden noticed that the nation’s poor was gripped in a food and economic crisis. Lamenting this state, Cobden also realized that continued dearth confirmed his free trade ideas and made the country ripe for a political movement based around the repeal of the Corn Laws. Cobden recognized volatility of country and opportunity for free traders and he simultaneously wished to rectify the great hunger of the working classes, prevent crippling working-class revolution, and decrease the vested interests of the aristocracy. He summed these multiple and overlapping goals in a letter to free trade MP Charles Villiers of Wolverhampton in 1838:

The wretches who toil at these articles, with a disadvantage of 40 to 50 [ur] in the cost of the necessity [ur] of life, must work proportionately harder and longer to sustain a living compensation against the more cheaply fed German or Swiss. Hundreds of thousands of these miserable people (including their families) have endured as severe sufferings during the last twelve months, in Nottingham, in Yorkshire, Lancashire, etc as at any former period. If

³² Quoted in Briggs, *Chartist Studies*, 20.

³³ Briggs, *Chartist Studies*, 42.

³⁴ Trygve R Tholfsen, *Working Class Radicalism in Mid-Victorian England* (London: Croom Helm, 1976), 25.

you have not heard a violent outcry it is because they are scattered and dispersed by the nature of their avocations, and therefore do not assemble in majors, to make themselves heard and [ur]. ...With the counties so many close boroughs in the pockets of the two great parties of the aristocracy what claim can the democratic interest possess? The ballot, as the most effectual remedy against such undue influence must be the first step toward a repeal of the corn-laws.³⁵

While modern climatologists would call the poor harvests of the 1830s and 1840s symptoms of persistent low NAO indexes, Richard Cobden saw them as an opportunity. Being the humanitarian and political calculator he was, he could report with horror that “the country is in a most fearful state – All parts are suffering alike...Leeds is fairing worse than Manchester, and Sheffield is perhaps even worse than Leeds!” at the same time he would ask colleagues to use the desperate state of the working-class as leverage in their political battle.³⁶ “This is a most eventful moment, he wrote a League colleague in 1841, “London is rising in every quarter. Good measures are ours if properly directed...a compromising policy will waste us.”³⁷ Responding to these conditions, Cobden helped form the Manchester Anti-Corn Law Association in 1836 to lobby against the Laws, proclaiming “the repeal of the corn laws...resolves itself into one of absolute state necessity.”³⁸ According to Cobden, the Laws struck at the very life of Britain: “to prohibit the import of corn, such as is actually the case at this moment, is to strangle infant commerce in its cradle; nay, worse, it is to destroy it even in its mother's womb.”³⁹ Others came to call the Corn Laws “a barbarous and inhuman law, which inflicts unmitigated suffering on the poor for the benefit of the rich.”⁴⁰ Lawmakers attempted to resolve these systemic high prices by passing a modified Corn Law in 1842 – introducing lower mark at which the sliding

³⁵ Richard Cobden to Charles Villiers, Feb. 17, 1838. “Cobden Letters,” *The British Library*.

³⁶ Richard Cobden to Thomas Ashworth, July 11, 1842, “Cobden Letters,” *The British Library*.

³⁷ Richard Cobden to Thomas Ashworth, May 5, 1841, “Cobden Letters,” *The British Library*.

³⁸ Cobden, *Political Writings of Richard Cobden*, 145.

³⁹ *Ibid.*

⁴⁰ *Is Cheap or Dear Bread Best for the Poor Man?* (London: James Ridgway, 1841), 4.

scale of imports would start – but it was too little too late.⁴¹ By 1840, it was clear that the entire economy of Great Britain was struggling under the weight of successive crop failures.

Increasingly, businessmen and the working-class alike came to locate the Corn Laws themselves as *the* central problem facing the British economy.

Answering National Uncertainty with Naturalized Free Trade

When the regional Manchester Association reorganized itself as the national Anti-Corn Law League in 1838, one of Cobden’s first moves was to hire Scottish lawyer Sidney Smith as the league’s primary lecturer. The appointment of Smith is noteworthy for two reasons: (1) it highlights the calculated nature of the League’s political mobilization and (2) its earnest commitment to espousing a natural theology of free trade that linked that mobilization to the earnest belief that British political economy should mimic the divinely-ordained laws of nature.

Beginning in 1838, Cobden’s plan converged with the free trade community in Manchester, the established Anti-Corn sympathies of Wolverhampton MP Charles Villiers, and the ample donations of the Strutt, Biggs, and Greg mill-owning dynasties to form first the Anti-Corn Law Association of Manchester and then, a year later, the more nationally-ambitious Anti-Corn Law League. At the beginning, the League’s committee considered the organization as an extra-partisan, public relations body, and immediately set about sending lecturers like Smith to promote the cause of free trade throughout England, Wales, and Scotland. The League also began printing the *Anti-Corn Law Circular* in 1839 (later renamed the *Anti-Bread Tax Circular* and then, *The League*, referred to simply as the *Circular* below) which espoused their moral, economic, and social reasons for backing repeal and often – in line with League policy early on – skirting political partisanship. Beginning in the 1840s, however, the League found itself more

⁴¹ C. Schonhardt-Bailey, *Free Trade: The Repeal of the Corn Laws* (Bristol: Thoemmes Press, 1996), 191–226.

directly involved in politics, first running a Leaguer for a Parliamentary seat from Walsall in 1841 and then maneuvering to place itself as the primary vocal opposition to Peel’s new Conservative ministry later that year. By 1842, the League was a well-funded and national instrument for the free trade movement, serving public relations through the lectures of Sidney Smith and John Bright and making political inroads in Parliament through the effort of Villiers and Cobden, the latter being elected to Parliament from Stockport during the general election of 1841. The League was also the primary fund raising mechanism for the free trade movement and a major force in voter registration in industrial cities and free trade bastions.⁴²

Conservative Prime Minister Robert Peel observed the growing power of the League, and noted the increasing difficulty of a Conservative defense of restrictions on food imports during continued harvest failures and mounting famine in Ireland, he sought to maneuver to obliterate the growing Radical movement by repealing the Corn Laws himself. As the League began preparing for an anticipated General Election in 1848 when it hoped to run its own candidates and make the Corn Laws the decisive issue of the entire campaign, Peel debated among his Cabinet the best way to simultaneously reduce the power of the Radicals and provide relief for the growing food shortage throughout Great Britain.

Peel ultimately decided upon repeal because successive British crop failures (exemplified by the horror of the ongoing Irish Potato Famine) and the agitation of the Anti-Corn Law League had whipped up national furor for repeal.⁴³ He calculated that a concession for repeal would

⁴² For complete histories of the Anti-Corn Law League, see McCord, *The Anti-Corn Law League, 1838-1846*; Schonhardt-Bailey, *Free Trade: The Repeal of the Corn Laws*; Pickering and Tyrrell, *The People’s Bread: A History of the Anti-Corn Law League*; C. Schonhardt-Bailey, *From the Corn Laws to Free Trade: Interests, Ideas, and Institutions in Historical Perspective* (Cambridge, MA: The MIT Press, 2006).

⁴³ Clark, “Hunger and Politics in 1842.”

strengthen his liberal-minded Conservative supporters and keep him in power.⁴⁴ Though the ramifications of this political move echoed outward into the global economy for more than a century, its primary purpose was not successful. Peel was removed from office not a year later, unable to table the disagreement that would eventually rip the Tories asunder. The party lived on as a fractured remnant of its former power for over a decade until revived by the brilliant political maneuverings of conservative protectionists Edward Smith-Stanley and Benjamin Disraeli in the late 1850s and 1860s.⁴⁵

Despite the complexity of their strategy and political life, it is possible to boil the ideas and motives behind the League to their core and follow them through the lectures of Sidney Smith. As English social historian Asa Briggs noted, Cobden and the League believed that repeal would accomplish four main goals at once. First, repeal would guarantee economic growth that would benefit all by providing a market for English manufactures in agricultural nations. Second, repeal would improve the lives of the working-class and remove the great issues behind their radicalism: the price of bread and material want. Third, repeal would make English agriculture more efficient in competition with foreign grain for industrial markets. Fourth, repeal would open the door for other nations to remove protectionist barriers and create a harmonious international order of peace and trade.⁴⁶ These ideas, in turn, can be distilled down to a central assumption about humans and their place within the natural order: that God had endowed nature with comparative gifts and it was up to humans to understand those endowments and create a political and economic system that best mapped onto them.

⁴⁴ Michael Lusztig, “Solving Peel’s Puzzle: Repeal of the Corn Laws and Institutional Preservation,” *Comparative Politics* 27, no. 4 (July 1, 1995): 393–408; E.J. Evans, *Sir Robert Peel: Statesmanship, Power and Party*, vol. 2nd (London: Routledge, 2006).

⁴⁵ Gambles, “Rethinking the Politics of Protection.”

⁴⁶ A. Briggs, *The Age of Improvement, 1763-1867* (London: Longmans, Green and Co., Ltd., 1967), 314.

Cobden appointed Sidney Smith as the League’s primary public lecturer in 1839. Soon, the League began to publish his lectures as an example to be followed by others. Subsequently, Smith became secretary of the League’s London operations and editor of the short-lived periodical, the *Free Trader*.⁴⁷ He was a follower of the political economy and natural theology of Scottish physiocrat Thomas Chalmers, citing the latter’s book *On Political Economy* as the authority “by which I can best refute my opponents.”⁴⁸ Smith, enjoying a well-earned reputation as a careful thinker and enthralling speaker, often earned the toughest lecture assignments from the League, venturing into the Chartist hotspots of industrial cities where League partisans were sometimes accosted during their speeches, or to the agricultural heartland of England’s southeast, the center of the pro-protection, landowner and agricultural response to the Anti-Corn Law League.⁴⁹ After his career in the League, Smith went on to become secretary for the engineering-based Master’s Association, wrote a number of guide books for emigrants to Australia, and served as the electoral manager for the Liberal Party in London during the 1860s and 1870s.⁵⁰

Like other Anti-Corn Law partisans, Smith saw the price of bread under the Corn Laws as the keystone issue in British politics and the global economy. “Cheap bread is the very stone to the independence and comfort of the people,” he often began his lectures, “it enables them to avoid competing with each other in the labour market...there is not an agricultural labourer in the kingdom who does not know that he is ill off and starved when bread is dear; in other words, well off when it is cheap...when bread is dear he must work at any price the farmer chooses to

⁴⁷ Pickering and Tyrrell, *The People’s Bread: A History of the Anti-Corn Law League*, 48, 199.

⁴⁸ Quoted in McCord, *The Anti-Corn Law League, 1838-1846*, 2nd:21.

⁴⁹ *Ibid.*, 2nd:61.

⁵⁰ Pickering and Tyrrell, *The People’s Bread: A History of the Anti-Corn Law League*, 249.

give him. His wages, so far from rising, actually fall.”⁵¹ Like other Anti-Corn Law free traders, Smith was also quick to associate “popular movements” with the “starvation of the working classes.” In front of a conservative-minded crowd in southeastern England in June, 1839, Smith claimed “there never would have been a Chartist in the world had bread been cheap in proportion to wages.”⁵²

Free trade was all about understanding God’s plan for nature.⁵³ Smith often extorted his listeners that “God has created within a small compass a great variety of climate, weather, and soil. Some seasons are so uncongenial as to produce barrenness on one spot, and the very same create abundance in another. Thus, whenever there is scarcity, it is supplied from external superabundance. This is God’s law and God’s remedy.”⁵⁴ Paying attention to the natural world, then, would illustrate for free traders which regions should trade with one another based not on arbitrary national laws, but based on the fundamental principles of nature, manifested through weather patterns and soil quality.

Anti-Corn free traders took it on faith that humans lived deeply embedded in a world that God had provided for their use. God tasked humans to figure out the laws of nature and economy. This assumption was also demonstrated by the main publications of the free trade movement between the 1830s and 1850s: the *Circular* and *The Economist*. The *Circular* began every edition with quotes from liberal philosophers, each one connecting human morality, economic process, and natural conditions to the question of cheap bread. And while most people associate *The Economist* with high finance, it was originally issued in the 1840s as a “Political,

⁵¹ Sidney Smith lecture, *Anti-Corn Law League Circular*, vol. 7, (July 9, 1839).

⁵² Sidney Smith Lecture, *Anti-Corn Law League Circular*, vol. 5, (June 11, 1839).

⁵³ Boyd Hilton, *The Age of Atonement: The Influence of Evangelicalism on Social and Economic Thought, 1795-1865* (Oxford: Clarendon Press, 1988); A. M. C. Waterman, *Revolution, Economics and Religion: Christian Political Economy, 1798-1833* (Cambridge: Cambridge University Press, 1991).

⁵⁴ *The Anti-Corn Law Circular* no. 7 (9 July, 1839)

Commercial, Agricultural and Free-Trade Journal.”⁵⁵ One of the paper’s many goals was to provide “frequent chapters on improvements in agriculture; on the application of geology and chemistry.”⁵⁶

To understand God’s plan for nature, business and politicians had to pay attention to its physical function. An unnamed author writing in 1839 asked “Why does every body consult the barometer daily, and ask his neighbor every morning what he thinks of the weather?” and quickly answered “because everybody knows that the crisis of corn laws question is at hand, and a few showers and a little cold weather must produce a dearth; which will lead to consequences not to be contemplated but with dismay.”⁵⁷ No surprise then, that *The Economist* would include a detailed weather report with every chapter on the grain market. As reported often, if the British grain market derived its produce from its own island, then a “thoroughly wet day” in which the “barometer (has) fallen considerably” had real potential ramifications for the price of grain at market.⁵⁸ Such weather, especially during harvest season, could tip the scales in favor of scarcity and cause a dramatic rise in the price of grain.

For free traders, it only made sense to study the environment of one region comparatively within a larger matrix of other regions. Sidney Smith reminded his listeners in 1839 that “the intention of nature was to render man more independent upon bad seasons by creating such a variety of weather over the globe, and such a diversity of soil as that when barrenness visited one region, superabundance should compensate another.”⁵⁹ Free traders believed nations were bound together through the moral economy of nature, connected through a Christian belief that

⁵⁵ *The Economist* no. 1 (August, 1843)

⁵⁶ *Ibid.*

⁵⁷ *The Anti-Corn Law Circular* no. 9 (6 August, 1839)

⁵⁸ *The Economist* vol. III no. 10 (8 March, 1845)

⁵⁹ *The Anti-Corn Law Circular* no 7 (9 July, 1839)

free trade was God’s design.⁶⁰ This view made sense because anti-corn free traders viewed nature as a global system. Regions of scarcity and abundance were connected by God’s plan and human markets. Despite nature’s best intentions, the Corn Laws conspired against God’s will. One anti-corn law pamphleteer asked “why should the law step in and say, ‘You should neither labour nor eat?’ God has provided food for [the poor] in other lands; and if no law prevented, they could easily buy it. Can it be right that the law should intercept the bounty of God, and sentence them to perpetual want?”⁶¹ Free traders answered an emphatic “no.”

The argument that God had produced industrial strength in England and agricultural abundance elsewhere seemed to resonate during the failed harvests of the late 1830s. While Cobden and his cohort began the unsuccessful Anti-Corn Law Association in 1836 on the heels of historically low bread prices, their reconstituted Anti-Corn Law League hit the national stage with greater force in 1838 amid successive harvest failures. During the late 1830s and 1840s, then, the League entered into the Corn Law debate amid weather and socio-economic conditions that seemed to confer their free trade arguments with an air of authority. Ideas, institutions, *and* nature, then, allow historians to fully account for why the Anti-Corn Law League found such great success during the “hungry forties.”

American Wheat in Transatlantic Free Trade Politics

In a curious twist of fate, the free trade movements Great Britain and the free soil movement in the United States came together through their collective commitment to the natural

⁶⁰ This idea seemingly owes much to the philosophy of the physiocrats who held that human economy was built around the natural order. Physiocratic thinking differed from nineteenth century free trade sensibilities, however, because physiocrats argued for an authoritarian ruler to hold human economy to its natural order. See Elizabeth Fox-Genovese, *The Origins of Physiocracy: Economic Reform and Social Order in Eighteenth-Century France* (Ithaca and London: Cornell University Press, 1976).

⁶¹ Baptist W. Noel, *Corn Laws: Selections from a Plea for the Poor* (Manchester, UK: J. Gadsby, 1843), 5.

harmony of free trade and objection to the Corn Laws. While the Anti-Corn Law League existed as a national organization to change a national law, their ideas and aspirations were international. The League was no less than an attempt to use the laws of Great Britain to refashion the world economy along the lines of divinely-ordained laws of natural advantage. In this quest, the growing bounty of American wheat harvests and the transatlantic economic downturn of 1837 loomed large. The example of the American wheat surplus in Anti-Corn Law efforts sprang from a growing transatlantic network of liberal merchants and politicians who all believed (1) the laws of nature favored the exchange of American wheat for British manufactures and (2) the elite landed interest of the American and British governments constantly altered those natural laws in their own interests creating suffering in the British working class and supporting the extension of slavery in the American South. No one was in a better position to view the relationship between American wheat and the British market than Birmingham anti-slavery advocate, free trader, and wheat merchant Joseph Sturge.

Joseph Sturge made his money in the wheat trade. In his early years he traveled around England and Wales as a wheat factor in search of crops and potential markets, a job he undertook with a “simple and healthy zest.”⁶² In 1822, he entered into a partnership with his brother Charles as a grain dealer in Birmingham and, until the early 1830s, he “devoted himself to business with unremitting assiduity.” Under the Corn Laws of 1828 merchants had to engage in such focus or risk ruin because “so great, frequent, and sudden were the fluctuations in prices that, though sometimes large fortunes were rapidly made...those who did not conduct their affairs with great prudence were liable to be as rapidly involved in ruin, and often with the loss of reputation and character.”⁶³ Sturge lived this period of his life in “intense anxiety.” During this

⁶² Henry Richard, *Memoirs of Joseph Sturge* (S.W. Partridge, 1865), 26.

⁶³ *Ibid.*, 37.

period, Sturge leaned on his Quaker faith considerably, and his diary reads continually on alternating days “attended meeting” and “attended market.”⁶⁴ Never content, however, to be a “mere man of business,” Sturge involved himself in various radical movements including peace, abolition, and anti-industrialization. Sturge could not fail to notice that “there was a good deal of distress in the manufacturing districts” as he toured the region engaging in various wheat deals.⁶⁵ Like other merchants of his era, Sturge became a devotee of “an independent study of the principles of political economy.” By the 1830s, Sturge was “not slow boldly to avow, of the manifold evils of the corn laws.” By 1835, Sturge was a political activist as well as wheat merchant advocating strongly for free trade and abolition.⁶⁶ By then, Sturge was a prominent wheat merchant and leader of the Birmingham Radicals, concluding that real reform for the welfare of the poor and marginal was impossible under the current political system and that radicals needed to push issues on all fronts that would lead to a collapse of Conservative power in Parliament and beyond.⁶⁷

Sturge leveled two attacks against the Corn Laws. First, he believed the Laws were an immoral force that simultaneously propped up a class of landed elite. Landowners grew wealthy upon the suffering of the working classes *and* the slaves working the cotton and sugar which import laws admitted at lower duties than wheat.⁶⁸ Second, he could call on his expertise to provide sound arguments against the political economy of the Corn Laws. In his partnership’s annual statement, Sturge would provide an account of the stock on hand from both domestic production and foreign sources lying in bonded warehouses. He often took the opportunity to note that given those stocks, a “low range of prices” to a large extent “depend upon how far our

⁶⁴ *Ibid.*, 42.

⁶⁵ *Ibid.*, 258.

⁶⁶ *Ibid.*, 63–65.

⁶⁷ McCord, *The Anti-Corn Law League, 1838-1846*, 2nd:112.

⁶⁸ Richard, *Memoirs of Joseph Sturge*, 277.

absurd legislation, directly tending, as it most powerfully does, to deprive the labouring population of a profitable application of their industry, and consequently their means of a comfortable subsistence, may force them to the use of cheaper food, such as potatoes &c., as a substitute for bread.” Sturge looked for trends in wheat stocks, population growth, and weather to predict prices. Amid the Corn Law debate in 1839, Sturge provided such an assessment, noting “the crop of 1840, there is reason to believe, proves to be more nearly an average one than, considering the very ungenial weather during part of the last summer, might have been expected, especially in most of the eastern, midland, and western districts of the kingdom.” He then went on, “should the consumption of wheat still keep pace with the increase of our population, as it doubtless would under a system of free trade, we may expect a considerable advance before the next harvest.” “It is obvious,” Sturge concluded, “that a very large annual supply of wheat will in the future be required, unless the deficiency is met by the increased breadth of land sown with wheat, by the improvements in agriculture, by which a larger quantity per acre is produced, or by the increased poverty of the people” under the Corn Laws. A continuation of these policies, therefore, would lead to either greater power in the hands of landlords or the increased poverty of the working classes, probably both.⁶⁹

To obtain foreign wheat, Sturge’s eyes were increasingly cast across the Atlantic towards the surplus of the United States. Sturge proved to be the League’s crucial representative in the United States at a time when the Anti-Corn Law movement of Britain was gaining traction, surprisingly, in the free soil movement of western American farmers. Also, Sturge would often make fact-finding trips to the West Indies to observe working conditions of the slaves. During these trips he would often stop in New York, Philadelphia, and Boston⁷⁰ He began to build his

⁶⁹ Leavitt, *Wheat Memorial*, 27–28.

⁷⁰ Martin, “The Upper Mississippi Valley in Anglo-American Anti-Slavery and Free Trade Relations,” 207.

connections with the free soil free trade interests of the American North and West. The abolition and free trade movements in the United States and Great Britain, like many other nineteenth century radical movements, were reliant on an overlapping set of supporters at every level from community organizing to national executive committees.⁷¹

The United States began to figure more prominently in the League’s literature and speeches. The United States took on the role of potential partner but unwilling competitor. In a speech in the House of Commons in March 1838, Charles Villiers reported “from our own Minister at Washington we learn that the American Government justified its tariff by the exclusion of her corn from our market.”⁷² Such restrictions acted against not only the laws of nature and trade, but also functioned to harm Britain’s economy. To a man, it seems, Anti-Corn Law Leaguers believed the Laws “prohibited the cultivation of corn for the use of our people in the United States.”⁷³

As American harvests rebounded from poor growing years in the mid 1830s and surpluses grew as a result of economic stagnation following 1837, the United States became to prime example upon which Sturge and other Anti-Corn Law free traders built their arguments. The *Circular* led each issue with an account of bountiful American harvests wherever they could be found. The paper reminded its readers that American abundance was the answer to Britain’s food supply problem:

We give the subjoined extracts from an American paper. It is not in mockery of our poorer readers that we continue to give these accounts of the harvests...whose superabundance they are, by a merciless and selfish law, debarred from sharing. We shall lay before them, from time to time, similar information, in order that they may see that a beneficent Providence supplies a bountiful request for all his creatures, whilst the wicked legislation of our landowners denies to our starving artizans (sic) a place at nature’s board”⁷⁴

⁷¹ Ibid., 87–88.

⁷² Schonhardt-Bailey, *Free Trade: The Repeal of the Corn Laws*, 16.

⁷³ *Anti-Corn Law League Circular*, vol. 9, (Aug. 6, 1839).

⁷⁴ *Anti-Corn Law League Circular*, vol. 8 (July, 23 1839).

While dearth continued to wrack the British nation, record harvests came to American farmers who could not sell the entirety of their crop on depressed domestic markets. Meanwhile, the British poor starved. As the *London Spectator* incredulously observed “all this suffering exists in the midst of the elements of prosperity. Industry, intelligence, experience; land and raw produce in abundance on one side of the Atlantic; capital and mechanical skill on the other; both countries brought so closely together, by the magic powers of steam, that interchange of commodities is easy and not expensive. How does it happen that we hear nothing but distress, embarrassment, and anxiety for the future?”⁷⁵

When Sturge traveled to the United States for a protracted tour on behalf of the British Anti-Slavery Society and the Anti-Corn Law League in 1839, the Corn Laws took on greater importance in that country due to the rapidly increasing production of the Great Lakes basin.⁷⁶ Cincinnati’s *Weekly Herald and Philanthropist* argued that farmers “can count on a certain, and increasing market. Great Britain has opened its ports, to our beef and lard oils. Let her corn laws be repealed, and the certainty of a market for all the wheat that could be raised would stimulate incalculably the production of our farmers.”⁷⁷ The premier merchant magazine of the United States, *Hunt’s Merchant Magazine*, implored that “the only tendency of the corn laws is to swell the rents and incomes of the owners of the land” thereby making landowners ever more rich and powerful.⁷⁸ By the early 1840s, *The National Intelligencer* was publishing accounts of Anti-Corn Law League lectures in England.⁷⁹

⁷⁵ Date unknown. Quoted in Leavitt, *Wheat Memorial*, 16.

⁷⁶ Thomas P. Martin, “Cotton and Wheat In Anglo-American Trade and Politics, 1846-1852,” *The Journal of Southern History* 1, no. 3 (August 1, 1935): 299.

⁷⁷ *Weekly Herald and Philanthropist* (Cincinnati), Aug, 13, 1845, quoted in *Ibid.*, n. 300.

⁷⁸ *Hunt’s Merchant Magazine*, vol. 5, (July, 1841), 521.

⁷⁹ Thomas P. Martin, “Free Trade and the Oregon Question, 1842-1846,” in *Facts and Factors in Economic History: Articles by Former Students of Edwin Francis Gay* (Cambridge, MA: Harvard University Press, 1932), 475.

The object of Sturge’s 1839 trip was to evangelize a host of liberal British issues throughout the free-soil, wheat-producing, and (hopefully) free trade American interior.⁸⁰ Sturge believed that the Liberty Party – a forerunner of the Free-Soil and Republicans Parties - could help achieve the abolition and free trade objectives of the Anti-Corn Law League in the United States. “At the present time,” he wrote upon his return from the United States, “England gives a premium to American slavery by admitting, at low duties, the cotton of the slaveholder, which is his staple production, and refusing corn, which is mostly the produce of free labour.” As such, “not only would England escape this inconsistency and reproach, by repealing the corn law, but she would strike a most effectual blow at the existence of slavery in the United States.”⁸¹ Again, the differences between slavery and free soil were based upon God’s plan for nature. For Sturge, the “diminished produce” of Great Britain came directly from the Corn Laws, devised by “legislators, who, either in ignorance or selfishness, set aside nature's laws, and disregard the plainly legible ordinances of Divine Providence.”⁸²

While in the United States, Sturge met with Joshua Leavitt, who was in the process of compiling evidence and data for the eventual publication of his transatlantic and Anti-Corn tract *Wheat Memorial* in 1841.⁸³ Prolonged conversations with Leavitt helped Sturge conclude that Americans were fully behind a repeal of the Corn Laws, a position he brought back to the League upon his return. These conversations, and others, helped Sturge fully realize the earnestness with which Americans sought the Corn Laws repealed, and convinced him that “this question of trade with America also has important anti-slavery bearings.”⁸⁴

⁸⁰ Joseph Sturge, *A Visit to the United States in 1841* (London: Hamilton, Adams and Co., 1842), 47–50.

⁸¹ *Ibid.*, 156–157.

⁸² *Ibid.*, 148.

⁸³ *Ibid.*, 110; Richard, *Memoirs of Joseph Sturge*, 235.

⁸⁴ Sturge, *A Visit to the United States in 1841*, 156.

Sturges’ visit was not the only journey by an Englishperson that revolved around the twin goals of free trade and abolitionism. In 1836, English social theorist and Liberal sympathizer Harriet Martineau traveled throughout the Upper Mississippi Valley publishing her free trade and abolitionist ideals in *Society in America* one year later. In that book she recorded her thoughts of the American landscape and its potential relation to the British wheat market:

The prospects of agriculture in the States northwest of the Ohio are brilliant. The stranger who looks upon the fertile prairies of Illinois and Indiana, and the rich alleviations of Ohio, feels the iniquity of the English corn laws [sic] as strongly as in the alleys of Sheffield and Manchester. The inhuman perverseness of taxing food is there evident in all its enormity. The world ought never to hear of a want of food, no one of the inhabitants of its civilized portions ought ever to be without the means of obtaining his fill, while the mighty western valley smiles in its fertility. If the aristocracy of England, for whom those laws were made, and by whom they are sustained, could be transported to travel, in open wagons, the boundless prairies, the shores of the great rivers which would bring down the produce, they would groan to see what their petty, selfish interests had shut out the thousands of half-starved labourers at home. If they could not be convinced of the very plain truth, of how their own fortunes would be benefitted by allowing the supply and demand of food to take their natural course, they would, for the moment, wish their rent-rolls at the bottom of the sea, rather than that they should stand between the crowd of labourers and the supply of food which God has offered them.⁸⁵

Martineau linked the bounty of the Northwest to free labor. Wasteful agricultural practices dominated the South due to slavery, while economy prevailed in the North. To Martineau this difference was akin to wasting God’s bounty.⁸⁶

Sturge’s and Martineau’s visits occurred within a hornet’s nest of free trade activity in the United States. British free trade merchants were conscious of this debate and published on it widely in England. One merchant spoke at a Manchester Chamber of Commerce meeting in 1840:

A vast population has grown up on the interior states of the Union, whose surplus production consists of corn and other articles of food. Their voice will go far to determine the character of the future commercial intercourse between America and this country. If wisdom direct our proceedings, we shall adopt such a policy in regard to import duties upon the natural production of the United States as will secure to us an increasing commerce with the people of that important country.⁸⁷

⁸⁵ Harriet Martineau, *Society in America* (Saunders and Otley, 1837), 305.

⁸⁶ *Ibid.*, 300–305.

⁸⁷ John Benjamin Smith, quoted in Martin, “The Upper Mississippi Valley in Anglo-American Anti-Slavery and Free Trade Relations,” 209.

During the late 1830s, the western farmer – and his wheat – became the great set-piece in the the transatlantic debate over free trade and abolitionism.⁸⁸ This debate over western wheat was why free-trade southerners were unwilling to yield their potential alliance with western farmers. Wheat growers, like cotton growers, could only look to international markets to sell their goods at the highest profit: grain prices were higher in Europe than the United States. For free trade southerners, “it would not do to let Liberty Party-Abolitionist Yankees appear as the sole champions of the West in efforts to open the markets of Great Britain to western grain, flour, and provisions.”⁸⁹ Understanding their importance in the expanding national debate over tariffs and the fate of western labor, western farmers began to organize. Sturge, and the Anti-Corn Law League, for their part, played a crucial role in widening and publicizing the connections between the free trade and free soil movements in the American West that would form the first sustained conversations between American wheat producers and British consumers. Indeed, this debate even produced the first trickle of American wheat exports to Great Britain in response to the loosening of import restrictions in the Corn Law of 1842.

Shaping American Wheat Exports

During his 1841 trip to the United States in the employ of Baring Brothers, William Rathbone did more than view the American landscape and connect his family to the New York merchant network centered around Prime, Ward, King. He also became a committed free trader. Rathbone remembered years later just how fervently Americans followed the Corn Law debate in England and used them as a touchstone for a discussion on free trade in their own country. Attending a free trade lecture in Philadelphia by none other than Daniel Webster in 1841,

⁸⁸ Martin, “Cotton and Wheat In Anglo-American Trade and Politics, 1846-1852.”

⁸⁹ Thomas P. Martin, “Free Trade and the Oregon Question, 1842-1846,” in *Facts and Factors in Economic History: Chapters by Former Students of Edwin Francis Gay* (Cambridge, MA: Harvard University Press, 1932), 475.

Rathbone remembered the Americans’ dismay at England’s move towards free trade because “free Trade,” they said, “was for a new country like America, with its unlimited, undeveloped natural resources.” “How could England,” the speakers asked, “with its heavy taxation, compete with other countries without Protection?” Just as many intuitively grasped the differing endowments of natural gifts, so too did they understand how divergent trade policy could spring from the quality of land. Rathbone responded “that having a heavy burden to carry, it did not seem to me that to put ourselves in fetters was the right way to enable us to carry it.”⁹⁰

The conversation in America was so engaging, and the free-trade vision for the Anglo-American economy so convincing, that Rathbone returned home to England in 1842 “a strong and uncompromising Free-Trader alike on economic and moral grounds.”⁹¹ Looking back towards the end of his life, Rathbone was quick to isolate this turn towards free trade in the Anglo-American world as a seminal moment in the history of both countries: “the working-class of Free-Trade England have been, even in periods of industrial depression, comparatively free from the more dangerous manifestations of discontent, and immune from the ideas of communism and anarchism to be found in more or less every protected country.”⁹² As a result of his participation in these American debates, Rathbone remained a committed free trade partisan through the end of his life and throughout his long post-business political career representing various constituencies as a Member of Parliament between 1868 and 1898.⁹³ Perhaps more importantly in the ensuing decades he would steer his family firm towards becoming one of the largest in the Anglo-American grain trade.

⁹⁰ Eleanor Rathbone, *William Rathbone: A Memoir*, 1st ed. (London ;New York: Macmillan, 1905), 101–102.

⁹¹ *Ibid.*, 102.

⁹² *Ibid.*, 103.

⁹³ *Ibid.*, 189–224, 397–426.

As Rathbone grappled with the American landscape, merchant class, and free trade ideas, the transatlantic conversation over the Corn Laws reached new heights. The Anti-Corn Law League and the Liberty Party in the United States were at the apex of their ability to steer national and international discourse between 1838 and 1846. It was in the latter where the issue of free trade Anti-Corn partisanship touched the lives of wheat producers in the American West.

Political and economic historian Thomas P. Martin writes “it is significant....that in May, 1840, both the new American and Foreign Anti-Slavery Society and the Liberty Party showed unmistakable signs of connection with the British and Foreign Anti-Slavery Society and the Anti-Corn Law League.”⁹⁴ The American Liberty Party was less a national organization than it was an umbrella for diverse state movements. The New England and New York factions of the Party often dominated when it came to the issue of slavery, believing it to be first and foremost a moral and ethical issue that drives to the heart of the nation’s soul. However, the movement in the West developed along more pragmatic and political lines and there, especially in the great wheat-producing state of Ohio, is where anti-slavery met wheat producers. Liberty Party officials campaigning in Ohio often couched their mobilization in the ways in which the “slave power” of the “cottonocracy” worked against the interest of free soil, wage labor economies of the agricultural West.⁹⁵ In this effort, the Liberty Party consciously tried to convince and enroll wheat farmers and wheat merchants into their constituency.

American free soil free traders believed that slavery diverted the natural flows of goods and money away from markets dictated by economy, efficiency, or need. While certainly there were many hungry enslaved mouths to feed in the American South, free soil free traders believed that that food would go to drive the muscles of an immoral labor and the production of an

⁹⁴ Martin, “The Upper Mississippi Valley in Anglo-American Anti-Slavery and Free Trade Relations,” 207.

⁹⁵ Julian P. Bretz, “The Economic Background of the Liberty Party,” *The American Historical Review* 34, no. 2 (January 1, 1929): 250–264.

immoral economy. They believed that while the American West and industrial Great Britain had an opportunity for economic growth based upon the exchange of wheat, capital, and manufactured goods, the South was nothing more than a region of perpetual debt. In this view, the American Liberty party mapped directly onto the Anti-Corn Law League’s belief that the natural order of the Anglo-American economy was the free production of raw materials in the United States through wage labor, the flow of cheap food and goods from the United States to Great Britain, a stable and well-fed English working class, and a return flow of ample money and cheap manufacturing goods back to the United States. They believed that slavery and the Corn Laws discouraged such a system by sinking food and capital into slave’s muscle and wasting it on the uneconomical production of cotton that would destroy the land and require further capital to reclaim or move.⁹⁶

No individual looms larger in the late 1830s and early 1840s transatlantic free trade, free soil debate than New York abolitionist, editor of *The Emancipationist*, and Liberty Party spokesman Joshua Leavitt. During the 1830s and 1840s, Leavitt was at the forefront of political abolitionism, of evangelizing the North about not only the immorality of slavery but also the political dangers that would befall the free labor North if slavery was allowed to flourish and expand.⁹⁷ In this effort, Leavitt joined with other Liberty Party officials in the attempt to win western wheat producers by arguing the Slave Power and Corn Laws worked against their best interests.

For Leavitt and Liberty Party affiliates, internal improvements were the first way in which they sought the aid of western grain producers. “There is an immense amount of British capital invested in State and company stocks for canals and railroads,” Leavitt wrote in the

⁹⁶ Ibid., 256–257.

⁹⁷ James M. McPherson, “The Fight Against the Gag Rule: Joshua Leavitt and Antislavery Insurgency in the Whig Party, 1839-1842,” *The Journal of Negro History* 48, no. 3 (July 1, 1963): 177–95, doi:10.2307/2716339.

Wheat Memorial, “which will be greatly enhanced in security and value if a stable foreign market can be opened for flour.”⁹⁸ Wheat producers placed the free trade issue squarely inside the canal system that Baring Brothers, New York merchants, and western farmers themselves had done so much to fund. Wheat exported to England could help pay for the great expensive transportation projects that had encouraged surplus in the first place. Not only that, free trade would mean a heavy traffic of English finished goods heading West as well, meaning canals (which at this time, other than the Erie, were mainly one-direction feeders) could profit from greater toll revenues. American wheat exchanged for English manufactured products, in this sense, would be the ultimate savior of internal improvement projects. Natural harmony in trade would follow. According to wheat producers, it was only a matter of time before their produce flowed to “the great consumers of imported commodities” and that “the vast amount of trade which pass through our canals both ways, to the benefit of all parties, and the quantity of shipping necessary for its transportation to and fro on the ocean” would lead to a convergence in the free trade, wage labors of American farmers and British manufacturers. Many of the canals still carried significant debts incurred in their construction, debts which could be settled “out of the revenues of the works, if a foreign market can be opened for the boundless stores of wheat which the States of Northwest are just becoming prepared to produce.”⁹⁹

Rivers and harbors that fed the grain ports of the West were also a major focus of Leavitt and the Liberty Party in an attempt to build their “wheat interest.” Prior to the 1860s, the flow of western rivers and canals was the primary obstruction to moving wheat easily from the Great Lakes region to ports. Last chapter, we glimpsed how the Wabash glut in the New Orleans market was occasioned by low summer water on Western Rivers, which forced farmers to sell

⁹⁸ Leavitt, *Wheat Memorial*, 5.

⁹⁹ Joshua Leavitt in *The Emancipator*, May 1, 1840

their vital crop in a depressed market, often for a loss. Around Ohio, New York, and the port cities of the Great Lakes, these problems were no less significant. While the federal government under the Adams and Jackson administrations had proved generous in its appropriations for internal improvements throughout the Great Lakes, this policy underwent a marked change under the administrations of Van Buren and his Democratic successors.¹⁰⁰ Between 1838 and 1860, eight bills for improvement of watercourses and harbors throughout the Great Lakes region were laid on presidential tables and seven of those bills were vetoed, the lone exception was a harbor bill approved by Whig president Millard Fillmore. Democrats James K. Polk and Franklin Pierce in particular appear to have incurred the ire of western farmers and merchants alike through their vetoes.¹⁰¹ While undoubtedly some of these bills were vetoed due to financial concerns in the wake of the Panic of 1837, the Whig and Liberty Parties were quick to capitalize on the issue and publicize when bills designed for the interest of wheat producer and merchants were killed by Democrats and the “Slave Power of the South.”

Leavitt tried to convince western farmers that the Slave Power and Corn Laws were arrayed against their interests and that the British market was the best way to recover from the “combined effects of a bad season, an excessive spirit of speculation, and an unprecedented influx of immigration, which made us momentarily importers of wheat” during the Panic of 1837.¹⁰² Free soil, free trade wheat producers of the Midwest faced a choice in the late 1830s and 1840s. They had to decide whether or not to remain a Whig party in favor of strong national markets and internal improvements but hostile to free trade, or form a new political party/movement based around abolition and free trade. As the Panic of 1837 gripped the nation, however, the purchasing power of consumers in the East and South dropped. The West saw

¹⁰⁰ *Ibid.*, 5.

¹⁰¹ *Ibid.*, 6.

¹⁰² Leavitt, *Wheat Memorial*, 5.

increased wheat production but reduced prospects for a national market.¹⁰³ The Liberty Party consciously tried to curry favor in the Northwest as a bastion against the spread of slavery, and thus slave-state representation in Congress, further West. This effort coincided with a run of good harvests in Ohio, Indiana, and Illinois in the late 1830s that served to depress prices and create a volatile economic situation for farmers who could not meet rising debts with the remittances from their wheat. In addition to outstanding debt which they could not pay, the Panic of 1837 contributed to a contraction of additional lending power by western merchants. Thus western farmers by the late 1830s were feeling vulnerable economically.

Salmon P. Chase, one of the main organizers of the Liberty Party’s “wheat interest” convention in 1840, reported in the *Philanthropist* the “pecuniary losses sustained by the State of Ohio and especially by the county of Hamilton in consequence of the existence of slavery in those states which are the natural markets of our produce and manufactures.”¹⁰⁴ Another Chase report carefully accounted for the annual losses of farmers in merchants in southern Ohio through their sale of provisions downriver in Kentucky and the inability of southern planters to pay for the produce sold to them on credit. The planters were chronically in debt and their only marketable produce was cotton, a commodity of very little value to western farmers.¹⁰⁵ It seemed, as Joshua Leavitt would so succinctly put it, that “the capital of the North as naturally flows to the South as water runs down hill.”¹⁰⁶

At the same time western farmers were feeling the pinch of reduced markets, rising reports – often brought over by British merchants touring the United States – of poor harvests in Great Britain convinced many western farmers and merchants that their economic ills could be

¹⁰³ Martin, “The Upper Mississippi Valley in Anglo-American Anti-Slavery and Free Trade Relations,” 210.

¹⁰⁴ *Philanthropist*, May 19, 1841.

¹⁰⁵ *American and Foreign Anti-Slavery Reporter*, July, 1841, p. 6. In Bretz, “The Economic Background of the Liberty Party,” 260.

¹⁰⁶ *American and Foreign Anti-Slavery Reporter*, July, 1841. Quoted in *ibid.*, 254.

alleviated by selling their wheat not in the glutted markets of the United States, but the dear markets of England and Europe.¹⁰⁷ As the *Cincinnati Gazette* hoped, a repeal of the Corn Laws in England and a shift towards greater free trade in the United States “opens to us the means of liquidating a portion of our obligations”¹⁰⁸ One major line of attack of the western bloc of the Liberty Party was to follow what they believed to be slavery’s true cost through the American and Atlantic economies. “Slavery takes value out of the pockets of the free, as well as out of the sinews of slaves, without rendering an equivalent,” Leavitt argued, “it is a vampyre which is drinking up the life blood of free industry...has swallowed up the manufactures of the North and the provisions of the West, the products of years of economical, self-denying, heaven blessed industry”¹⁰⁹

In the end, argued Leavitt, the entire American political economy that favored slavery over the free labor production of wheat was based upon the British Corn Laws. Sounding much like a British Anti-Corn free trader, Leavitt opened his *Wheat Memorial* with the following assertion:

The production and exportation of provisions generally, of which wheat flour is necessarily the leading article, must constitute one of the great interests of the American nation, for whose advancement it is the duty of Congress to care. It is believed that the corn and provision laws of Great Britain and France constitute the principal obstacle to the indefinite extension of this interest, and that the removal of that obstruction would not only be an immense advantage to the agriculture of this country, but would impart an immediate spring to trade generally, which would not only restore our revenue, revive our credit, and stimulate our industry, but would also confer equal benefits upon the people of those countries, and, by multiplying the ties of mutual advantage and dependence of nations, greatly enhance the motives to mutual justice and permanent peace.¹¹⁰

Encouraging wheat exports from the American interior to Great Britain was especially important because that economy was global in scope and could easily encourage the production of cotton in their colonies in the Caribbean and India, leaving American merchants with nothing

¹⁰⁷ Martin, “The Upper Mississippi Valley in Anglo-American Anti-Slavery and Free Trade Relations,” 208.

¹⁰⁸ *Cincinnati Gazette*, Oct. 18, 1839

¹⁰⁹ *Free American*, Aug. 19, 1841. Quoted in Bretz, “The Economic Background of the Liberty Party,” 256.

¹¹⁰ Leavitt, *Wheat Memorial*, 1–2.

but specie to purchase manufactured goods. In this case, wondered wheat producers, “what have we to export, unless our government can open a market for our increasing products or breadstuffs? The Anti-Corn Law agitation was of the very highest commercial and moral importance to this country; for our commerce needed a new raw material for export, and our public mind needed to feel assured that there was something producible by free labor with which we can pay our debts abroad as well as with cotton.” Wheat exports, then, would strengthen America’s place within the international economy and solidify the growing political power of the free soil west. Repeal, argued wheat producers would “dethrone the *cottonocracy* of our commercial towns, and thus give our commercial and public men courage to look at the true interests of the country [sic].”¹¹¹

By the late 1830s, the free trade movements of the United States and England consistently exchanged strategies and ideas. Daniel Webster traveled to England in 1839 and met with both Alexander Baring and Sidney Smith to advance wheat-producing interests at a time when most private citizens and governmental representatives from the United States to England came on behalf Southern interests. Webster’s trip garnered much attention in London and all over Great Britain. His letters to various officials were reprinted in English newspapers. Amid transatlantic panic, he argued, the Anglo-American economy would prosper if the British would “accept American grain instead of demand specie” in exchange for the finished goods English merchants sold at auction in New York.¹¹²

To many, free trade would prove the slow death knell of slavery and allow the American and British economies to smoothly recover from the loss of slave labor. Repeal of the Corn Laws, then, would kill slavery in the American South by no longer artificially favoring slave

¹¹¹*The Emancipator*, April 23, 1840

¹¹² Quoted in Martin, “The Upper Mississippi Valley in Anglo-American Anti-Slavery and Free Trade Relations,” 211.

produce, growing the free soil wheat economy of the North and Northwest, and cheaply feeding the hungry masses of British workers. This view was summed up in an extended editorial in

London’s abolitionist newspaper *The Patriot*:

your country [Great Britain] prevents the importation of CORN from the United States, which is raised almost entirely by *free labor*. At the same time you admit our COTTON, and TURPENTINVE, and RICE, the products entirely of *slave labor*. Thus, in order to pay for the goods needed, your present laws compel our merchants to purchase cotton &c., and to remit them to England, where slave produce brings a better price than the produce of free labour. But if...your government should permit our corn to come in, either free or on low duty...your bread consumers would be furnished much cheaper than they now are;...the free states would plant more,...which would keep the price low;...merchants...would send corn rather than cotton;...cotton would fall much in price; and then it would cost the planter more to support his slaves, than he would realize for his crop. Now why should not Abolitionist England...encourage the introduction of our corn rather than our cotton? Why not allow us to pay her for her manufactures in the free man’s labour, rather than in the *sweat and blood of the slave*?...*If England desires America to be freed from slavery, England must receive the products of our free labour, instead of the products of our slaves*...Let, then, every Abolition in England consider that view, and strive in every lawful way to open your ports for the corn of our country, which grows upon *free soil*, and is cultivated by *free men*.¹¹³

During the summer of 1840, depressed financial markets and abundant harvests produced the lowest cereal prices since the Panic of 1837. During this period, abolitionist Whigs and local Liberty Party affiliates began to organize “wheat interest” conventions around the Northwest as a way to rally American farmers and merchants around the Party and its twin platform of free soil and free trade. Salmon Chase declared a state-wide convention to convene in Hamilton on September 1, 1840. Joshua Leavitt, editor of the New York-based *Emancipator* journeyed west to this conference to report that the Anti-Corn Law League had accepted the overtures of James Birney and Henry Stanton and that the Liberty Party and Anti-Corn Law League now formed a trans-Atlantic alliance based on the free production and trade of wheat and a commitment to abolition.¹¹⁴ Returning to New York City, Leavitt reported on his travels. He noted that migrants West “won’t go unless they can make money.” Further, he noted that the political, economic, and moral fate of the West was tied to its ability to market wheat abroad:

¹¹³ *The Patriot* (London), July 20, 1840, quoted in *ibid.*, 214–215.

¹¹⁴ *Ibid.*, 217.

[Farmers] can't make money unless they get a market for the wheat which now gluts the land and has been stacked seven successive years in the fields, and none sold. Yet our government has done nothing to get a market for them. We've had six expensive embassies to make markets for tobacco. We had one embassy six years to get money for a few slaves wrecked on a British colony; but none to find a market for the astonishing produce of the great north west. We've been thirty years toiling to keep markets for cotton; but not an hour for wheat. If our government were honest; if our statesmen had eyes, they would see that the most important benefit they could render this country would be to find a market for the produce of the north west. If they did this we should have a counter balance for all the frightful fluctuations in the cotton market...I know men who are poor to this hour, who can date their ruin from the fall of cotton in 1825...If we had good markets for the free labor agricultural produce of the northwest, we should have a balance wheel to keep the whole machinery of commerce steady.¹¹⁵

On the other side of the Atlantic, an 1840 Royal committee found that American arguments against the Corn Laws had a sound economic basis. Joshua Leavitt, who followed these proceedings intently, published in *The Emancipator* reported “the efforts of England to produce her own cotton [or obtain them from her colonies], which are calculated to do us, as a nation, so great a commercial injury in one way, will hereafter be coupled, and go hand in hand with efforts for the repeal of the Corn Laws, which will confer upon us, as a nation both commercial and moral advantages infinitely outweighing that injury.”¹¹⁶ At the end of 1840, *The Anti-Corn Law Circular* acknowledged the best strategy for defeating the Corn Laws was “to raise up friends among the agriculturalists of the western [American] states, by becoming constant customers of their grain.”¹¹⁷ Throughout that year and into 1841, American Anti-Corn Law societies sprang up in New England, New York, and the Northwest.¹¹⁸ In July, 1841, a Liberty Party convention held in Unionville, Ohio elected to send local abolitionist (and correspondent of Joseph Sturge) John Curtis to Great Britain to lecture against the Corn Laws on behalf of the Liberty Party and the Anti-Corn Law League. Curtis stayed in England for eight months touring the country as a representative of the Anti-Corn Law League, met several times

¹¹⁵ *The Emancipator*, Oct. 8 and 22, 1840.

¹¹⁶ *The Emancipator*, Oct. 15, 1840. Quoted in Martin, “The Upper Mississippi Valley in Anglo-American Anti-Slavery and Free Trade Relations,” 216.

¹¹⁷ *The Anti-Corn Law Circular*, Dec. 24, 1840.

¹¹⁸ Martin, “The Upper Mississippi Valley in Anglo-American Anti-Slavery and Free Trade Relations,” 219.

with the Executive Council of the League, and worked, in the words of historian Thomas Martin, “in constant cooperation” with Richard Cobden.¹¹⁹

By the end of 1840, a new alliance between British manufacturers and American wheat producers had not only succeeded in outlining a political economic vision born out of a potential Anglo-American grain trade, they encouraged an actual trade in grain between the American West and Great Britain. It seemed to most free traders that western markets were simply waiting on the British market to open itself to American wheat. This is precisely why there was such close contact among the Anti-Corn Law League, the American Anti-Slavery Society, and the Liberty Party. Indeed, one western newspaper reported that Ohio farmers were so prepared and informed about the status of the British Corn Laws that in response to Peel’s modification of the Corn Laws in 1842 to ease the sliding scale of 1828, wheat and flour were heading east by canals and lakes in great quantities.¹²⁰ Even Daniel Webster, who had in 1839 ventured to England to discuss free trade with the manufacturers of London and Manchester was surprised at the immediacy of the American response to the 1842 Corn Law. Within a few months, it seemed to Webster, the entire course of trade in the West had shifted dramatically as wheat, flour, butter cheese, and other provisions headed to New York and other Atlantic ports with the purpose of being marketed in England. “This is quite a new trade as everybody knows,” Webster exclaimed, “who ever thought, eighteen months ago, that a large cargo, entirely of provisions, would go to a London market!”¹²¹

The free trade and abolitionist movements in the United States and Great Britain during the late 1830s cross fertilized around the issue of American wheat and thereby stimulated the first trickle of grain to head from the American West to Great Britain. American newspapers

¹¹⁹ *Ibid.*, 220.

¹²⁰ *Morning Herald* (Cincinnati), Sept. 13, 1843.

¹²¹ *Morning Herald* (Cincinnati), Nov. 24, 1843.

followed the great debates in Parliament and the lectures of the Anti-Corn Law League while the British Anti-Corn Law Circular consistently reprinted reports of American surplus crops and calls for free trade by that country’s wheat farmers and merchants. Most importantly, the dialogue between American free soilers and British free traders also wove together a network of merchants and farmers around the idea of the British demand for American wheat. It focused this community in the United States on the issue of transportation and the need to improve the passage of wheat over rivers and canals. It also clued British merchants and importers who had been thinking about the United States as a potential market, like William Rathbone, to the growing American surplus and the necessity of free trade between the two countries.

Conclusion

Amid the transatlantic Anti-Corn Law debate, merchants and politicians moved throughout the Anglo—American world sharing political ideas and potential investments. Conversations among American free soilers and British free traders were all based around an assumption of the economy of nature, and that wage labor and free trade best mapped onto the divine laws of nature. In the 1830s and 1840, the transatlantic conversation about nature’s economy came to be fixed on wheat and its role relative to the other cornerstone commodities of the Atlantic world: sugar, cotton, and coal. According to Richard Cobden, Joseph Sturge and other merchant-politicians who steered these conversations, wheat alone had the potential of creating harmonious economies that were based upon the profitable and free production of wheat in the United States and an industrious and equitable production of manufactured goods and textiles in England. These visions came to be fixed on wheat because political, economic, and environmental events converged in the late 1830s to convince a critical number of politicians and

policy-makers in the United Kingdom and the United States that Britain’s food supply problems could be solved by American wheat surplus.

Chapter 5 - Organizing a Trade: Western Water, British Food Crises, and the Rise of the Great Lakes-Empire Corridor, 1846-1865

In the early 1850s, as many as 6,000,000 of the 21,185,000 people living in Great Britain subsisted on foreign bread.¹ This number suggests that by midcentury, Britain sat within a growing international trade in wheat. Repeal of the Corn Laws in 1846 helped bolster confidence in the merchant class that they could establish long-term connections with sources of wheat not found within the British Empire. But as of 1850, much of this foreign bread was not American in origin. That trade, while envisioned by Anti-Corn free traders and western wheat producers, had to be created.

The growth of American exports to Great Britain between 1846 and 1865 was spurred by a revolution in marketing strategies designed to move the growing wheat surplus of the American west through the Great Lakes-Empire Corridor and then to domestic and foreign markets. Western wheat merchants responded to a period of low water across the Great Lakes region in the 1840s by forming boards of trade that would fund harbor and river improvements and lobby the federal governments for internal improvements to deal with the most intractable problems. Then, these boards of trade responded to a series of British food crises in the 1840s and 1850s by collectively adopting futures trading and grading in order to more effectively transport their wheat and sell it in England. By the Civil War, wheat merchants from Chicago, Milwaukee, Cleveland, Buffalo, Rochester, Albany, and New York City – collectively referred to in this chapter as the Great Lakes-Empire Corridor - were ready to move their wheat to Great Britain in unprecedented volumes.

¹ J. H. Clapham, *An Economic History of Modern Britain*, vol. II: Free Trade and Steel, 1850–1886 (Cambridge: The University Press, 1967), 3.

This chapter focuses on the integration of a wheat trading network within the Great Lakes-Empire Corridor in response to drought and three British food crises from 1846 to 1862. As a result of the Corn Crisis of 1847, the Crimean Crisis of 1854-155 and food relief efforts during Lancashire Cotton Famine of 1862, the American grain trade became more connected to the British market. Separate wheat markets around Great Lakes-Empire Corridor converged into a single market by 1865 as wheat merchants responded to rising demand in British cities caused by these three food crises. Brought together under the banner of internal improvements and the free soil/free trade movements of the 1840s, western grain merchants in different markets began a more concerted effort to build better transportation and storage facilities at key places, design works projects to mitigate the variable hydrology of rivers and harbors, and correspond with each other on matters of price, sales, and standards. Efforts to move wheat through ports and transportation corridors reached their most concerted levels during periods of heightened demand from Great Britain when, as free soil/free trade partisans had predicted during the 1830s and 1840s, the growing American surplus came to offset scarcity in Great Britain. Beginning in the mid-1840s, merchants in Chicago, Buffalo, and New York City exported large amounts of wheat to Great Britain during shortages.

By following the careers of Buffalo grain merchant Joseph Dart, Liverpool merchant William Rathbone, and New York wheat broker David Dows, this chapter illustrates how the Great Lake-Empire Corridor became one of the world’s largest single source for wheat surplus, and how that surplus became intimately connected to the British market by the mid-1800s. The period between 1846 and 1865 marked a resurgence in American wheat exports to Europe, especially England. The value of American wheat exports did not exceed \$1.2 million, its number in 1820, in any year from 1821 to 1846. Then, Repeal and Irish Famine . Between 1846

and 1850, the total value of American wheat and flour exports climbed to \$13.9 million. Wheat exports from the United States to Great Britain rose from 2,000 bushels in 1845 to 2.5 million in 1847. During this period, grain exports to Great Britain comprised more than 10 percent of America’s total exports. American exports of flour grew from 35,000 barrels in 1846 to 969,000 in 1846 and an improbable 2.4 million in 1847. During this period, maize exports also reached their nineteenth-century peak, with the majority arriving in Ireland to stem the tide of starvation in the wake of the potato blight.² One study suggests that during 1847, the hardest year of the Irish Famine and a year of correspondingly poor crops in England, fully 40 percent of Great Britain’s imports of wheat and flour came from the United States.³ Over half this amount was flour; wheat arriving from the United States made up only 17 percent of total imports into Great Britain in 1847.⁴ During the 1850s, the American share of the British wheat market hovered between virtually nil in 1851 to over 30 percent in 1856, though they predominantly hovered in the low 20’s.⁵

With streamlined transportation and merchant connections with New York, wheat and flour carried the via Great Lakes-Empire Corridor supplied much of the total American exports to Great Britain during crisis periods. Total receipts of wheat and flour at Buffalo and Oswego increased from 2.5 million bushels in 1839 to 5 million bushels in 1840. Economic historian John C. Clark also estimates that wheat from this region comprised 46 percent of American exports during the peak export year of 1846-1847. During the Crimean War, exports from this

² John G. Clark, *The Grain Trade in the Old Northwest* (Westport, CT: Greenwood Press, 1966), 179.

³ Charles H. Evans, “Exports, Domestic and Foreign, from the American Colonies to Great Britain, from 1697 to 1789, Inclusive, Exports, Domestic and Foreign, from the United States to All Countries, from 1789 to 1883, Inclusive.,” *House Miscellaneous Documents*, 48th Congress, 1st Session, no. 49, Part 2 (1884); Clark, *The Grain Trade in the Old Northwest*, 179.

⁴ Brian Mitchell and Phyllis Deane, *Abstract of British Historical Statistics* (Cambridge: Cambridge University Press, 1962), 100.

⁵ Clark, *The Grain Trade in the Old Northwest*, 180.

region also spiked. In 1854, total American wheat exports rose to 28 million bushels, over half of which was destined for England. In response to growing European demand, exports from Chicago more than doubled between 1852 and 1854, and exports at Milwaukee increased by over 150 percent. Wheat exports from New York City rose from 3.8 million bushels in 1850 to 10.8 million bushels in 1854. Clark estimates that production in New York, Ohio, Indiana, Illinois, Michigan, and Wisconsin made up over 50 percent of American exports to Great Britain during the 1850s, suggesting not only a regional convergence, but a growing connection to the British market.⁶

Merchant Organizations and Great Lakes Hydrology

As wheat agriculture spread out into western New York and the Great Lakes Basin, early merchants were defined more by their connection to correspondents and discounters in larger cities of the East than they were to merchant communities in their own town.⁷ Merchants across the Great Lakes tried to increase the volume of wheat they handled by mobilizing merchant associations to remove harbor sandbars and dredge shallow watercourses. As merchants banded together in cities like Buffalo, Detroit, and Chicago a new sense of community emerged among western grain merchants focusing on their shared commitment to remove transportation bottlenecks imposed by nature. This effort would manifest itself in the region-wide creation of local boards of trade following the drought year of 1846 and then in a series of conventions centered on the issue of internal improvements. By the 1850s, these efforts resulted in

⁶ *Ibid.*, 185.

⁷ *Maryland Pocket Annual for 1840*. Quoted in Charles Byron Kuhlmann, *The Development of the Flour-Milling Industry in the United States: With Special Reference to the Industry in Minneapolis* (New York: Houghton Mifflin Company, 1929).

coordination among Great Lakes boards of trade that enabled merchants to communicate more easily.

All major wheat exporting harbors on the Great Lakes – with the exception of Erie, Pennsylvania – were located at the mouths of rivers or creeks. At the entrances to these harbors, including Buffalo and Chicago, river and lake currents combined to deposit silt. Sandbars formed a constantly and ever-shifting barrier to ships of all draughts and were one of the primary reasons limiting the capacity of lake vessels to a hold capacity of 4,000 bushels. Local city councils, merchant organizations, and the federal government constantly dredged channels to keep these harbors open for business.⁸

Shippers had to keep their vessels close to shore while plying the lakes. During heavy winds, captains on these vessels had dramatically less room to maneuver than their ocean counterparts. Captains and shippers constantly voiced the need for protective harbors for ships to seek shelter in during inclement weather. This problem was particularly acute for shippers on Lake Michigan due to the smooth shoreline and lack of islands or headlands for ships to seek shelter behind. Sandbars blocked natural harbors. Shippers and merchants encountered great difficulty in convincing federal authorities to build harbors for safety, where no harbors existed. As a result, vessel losses on the Great Lakes, especially Lake Michigan, were considerable and insurance costs across the region were high.⁹

The experience of merchants at Chicago is illustrative of the significant harbor issues facing western grain merchants. The Chicago River often flooded following spring snowmelt

⁸ Thomas Odle, “The Commerical Interests of the Great Lakes and the Campaign Issues of 1860,” *Michigan History* 40, no. 1 (1956): 2.

⁹ *Ibid.*, 4–5.

and “swept away the bridges and caused a great damage to shipping in the river.”¹⁰ These floods brought large silt loads and deposited them at the mouth of the river, creating a “bar at the mouth of the harbor [that] was a source of constant annoyance to navigators.” Later that year, the common council of the city attempted to marshal the business community of the city with a \$300.00 grant to remove the bar “provided those engaged in commerce will agree to keep the channel open during the season.”¹¹

Chicago merchants actually considered the sandbar problem serious enough to directly challenge the authority of the federal government. During the 1840s and 1850s, the United States government operated 5 steam dredges on the Great Lakes to assist merchant communities with the sandbar problem. However, governmental thrift during the 1840s often left these dredges inactive for months. One such government dredge sat inactive in the Chicago River in the wake of an 1849 flood. The Chicago Board of Trade led a public subscription fund which raised \$1,000 for harbor improvements and applied to the War Department for the right to use the dredge. As one history of the Chicago Board of Trade recalls, “the War Department rejected the application, and a joint commission of the common council and the Board of Trade thereupon adopted the hazardous resolution that they would use the dredge anyhow.” A group of merchants boarded the dredge and began using it to remove the sandbar. Upon receipt of an order to relinquish the dredge to the local Army Engineer, who “politely demanded that the dredge should again be placed in his possession,” the merchants turned over their contraband. The ploy seemed to work, however, as the engineer promptly finished the project and dug a channel 600 feet wide and from 11 ½ to 13 feet deep, a “sufficient depth of water for vessels

¹⁰ Charles H. Taylor, *History of the Board of Trade of the City of Chicago* (Chicago: Robert O. Law Company, 1917), 150.

¹¹ *Ibid.*, 178.

then navigating the upper lakes.”¹² The relief was temporary. By 1855, a “new bar had formed across the direct entrance to the harbor, greatly interfering with navigation.”¹³

Despite considerable hardships and costs of maintaining harbors free of sandbars, the greatest obstruction to lake shipping prior to the Civil War was the stretch of water between Lakes Huron and Erie. Two low water points on the St. Clair and Detroit Rivers, the St. Clair Flats and the Lime Kiln Crossing, necessitated shallow draughts on all lake vessels and represented a danger for ships to run aground, increasing freight and insurance costs.

The single greatest obstruction for Great Lakes shipping prior to the Civil War was the St. Clair Flats at the point where the St. Clair River dumped into Lake St. Clair. At this point, the river divided into a number of channels which wander through a delta called the St. Clair Flats. Shippers heading towards Buffalo had the choice of two prospective routes: the northern route was roundabout but deep, the southern route was direct but extremely shallow. Until a federal dredging campaign in 1858 permanently deepened the southern route, the draught of vessels on the Great Lakes was determined by the depth of the northern route. Usually the depth of this channel was about nine feet, but it occasionally dropped to as low as three feet. When the water was low, it was necessary to lighter (transfer to smaller vessels) cargoes through the Flats and, still, vessels often got stuck. The northern channel was also so narrow that when one vessel went aground, all traffic was held up behind it.

The other major obstruction between lakes Huron and Erie was the Lime Kiln Crossing in the Detroit River. Emptying from Lake St. Clair, the Detroit River was interlaced with a number of islands and channels. Vessels wishing to ply the deepest route through the River had to constantly switch back and forth, cutting across the current at multiple points. At one

¹² Ibid., 188.

¹³ Ibid., 203.

particularly tricky crossing, opposite a lime kiln which had long operated on the Canadian side of the river, vessels encountered a swift current created by an underwater ledge called Ballard's Reef. The crossing was often so close, and the current so swift, that boat hands would often had to guide their vessel across by grabbing reeds on the side of the channel and pulling their vessel across.¹⁴ Merchants and shippers often complained about the Lime Kiln Crossing, but since the depth of the water was not as shallow as the St. Clair Flats, and major work on this stretch of the Detroit River did not commence until after the Civil War.

The problem of low water at the Flats and Lime Kiln Crossing was exacerbated during the especially low water years of 1846 and 1854, years which happened to coincide with increased shipping through the Flats towards Buffalo, New York, and England.¹⁵ In 1854, the number of travel days lost to groundings on the St. Clair Flats amounted to 5,566, representing significant monetary loss. Vessels were often forced to wait one to two weeks in order for passage to become free. The problem was greatest at the close of the navigation season as merchants were desperate to ship large amounts of produce east.¹⁶

Though these periodic disruptions were serious, the largest impact of the St. Clair Flats on the grain trade was to permanently limit the size of vessels that could operate on the Lakes. Shippers had to guarantee their vessel could make it through the Flats in all but the very lowest waters. This limited the size of vessels, restricted the volume of cargo that flowed across the lakes, and increased freight charges.¹⁷

¹⁴ Odle, "The Commerical Interests of the Great Lakes and the Campaign Issues of 1860," 4, 12.

¹⁵ Ibid., 3.

¹⁶ David Wentworth, *Annual Review of the Trade, Commerce, and Manufactures of Buffalo for the Year 1854* (Buffalo: Bristol & Welch, 1855).

¹⁷ Odle, "The Commerical Interests of the Great Lakes and the Campaign Issues of 1860," 3.

The navigability of rivers and harbors was the central issue facing Great Lakes grain merchants during the 1840s and prompted a collective response on the part of the merchants.¹⁸ Beginning in 1842, and in the wake of a new recalcitrance on the part of successive Democratic presidencies towards internal improvements, an association of ship owners and merchants on the Great Lakes banded together to dredge shipping channels on the St. Clair and Detroit Rivers.¹⁹ On the heels of three very hot, dry summers between 1844 and 1846 four steamboats operated constantly as lighters to move cargo through low water on the St. Clair Flats.²⁰ As one Buffalo grain merchant noticed, highest water on the Great Lakes and the Flats occurred in July and August, when the lakes “received the benefit of the spring rains and melting of the snows.” He also noticed that “during these months the freighting and pressure of business is the lightest.” During the spring and fall, however, “when the business is rushing...more vessels, more property, and more lives, are exposed to the mercy of the elements. A “few individuals” during this season put forth “a vigorous effort” to deepen the channels through the Flats in 1846.²¹ This effort was initiated by “several grain dealers” in Buffalo, who obtained the use of a government steam dredge housed in Erie and towed it the St. Clair Flats. For two months, upwards of forty men toiled to deepen the channel, to little avail. The current was simply too swift and, at the end of the government contract, they abandoned their efforts.²²

The growth of boards of trade throughout the Great Lakes cannot be viewed outside the drought of 1846 and the unsuccessful attempts to deal with the Huron-Erie bottleneck. As a historian of the Great Lakes wheat trade notes, “it is significant that the organization of these

¹⁸ Frank H. Severence, ed., *Publications of the Buffalo Historical Society*, vol. 13 (Buffalo, NY: Bigelow Brothers, 1909), 248.

¹⁹ Odle, “The Commerical Interests of the Great Lakes and the Campaign Issues of 1860,” 12.

²⁰ James L. Barton, *Commerce of the Lakes: A Brief Sketch of the Commerce of the Great Northern and Western Lakes for a Series of Years* (Buffalo, NY: Press of Jewett, Thomas and Company, 1847), 54.

²¹ *Ibid.*, 13.

²² *Ibid.*, 53–54.

bodies came after the low water levels of 1846-1847 and during the decade that deeper draught vessels were built to carry the increasing trade of the lakes.”²³ In 1846, the Buffalo merchant community led the way, founding the Buffalo Board of Trade to build on initial harbor improvements and allow Buffalo merchants to better advocate for improvements to the St. Clair Flats.²⁴ Buffalo’s Board was followed quickly by Detroit (1847), Cleveland and Chicago (1848), and Milwaukee (1849).²⁵ These boards of trade were organized primarily as bodies that would create an open market for grain and deal with inadequacies of lake harbors and transport. While larger boards, like Buffalo, performed both functions, boards of trade in smaller were mainly devoted to harbor improvement.²⁶

Encouraged by the Buffalo Board of Trade, merchants around the Great Lakes convened a general “River and Harbor Convention” in Chicago in July, 1847 amid rampant low water.²⁷ Organizers toured the North, from New York City to Buffalo, Cleveland, and Detroit, publicizing the Convention.²⁸ Over 10,000 people poured into the frontier town of Chicago for the conference, which was opened by a grand patriotic procession down Michigan Avenue. From the beginning, the Convention fit into the growing sectional debate over internal improvements and the attempt by Whigs, Democrats, and the Liberty Party to curry favor among western wheat producers.²⁹ Echoing the transatlantic free trade, free soil sentiment of the Corn Law debate, merchants and shippers at the Convention affirmed that the southern cotton interests

²³ Odle, “Entrepreneurial Cooperation on the Great Lakes: The Origin of the Methods of American Grain Marketing,” 449.

²⁴ Severence, *Publications of the Buffalo Historical Society*, 13:247, 251, 267–269.

²⁵ Odle, “Entrepreneurial Cooperation on the Great Lakes: The Origin of the Methods of American Grain Marketing,” 448.

²⁶ Ibid.

²⁷ *Chicago River and Harbor Convention: An Account of Its Origin and Proceedings* (Chicago: Fergus Printing Company, 1882).

²⁸ Ibid., 10–11.

²⁹ Mentor L. Williams, “The Chicago River and Harbor Convention, 1847,” *Mississippi Valley Historical Review* 35 (March 1949): 608–609.

prevented western grain merchants from internal improvements that would connect their produce to their natural markets in the East and in Europe.³⁰

Delegates to the Convention argued that a great national effort of improving the course of trade through the Great Lakes would encourage the northern economy, and “raise this country to that position for which Nature intended her.”³¹ The Convention soon became a simultaneous rally of wheat merchants and Whigs. Newspaper men Thurlow Weed and Horace Greeley sent back constant reports of the Convention to their newspapers in Albany and New York City. Daniel Webster wrote a letter to the Convention in which he argued that the federal government’s power to expand trade in the Great Lakes “is not partial, limited, obscure, applicable to some uses and not applicable to others,” but complete and in “the great interests of the country.”³² The Convention met for three days, enacting a set of fifteen resolutions that acknowledged the federal government’s right to execute Great Lake improvements. These measures ensured that western interests would remain aligned with Whig Party for at least a few more years and garnered support for a northern transcontinental railroad route originating in Chicago.³³ All who attended and covered the conference agreed that the Convention was the West’s coming out as “the granary of the nation” who’s interests laid with internal improvements and connecting the region to the Atlantic seaboard and markets abroad.³⁴

Problems with transportation through the Flats again reared their head through the heightened export years of 1853-1856. While the federal government lagged in its funding of a dredging project, “the commercial men of the Great Lakes” held another convention in Detroit in May, 1854 with the expressed intent of devising a plan for dredging the Flats during another

³⁰ *Chicago River and Harbor Convention*, 6.

³¹ *Ibid.*, 5.

³² *Ibid.*, 88.

³³ Williams, “The Chicago River and Harbor Convention, 1847,” 612–615.

³⁴ *Hunt’s Merchant Magazine*, XVII (Aug. 1847), 217-218.

extremely low water year.³⁵ Following another period of summer drought in the early 1850s, Great Lakes merchants had lost heavily in paying for lighterage and shipping damages through the St. Clair Flats. Following this disastrous season, the Buffalo Board of Trade called a general meeting at the city’s Corn Exchange in March, 1855 to which they invited “grain dealers and shipowners from most of the western parts of the Great Lakes.”³⁶ The committee succeeded in getting federal permission to raise the dredge, which had been scuttled due to lack of funds, and successfully dredged a channel through the most treacherous stretch of the St. Clair Flats to a depth of thirteen feet, a width of fifty feet, and a length of 1,700 feet. In 1857-1858, a total of \$65,000 devoted by the American and Canadian governments helped expand the channel greatly to 6,000 feet in length, 275 in width, and a uniform 12 feet deep throughout.³⁷

The efforts to remove transportation bottlenecks in harbors and rivers throughout the Great Lakes constituted the first concerted action among the Great Lakes merchant community. As boards of trade organized to deal with transportation bottlenecks, they also began to communicate amongst each other on marketing issues. In 1854, a conversation developed among the New York Produce Exchange, the Buffalo Board of Trade, and the Chicago Board of Trade on the correct standard for weighing wheat shipments. While New York merchants had to balance a domestic and export business favored the continued use of the bushel, interior merchants using newly-developed elevators favored sales of wheat by bulk weight. The Chicago and Buffalo Boards agreed to adopt the new method of elevator-based sales, and sent a “request the Boards of Trade of Milwaukee, Detroit, Toledo, Cleveland, and all other shipping ports to co-operate with us in the effort to accomplish this desirable object.” By the late 1850s, all

³⁵ Odle, “The Commerical Interests of the Great Lakes and the Campaign Issues of 1860,” 13.

³⁶ Lloyd Graham and Frank Hayward Severance, *The First Hundred Years of the Buffalo Chamber of Commerce* (Buffalo, NY: Foster & Stewart Publishing Corporation, 1945), 44–45; Odle, “The Commerical Interests of the Great Lakes and the Campaign Issues of 1860,” 14.

³⁷ Odle, “The Commerical Interests of the Great Lakes and the Campaign Issues of 1860,” 15.

boards of trade in the Buffalo-Empire Corridor used the weighted measure system expect that in New York, which held to the bushel in order to sell wheat aboard.³⁸

Western merchants responded to local and regional transportation, environmental, and market conditions by banding together and forming a community that was characterized first by a collective response to the hydrology of the region’s harbors and rivers and second by a collective conversation over adopting new market strategies that would use the unique conditions of the western grain trade. These conversations took on heightened importance during years of increased demand from the British market.

Britain’s Corn Crisis and the Origin of American Futures Trading

Between 1845 and 1847, a convergence of events throughout the Anglo-American world produced the first sustained wheat exports from the United States to Great Britain. First, the Anti-Corn Law debate and Liberty Party activities made American wheat and British demand part of a transatlantic conversation revolving around comparative advantage. Second, American production in the Great Lakes basin, particular in Ohio, Indian, and Illinois grew dramatically in the 1840s. Third, a series of poor harvests across Great Britain, manifesting as the “Corn Crisis of 1847” in England and as the Potato Famine in Ireland, created a greater demand in for wheat the United Kingdom. Fourth, the Great Lakes merchant community became more cooperative following the drought of 1846. This cooperation allowed these merchants to adopt marketing strategies designed to move and market wheat more efficiently than ever before. British importers began to look more actively at the American wheat market in 1846 and 1847, stimulating a growth in wheat shipments to England.

³⁸ Taylor, *History of the Chicago Board of Trade*, 189–190.

The global economic harmony envisioned by Anti-Corn free traders in 1846 was dashed in 1847. That year, a dramatic rise in grain prices on both sides of the Atlantic sent shock waves through the economies of Great Britain and the United States. The Corn Crisis of 1847 laid bare many of the difficulties lying dormant within the Anglo-American grain trade. Merchants on both sides of the Atlantic struggled to respond to constantly-changing conditions in wheat crops over a wide swath of the Anglo-American world. Spot prices changed faster than the pace of transportation and information. In the face of these conditions, merchants in Chicago, Buffalo, and New York began to experiment with to arrive contracts which were better able to respond to constantly changing prices and an endemic lack of hard cash in the western economy.

In 1846, William Rathbone prepared for yet another trip to the United States. Earlier that year, Rathbone had tentatively stepped into trading American wheat by purchasing 8,000 barrels of flour in New York for delivery to Ireland and Scotland, the populations of which were struggling under the weight of successive crop failures of wheat, oats, and potatoes.³⁹ In the wake of a “cold, late season” in which an “arctic spell” spell lasted from January 27 to March 21 the cold spring gave way to a rainy summer. A species of fungus-like oomycete bloomed in Ireland’s potatoes causing the first wave of harvest failures that would define the Irish Famine.⁴⁰ In these developments, Rathbone sensed a humanitarian and business opportunity: he could realize his new-found commitment to free trade by using American wheat to offset British shortage.⁴¹

³⁹ William Rathbone VI to William Rathbone V, March 7, 1846. “Rathbone Family Papers,” *University of Liverpool Special Collections*.

⁴⁰ J. M. Stratton, Jack Houghton Brown, and Ralph Whitlock, *Agricultural Records, A.D.220-1977*. (London: J. Baker, 1978), 107.

⁴¹ Henry Gair to Rathbone Brothers & Co., Jan. 18, 1848. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

Between 1846 and 1849, Rathbone would take two separate trips to the United States and build on the connections he established through patronage in the Barings network during his visits in 1841 and 1842. In 1847 and 1848, these trips resulted in increased purchases of American wheat. At first, Rathbone’s orders were relatively small, concentrated to flour, and dependent on Baring Brothers’ associations and capital. By 1848, however, Rathbone and Ross Smyth were overseeing individual purchases of over 10,000 barrels of flour from New York.⁴² Much of the flour Rathbone traded in the 1840s came from the Upper Mississippi Valley. He and Smyth preferred to deal in “the best St. Louis brands” because such a flour had “little trouble to get from the Bakers or others its real value.”⁴³ In these early years, Rathbone relied on established communities in New York and Liverpool to purchase and distribute his wheat. While he relied upon Hicks & Co. and Suydam, Sage & Company in New York to obtain wheat heading east across the Erie Canal, he depended on Smyth and Joseph Sandars, both established fixtures of the Liverpool grain merchant community, in purchasing supplies on joint account or providing a list of potential buyers in Manchester and the industrial interior.⁴⁴ New York and Liverpool merchants depended on larger credit lines from brokerage firms like Prime Ward King or Baring Brothers themselves to purchase and move wheat. Once the wheat arrived in New York, an agent of Hicks & Co. would deal with the shipping firms of Goodhue & Co. and Grinnel & Minturn to see who would give them the most favorable rates. Often at this juncture, Hicks & Co. would also be corresponding with William Rathbone and working out a final price on the wheat in the Liverpool market. Carried across the Atlantic for a small commission,

⁴² Henry Gair to Rathbone Brothers & Co., Oct. 22, 1848. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

⁴³ Henry Gair to Rathbone Brothers & Co., Nov. 27, 1848. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

⁴⁴ Henry Gair to Rathbone Brothers & Co., Dec. 18, 1848. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

Rathbone would take control and ownership of the wheat at the docks and use Smyth or Sandars as a middleman to negotiate the final sale of the wheat to a Manchester baker. The whole system, which operated on credit, was dependent on the cash reserves and credit extension of transatlantic baking firms like Baring Brothers and Brown Brothers.⁴⁵

Rathbone entered into the grain trade at a time of transition. As western merchant were organizing boards of trade and removing transpiration bottlenecks, new types of speculation developed in the United States. For merchants like William Rathbone, immersed in a culture of business revolving around credit and respectability, this speculation was disreputable. “You really must get the old business out of your head it exists no longer,” he warned the Liverpool house of Rathbone Brothers during a trip to New York in 1849, “the men who sent out or ordered out goods and sent returns in produce – by fixing advances too low we throw ourselves on a lower grade of men and a more dangerous transitory and unsatisfactory business.”⁴⁶ This speculation was not a response to abstract market developments, but the measures adopted by grain merchants across the American West to increase their grain shipments east during times of heightened domestic and international demand.

The British Corn Crisis of 1847 and the related rise of to arrive contracts in the United States introduced a speculative element into the Anglo-American grain trade that fundamentally change the nature of business throughout the Great Lakes-Empire Corridor. In England, the poor harvests of 1845 were followed by a “passable” harvest in 1846, and in 1847 much of the wheat crop of the south and east was destroyed by mildew.⁴⁷ By 1847, Britain’s stock of wheat was

⁴⁵ R.W. Hidy, *The House of Baring in American Trade and Finance: English Merchant Bankers at Work, 1763-1861* (Cambridge, MA: Harvard University Press, 1949); Edwin J. Perkins, *Financing Anglo-American Trade: The House of Brown, 1800-1880* (Cambridge, MA: Harvard University Press, 1975), 4–16, 85–103.

⁴⁶ Henry Gair to Rathbone Brothers & Co., Jan. 9, 1849. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

⁴⁷ Stratton, Brown, and Whitlock, *Agricultural Records, A.D.220-1977.*, 107.

running dangerously thin. Supplies dwindled in the industrial North due to the potato famine that gripped Ireland, as Irish wheat traditionally shipped to England stayed in Ireland to feed the starving populace.⁴⁸ As reports about a potential food crisis in Britain filtered slowly across the Atlantic, prices for American produce began to climb. American farmers and merchants in the interior, anticipating a further rise in prices, held back much of their crops in an attempt to profit from the crisis. The lack of foreign supply further contributed to rising prices on the British market. By April of 1847, British politicians and merchants realized the potential severity of the food shortage and sent out increased orders for American grain. Later that year, prices rose simultaneously in Great Britain due to shortage and in the United States in anticipation of large orders from across the Atlantic.⁴⁹

In 1846 and 1847, merchants across the Great Lakes, already corresponding about rivers and harbors, began to design new types of contracts that allowed them to speculate on the continuation of high prices. The story of these “to arrive” – or future – contracts, began as Chicago merchants attempted to deal with new demand from the British market and time shipping to and from their port. During the early 1840s, the City of Chicago grew from a small village into the primary grain market of northern Illinois.⁵⁰ In 1847, cartloads of wheat entered the city.⁵¹ The quantity of wheat handled by Chicago merchants grew dramatically from 260,000 bushels in 1845 to 682,133 bushels in 1846 and 643,000 bushels in 1847.⁵² Merchants handled this grain largely according to tradition: extending credit to farmers, quoting prices with wide margins, and carrying their advances until harvest times. In this type of market, “only one thing

⁴⁸ William Rathbone VI to William Rathbone V. June 10, 1846. “Rathbone Family Papers,” *University of Liverpool Special Collections*.

⁴⁹ Jeffrey C. Williams, “The Origin of Futures Markets,” *Agricultural History* 56, no. 1 (January 1, 1982): 307–313.

⁵⁰ Taylor, *History of the Chicago Board of Trade*, 139.

⁵¹ *Ibid.*, 133–134.

⁵² *Ibid.*, 149.

was certain, interest, insurance, and storage would add several cents a bushel to the cost of grain before the merchant would have an opportunity to dispose of it.”⁵³

As a combined result of Great Lakes shipping, prevailing winds, and a lack of storage in Chicago, a small futures market developed there in the period after 1845. In the mid 1840s, most wheat from Chicago was shipped across the Great Lakes, through the St. Clair Flats, and into the elevators of Buffalo grain merchants. Due to this practice, the cost of freight and the price of wheat in both Chicago and Buffalo was determined by the volume of shipping available on the Great Lakes and the timing of their arrival in Chicago to pick up the produce. Fleets from Buffalo arrived in spring when ice melted and prevailing westerlies across the Great Lakes were broken by a short run of easterlies.⁵⁴ Prevailing winds on the lakes meant that fleets from Buffalo would arrive at the same time without any knowledge when the next would follow. Storage space was extremely limited, however. This meant that when a large fleet of vessels would arrive in Chicago Harbor from Buffalo, there would often be little grain waiting for them in the city. This uncertainty drove competition among the country dealers for space in warehouses and vessels and encouraged shippers to raise the price of transport. These dealers would encourage their Chicago agents or associates to accept something less for shipment the next week, or the next month, in the hopes that prices would be lower when the next group of ships came in.⁵⁵ It wasn't long before shippers and Chicago grain merchants worked out a system of delivery whereby the grain dealer would agree with the shipper to deliver goods he knew to be held in a country warehouse “to arrive in 5 days,” or “to arrive in 10 days.”

⁵³ Ibid., 147.

⁵⁴ Ibid., 203. The Great Lakes: An Environmental Atlas and Resource Book.
<http://www.epa.gov/greatlakes/atlas/glat-ch2.html>. Accessed August 14, 2014.

⁵⁵ Ibid., 193.

The British Corn Crisis of 1847 and a growing network of corresponding merchants throughout the Great Lakes-Empire Corridor turned to Chicago's to arrive contracts in an attempt to make money during a period high prices in England and America. Futures contracts became a standard practice among the merchants of Chicago, Buffalo, and New York City.⁵⁶ Near end of February, 1847, the Buffalo Morning Express reported, “There is a large speculative movement in flour, and within the week, privileges [options] to the amount of 20,000 bbls have been bought at 12 ½ per bbl on \$7.25 @ 7.5; 25 on \$7.12 ½ to be taken up hours after [the] Steamer arrives.”⁵⁷ As prices climbed, merchants in Buffalo and New York began adopting the practice of futures contracts in the hopes of profiting from continually rising prices in England. This trade was fed by the dramatic growth of grain receipts in Chicago and other western lake ports. During 1847, when receipts of flour during the shipping season would average around 20,000 barrels a day, the volume of trading for future delivery and to arrive represented a sizable portion of the flour for purchase in Chicago, Buffalo, and New York.⁵⁸ By April, 1847, American merchants were responding to the Corn Crisis by contract for shipments deliverable in June and July at prices that supposed a further rise. During this period, according to one historian of early futures trading, “forward sales considerably outnumbered sales of flour on the spot. For instance, on 13 April 3,500 barrels on the spot changed hands while 11,000 barrels to arrive soon, 3,500 to arrive in June, and 2,000 to arrive in July were sold.”⁵⁹

The pace of trade did not last for long, however. Bull speculators, hopeful that prices would continue to rise, bought up much of the American stock and held it warehouses in the United States and Britain. With prices rising on both sides of the Atlantic and supplies at a

⁵⁶ Williams, “The Origin of Futures Markets,” 309.

⁵⁷ *Buffalo Morning Express*, Feb. 20,, 1847.

⁵⁸ Williams, “The Origin of Futures Markets,” 309.

⁵⁹ *Ibid.*, 309–310.

standstill, Britain braced for a widespread dearth and general economic downturn. In anticipation of a general economic downturn, factory owners reduced output and laid off workers, public works projects were suspended, and the British government terminated its program of relief to those left starving from the Irish famine. When word of the crisis reached the US, the price of flour soared to the extraordinary price of ten dollars a barrel.⁶⁰ But the crisis passed. Speculators lost heavily when their orders at ten dollars a barrel were unmarketable later in the year: 1847 produced a fine harvest in England and prices again retreated.⁶¹

The American response to the British Corn Crisis of 1845-1847 is important for three reasons. First, occasioned by the development of futures trading and increased interest in the American grain trade on the part of British merchants like William Rathbone. 1847 saw the largest exports of American breadstuffs into Great Britain to that date. British merchants imported 946,000 cwts of wheat meal and flour in 1845, 3,190,000 cwts in 1846, and 6,329,000 cwts in 1847. Merchants also imported great quantities of raw wheat into the United Kingdom in 1847, totaling 1,827,000 cwts.⁶² This number is reflected as well in the spike in American wheat and flour exports during the crisis period between 1845 and 1847. As illustrated in Figure 4.1, wheat exports from the U.S. spiked dramatically between 1845 and 1847.

Second, rising trade between the United States and Great Britain during the Corn Crisis was fed primarily by the growing production of the Great Lakes-Erie Corridor. As demonstrated in Figure 4.1 the spike in exports illustrated above conforms to a spike in trade among various wheat ports throughout the Great Lakes region.

⁶⁰ Jeffrey C. Williams, “The Origin of Futures Markets,” *Agricultural History* 56, no. 1 (January 1, 1982): 306–316.

⁶¹ Frederick Merk, “The British Corn Crisis of 1845-46 and the Oregon Treaty,” *Agricultural History* 8, no. 3 (July 1, 1934): 95–123.

⁶² Mitchell and Deane, *British Historical Statistics*, 97–102.

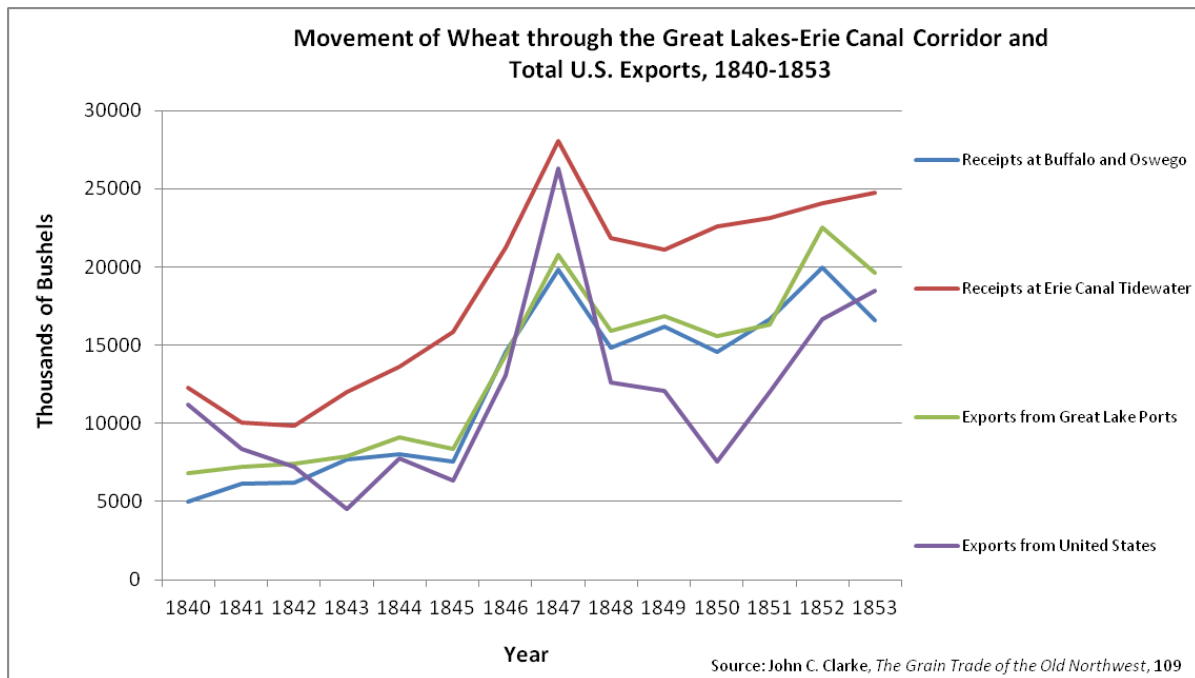


Figure 4.1. Movement of Wheat through the Great Lakes-Empire Corridor and Total U.S. Exports, 1840-1853. Shipments Wheat flowing east across the Great Lakes spiked dramatically in response to the British Corn Crisis of 1847. Graph by author from data in Clark, *The Grain Trade of the Old Northwest*, 56.

Finally, the rise in American exports and trade among the Great Lakes-Erie Canal corridor suggests that the communal efforts on the part of western grain merchants to deal with transportation bottlenecks and marketing problems translated into an increased portion of the region’s surplus crop exported to Great Britain through merchants in Buffalo, New York, and Liverpool. As merchants in the West became more collective in the efforts to reduce the cost of transportation, and as British merchants became more active in the American grain trade, the growth of futures delivery allowed cash-poor western merchants a way to market their grain in the East. While William Rathbone had mixed feelings about the new “speculative element” within the grain trade, to arrive contracts undoubtedly increased the ability of western merchants to group together in an effort to move the American surplus towards the British market.

The Crimean War Food Crisis and Wheat Grading

Following the Corn Crisis, English harvests rebounded and American exports to Great Britain dropped. Merchants in the Great Lakes and in Liverpool, however, still conducted business with New York merchants. Increasingly specialized and free of a string of debts that necessitated heavy outlays at the beginning of each season, western merchants continued their use of to arrive contracts, albeit not with the same regularity as in 1847. William Rathbone continued to finance small imports of American wheat and flour into Great Britain while concentrating on cotton. Baring Brothers remained active in brokering American securities and financing the cotton and flour trades. Another food crisis in Europe in the early 1850s, however, would again bring these merchant communities together in order to bring American wheat and flour to Great Britain.

Prior to the 1850s, England’s main source of imported wheat was the southern Russian port of Odessa. In 1854, however, this source of supply was cut off due to the outbreak of hostilities between Russia and the Ottoman Empire – a conflict that would widen in the next two years to become the Crimean War. Between 1851, when English wheat prices sat at a 70-year low following a series of fine harvests, and 1855 when prices almost doubled, Britain sought new sources of imported food.⁶³ A wet autumn in 1853 throughout Great Britain spoiled much wheat in the field and led a harvest down 108,000,000 bushels from 1852. This deficit alone would have assured moderately high prices without the loss of Russian imports in 1854.⁶⁴

In 1853 and 1854, American markets were volatile as well. A severe drought during the Summer and Fall struck the entire Great Lakes region. The American maize crop suffered upwards of a 30 percent loss. Price fluctuations were abrupt and violent, as drought killed large

⁶³ Stratton, Brown, and Whitlock, *Agricultural Records, A.D.220-1977.*, 109–110.

⁶⁴ Taylor, *History of the Chicago Board of Trade*, 184.

swaths of wheat in Ohio and Indiana and as farmers put new fields into production in Illinois, Iowa, and Wisconsin. Throughout the American market, rumors of war in Europe created great uncertainty. In anticipation of needed space for increased exports to England and Europe, ship charters from Chicago to Buffalo doubled in November 1853.⁶⁵ In the Chicago and Buffalo Boards of Trade, advances and declines of 10 cents per bushel within a few days were not uncommon.⁶⁶ Amid this uncertainty, speculative merchants contracted for future deliveries across the Great lakes-Erie Corridor. The “Democrat Press” of Chicago, January 31st, 1854, reported, “There is a strong disposition to operate for future delivery here and elsewhere, on the part of buyers, but holders in store are extremely sanguine and quiet.”⁶⁷ In July 1855, merchants began receiving reports from their agents that the supply of stored wheat would cover all domestic needs, and that a new crop exceeding all previous records was practically assured. Prices dropped suddenly. In a week wheat declined in Chicago 30@35 cents per bushel; Baltimore reported a decline in red winter wheat of 60 cents a bushel within five days.”⁶⁸ Thus, in 1854 and 1855, wheat prices were very high in England and dropping in the United States, creating an opportunity for merchants in both countries to benefit from exports. The French and British government appointed agents to obtain wheat from American and Canadian markets.⁶⁹ Experts on the American economy, Baring Brothers acted on account for the British.⁷⁰

Baring Brothers contributed significantly to the export of American wheat to Europe in the mid 1850s. By the time harvests failed in France during the Crimean War, Baring Brothers and their associates were confident enough to arrange for massive shipments of American wheat

⁶⁵ Ibid., 184–186.

⁶⁶ Ibid., 194–200.

⁶⁷ Ibid., 192.

⁶⁸ Ibid., 92.

⁶⁹ Ibid., 206–208.

⁷⁰ 17 Oct 1855

to Britain and the Continent. In 1853-54, Goodhue & Company alone consigned 100,000 barrels of flour destined for England on order from Baring Brothers.⁷¹ In October 1855, Baring Brothers’ Liverpool house reported that “imports from America are freely offered.”⁷² A typical “large” week for Barings during this period meant handling approximately 28,000 barrels of flour and 42,000 quarters of raw wheat.⁷³ For comparison, total British imports for 1855 were 11,560,000 quarters. This means that one’s weeks transaction of 42,000 quarters of wheat provided 3 percent of Britain’s total annual imports for that year,⁷⁴

During 1853-1856, when British firms such as Baring Brothers placed direct orders for shipments in exchange for credit with associate houses like Prime, Ward, King. Very few western dealers dealt directly with British orders at this time.⁷⁵ Wheat moved to the seaboard in response to successive cash outlays at every step from western farm to seaboard warehouse. At several points throughout the growing season, New York merchants advanced large funds to working partners in the interior, usually with two obligations attached. First, the western merchant was to pay back the seaboard merchant in several months. Second, the western merchant would consign a certain portion of his goods through to the seaboard merchant. Advances down the chain were then made based on the original draft of credit issued to the New York firm, and represented a large portion of the price of purchases in the West. Advances against future shipments were thus key in developing market connections across the Great Lakes-Erie Canal corridor. This system provided western merchants with working capital and

⁷¹ Hidy, *The House of Baring*, 437.

⁷² Baring Brothers & Co, Liverpool to Baring Brothers & Co, London. Oct. 27, 1855. “3L: Agents and Correspondents – Liverpool, 1834-1869,” Baring Fonds, Canadian National Archives, Baring Brothers – A – Letters Received, Roll C-1422.

⁷³ Baring Brothers & Co, Liverpool to Baring Brothers & Co, London. Nov. 3, 1855. “3L: Agents and Correspondents – Liverpool, 1834-1869,” Baring Fonds, Canadian National Archives, Baring Brothers – A – Letters Received, Roll C-1422.

⁷⁴ Mitchell and Deane, *British Historical Statistics*, 98.

⁷⁵ Rothstein, “American Wheat and the British Market, 1860-1905,” 62.

ensured eastern merchants access to wheat arriving at the seaboard.⁷⁶ Once it arrived at the seaboard, it was up to the merchant to judge, based on price, whether he would export the flour or redistribute it domestically. Prior to the 1850s, and access to updated market information about prices and harvest conditions, this was no easy task.

One problem for Baring Brothers during the 1840s and 1850s was that American wheat was not yet in demand on the English market due to low opinions of its quality by British merchant and consumer alike. Much of the American wheat imported was “hard,” meaning it had a firmer bran casing and was thus difficult to mill. Many English wheat merchants and bakers shared the Liverpool office’s opinion that “much of the wheat arriving from America is of poor quality.”⁷⁷ Wheat which was passable also faced spoilage on the long Atlantic journey and each shipment had a portion of unmarketable “sour” flour.

Because of its perceived inferior quality much of the wheat bought by Baring Brothers during the 1840s and 1850s went directly to feed the poor working populations in England’s industrial North. In 1846, the Baring Brothers’ Liverpool house reported that it regularly sold “western Canal” flour “at a fair profit” consigned to England by Suydam and Sage who sold it “at the Manchester market.”⁷⁸ They sold most of their wheat to a merchant middleman or directly to a baker. There sales were executed by providing a small sample by which the buyer could judge the quality of the entire shipment. On non-market days when there were no spot sales to make, Baring Brothers agents would contract with other merchants or dealers who could

⁷⁶ Ibid., 56.

⁷⁷ Baring Brothers & Co, Liverpool to Baring Brothers & Co, London. Nov. 13, 1855. “3L: Agents and Correspondents – Liverpool, 1834-1869,” Baring Fonds, Canadian National Archives, Baring Brothers – A – Letters Received, Roll C-1422.

⁷⁸ Baring Brothers & Co, Liverpool to Baring Brothers & Co, London. June 24, 1846. “3L: Agents and Correspondents – Liverpool, 1834-1869,” Baring Fonds, Canadian National Archives, Baring Brothers – A – Letters Received, Roll C-1422.

warehouse the grain until a favorable deal presented itself.⁷⁹ Sampling, however, was an inexact science made difficult by the mixing of grains of different type and quality in elevators. Uncertainty could lead to disputed sales or inaccurate quality reports, as the Liverpool house reported in 1855: “the price...of western Canal flour is more than we expected to get after ascertaining the quality of some of the brand.”⁸⁰ Though Baring Brothers profited in this instance, it could have just as easily been the other way around.

Despite lingering risks, merchants like Baring Brothers and William Rathbone understood the potential profitability of using American wheat to feed Europe during the Crimean Crisis. In 1850, Rathbone sent an agent of the company to New York in order to broker deals in cotton and wheat. Sensing an opportunity to trade in wheat profit, Rathbone’s agent began contracting large deals of wheat in the summer of 1853, purchasing upwards of 10,000 bushels of raw wheat per day and forwarding them on joint account to Liverpool. This is the first instance where the price differential between Great Britain and the United States and the coast of transportation – lowered by a transatlantic explosion of shipping space in the 1850s – enabled the export of wheat rather than flour from the United States.⁸¹

The wheat forwarded to Liverpool for William Rathbone came out of the Great Lakes-Empire Corridor. Rathbone’s agent preferred “prime” Ohio wheat and, though they placed considerable orders for wheat, he also reported from New York City he was “tapping our sources

⁷⁹ Baring Brothers & Co, Liverpool to Baring Brothers & Co, London. Nov. 15, 1855. “3L: Agents and Correspondents – Liverpool, 1834-1869,” Baring Fonds, Canadian National Archives, Baring Brothers – A – Letters Received, Roll C-1422.

⁸⁰ Baring Brothers & Co, Liverpool to Baring Brothers & Co, London. Nov. 16, 1855. “3L: Agents and Correspondents – Liverpool, 1834-1869,” Baring Fonds, Canadian National Archives, Baring Brothers – A – Letters Received, Roll C-1422.

⁸¹ Henry Gair to Rathbone Brothers & Co., July 19, 1853. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

of supply and getting Flour from Rochester in the Western portion of this state.”⁸² Despite problems of information and the increasing predilection of American merchants to sell using to arrive contracts, Rathbone and his agent still considered the Anglo-American grain trade profitable. Rathbone and his agent constantly exchanged letters on the state of the American harvests and prospects for British demand. The agent wrote in June, 1855:

I did not lose light of the fact that my opinion respecting the Production and Consumption of Wheat, which in Great Britain may prove enormous – and this consideration give my opinion that an advance before harvest is not improbable – in fact I consider that portion of G Britain is made much worse by considering our consumption to be 20,000,000 Qrs instead of 13,500,000 Qrs⁸³

Rathbone was acting upon a general assumption throughout England and the United States that the Crimean War disruption would provide the shock needed to perpetuate a hitherto ephemeral Anglo-American grain trade. The output of wheat from the North Central states increased from 100 million bushels in 1850 to 173 million bushels in 1860. It was clear to merchants at this early date that American consumption could not keep up with the increase in supplies pouring in from the West. By the 1850s, transatlantic merchants were successfully devising ways to connect American surplus to British demand for wheat. Central to this connection was an emerging merchant networks through the Great Lake- Erie Canal system centered on New York.

In Chicago, merchants constantly dreamed of opening a direct trade with Great Britain and Europe without having to break bulk for lighterage at the St. Clair Flats, and transshipments at Buffalo and New York City. Conditions in 1854 favored more than a few attempts. In autumn, 1854, the U.S. and Britain signed a reciprocity treaty that allowed American vessels to

⁸² Henry Gair to Rathbone Brothers & Co., April 10, 1855. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

⁸³ Henry Gair to Rathbone Brothers & Co., June 26, 1855. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

ply the Canadian Welland Canal and St. Lawrence River on their way to England.⁸⁴ In November, Chicago grain merchant William Kernaghan posted a flier in the Board of Trade asking shippers to lease “1 vessel for Liverpool,” “1 vessel for Glasgow,” and “1 vessel for Cork.” Kernaghan explained “these ships must be first-class, and can be profitably employed in the coasting trade between England and Ireland, and English ports during the winter months, taking out passengers to Quebec in the spring, should they not be able to get further than Quebec at a proportionate rate for Quebec.”⁸⁵ That same month, an agent for the French government arrived in Chicago and “paid out for wheat \$1,200,000.00, all of which was believed to be for French account.” This is the first known purchase of a shipment of American wheat for the European market not purchased on the eastern seaboard.⁸⁶

The movement to connect the Great Lake and Liverpool markets directly during the Crimean Crisis culminated in the 1856 shipment of 5,000 bushels of Illinois winter wheat and 9,060 bushels of Milwaukee spring wheat in the schooner *Dean of Richmond*. This shipment occurred with much fanfare, “a large number of members of the Board of Trade went out of the river with her, returning on the tug which towed her into the lake.” The voyage to England lasted sixty days and, according to an early history of the Chicago Board of Trade “newspapers on both sides of the Atlantic enlarged upon the “revolution” which direct trade between the interior of the American continent and the consumers of Great Britain would at once inaugurate...One of the heavy produce dealers of Liverpool came at once to Chicago with a view of making arrangements for direct trade between the two cities, and the enterprising members of the Board of Trade talked of sending other vessels in the wake of the *Dean of Richmond*.⁸⁷

⁸⁴ Taylor, *History of the Chicago Board of Trade*, 184.

⁸⁵ *Ibid.*, 184–186.

⁸⁶ *Ibid.*, 207.

⁸⁷ *Ibid.*, 220.

As a result of the efforts of Baring, Rathbone, and Great Lakes merchants, English orders for American wheat tripled between 1853 and 1854 and the price of wheat on most American markets rose by 50 percent. As a result, William Cronon notes, the amount of grain shipped through Chicago more than tripled between 1853 and 1856.⁸⁸ Meeting this demand, receipts of wheat in Chicago grew from 937,000 bushels in 1852 to near 9 million in 1856.⁸⁹

The growing volume of wheat from Chicago destined for Britain created a problem for English merchants already wary of the quality of western wheat. Wheat arriving in New York from the West had long been designated by type – winter, spring, club – and the market of origin. Different regions held different reputations for quality. In the British market, “western canal” wheat, harder spring wheat originating from northern stretches the Great Lakes-Ohio Basin, was considered coarse and low-grade. Conversely, British merchants, millers, and consumers, preferred the soft winter wheat grown in Pennsylvania, Maryland, and parts of Ohio. Knowing that American and British millers and bakers worked from precise recipes and preferred to know the exact type and market of origin of the wheat, Buffalo and Chicago wheat merchant kept their wheat separated by type and origin until well into the 1850s. This practice proved unwieldy in times of high supply. In 1856, Chicago merchant were placed in a bind as large supplies and heightened demand encouraged them to cut corners and mix types in their bins.

Knowing that British merchants would not accept deals without knowing the approximate quality of the grain they were purchasing, the Chicago Board of Trade cobbled together the first grading system in 1856.⁹⁰ The Board set out vague specifications for two grades and authorized

⁸⁸ William Cronon, *Nature's Metropolis: Chicago and the Great West*, 1st ed (New York: W. W. Norton, 1991), 115.

⁸⁹ Rothstein, “American Wheat and the British Market, 1860-1905,” 59.

⁹⁰ Thomas D. Odle, “The American Grain Trade of the Great Lakes, 1825-1873,” *Inland Seas 7-9* (1951-1953): 191-192.

inspection of each elevator in order to determine the grade of the grain held within. This system was also set up only for the inspection of grain arriving via rail at Chicago. A year later, the Board revised the grade standards further and provided for two grades of Red wheat – No. 1 Winter and No. 2 Spring.⁹¹ Almost immediately, however, Chicago merchants earned a poor reputation with farmers and merchants farther east for over-grading and mixing. The Board continued to revise grading standards and practices until by the onset of the Civil War, Chicago’s grading system comprised a detailed and rigid system of grade standards and inspection that became the model for similar grading systems adopted at other Great Lake ports.⁹²

Despite the best efforts of Chicago merchants, to break the hold of New York merchants on the foreign trade, the American response to the rise in British demand during the 1850s still flowed through Baring Brothers, Rathbone Brothers, and their agents in New York. The perpetuation of future contracts and grading, the result of the collective efforts of interior boards of trade had, by the mid-1850s, created a virtual revolution in marketing strategies. In the span of 10 years bookended by the Corn Crisis and the Crimean War, New York City became the unquestioned center of the American grain trade. As demonstrated in Figures 4.2 and 4.3, this ascendancy of New York was realized during the 1850s.

⁹¹ Rothstein, “American Wheat and the British Market, 1860-1905,” 90.

⁹² *Ibid.*, 92.

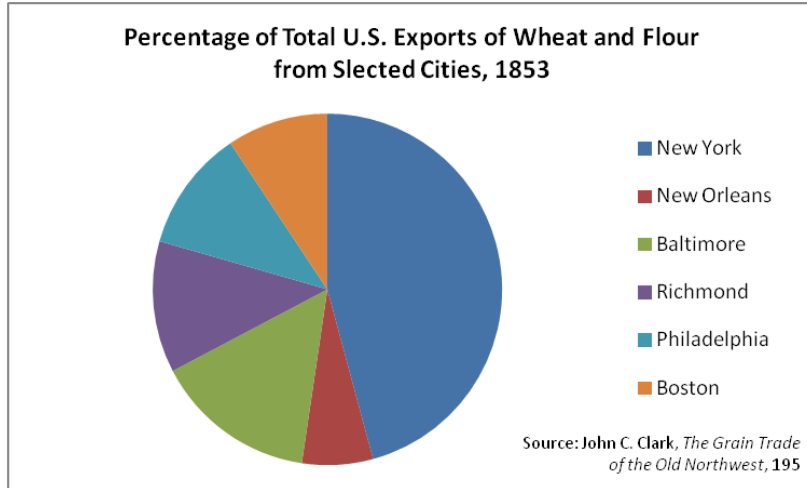


Figure 4.2. New York’s Share of Wheat Exports from the United States in 1853. Prior to the Crimean Crisis, New York was the most important wheat market in the United States, but more total wheat flowed to other ports. Chart by author from data in Clark, *The Grain Trade of the Old Northwest*, 195.

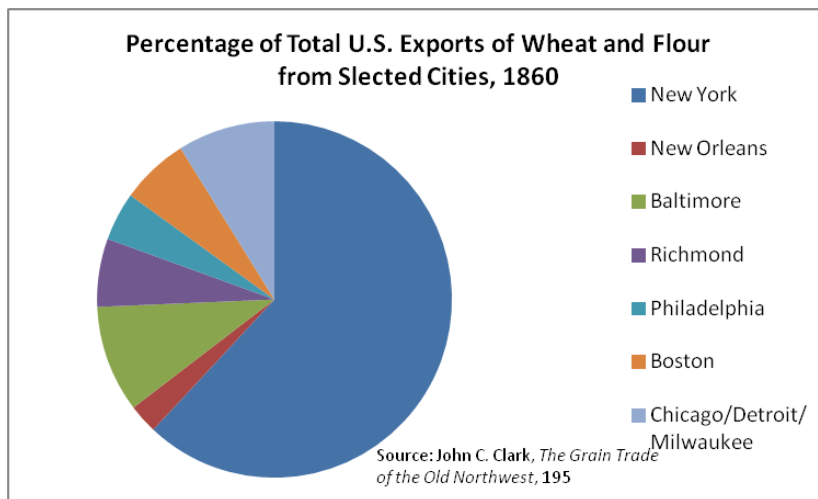


Figure 4.3. New York’s Share of Wheat Exports from the United States in 1860. By the end of the Crimean Crisis, New York merchants handled more wheat than all other American ports combined. Chart from author based on data from Clark, *Grain Trade of the Old Northwest*, 195.

As a result of Great Lake merchant cooperation to improve rivers and harbors, and profit from the Corn and Crimean Crisis, by the outbreak of the American Civil War in 1861, the Western surplus of grain cascaded across the Great Lakes, through the Erie Canal, down the Hudson River and into the warehouses of Manhattan and Brooklyn. Between 1855 and 1857,

this regional market produced the largest percentage of exports versus domestic consumption of American wheat. In 1856, 8 percent of the American crop was exported. In 1857, that number jumped to 15 percent.⁹³ These numbers seem small, but they comprised near one-third of all wheat imports into Britain in 1856 and one-fifth in 1857.⁹⁴ Clearly, the growing American surplus was flowing in greater volumes to England. The development of futures trading and grading were both a cause and symptom of this growth in trade between the United States and Great Britain.

The Great Lakes-Empire Corridor, Civil War, and Cotton Famine

By 1860 New York grain merchants like David Dows had transformed their operations from spot sales to the financing of to arrive contracts. Dows began his career in Albany during the 1830s forwarding grain shipped via the Erie Canal to the flour mills of Eli Hart & Co. in New York City.⁹⁵ Like many other merchants, Dows built an inland network of correspondents throughout the 1840s and 1850s that provided him with information of wheat crops from such diverse places as Michigan, Chicago, and California by the 1860s. Through these efforts, Dows “cornered large portions of the interior exports” which led him to become one of the most prominent commission merchants in New York City.⁹⁶ His correspondence reads as a constant update on weather in these locations, knowing that “good crops...entirely depend on the amount of rain we have in the winter season.”⁹⁷ To manage the flow of information, capital, and grain, Dows helped organize and direct the New York Corn Exchange, Fourth National and Merchant

⁹³ United States and Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970*. (Washington: United States Government Printing Office, 1975), 510–512, 898–899.

⁹⁴ Mitchell and Deane, *British Historical Statistics*, 97–102.

⁹⁵ “Ledger,” David Dows Papers, 1825-1957,” New-York Historical Society Library.

⁹⁶ “Printed Life Story”, Dows Papers .

⁹⁷ J. Dony to D. Dows. February 10, 1861. Dows Papers.

Banks, the Central Trust Co. of New York, and the Union National Bank of Chicago. He also built the huge Dows Elevator near the Atlantic Docks in Brooklyn, which, by the 1850s, was the primary collection point for interior grain heading towards Great Britain.⁹⁸ In this way noted a reflection on Dows’ life, “the merchant [had] become a financier.”⁹⁹

In the 1850s and the 1860s, David Dows was one of the main merchants in the Anglo-American grain trade. In attempting to purchase interior wheat supplies, he operated from a fundamental assumption that “Europe must be considered as the great consumer of the American surplus of wheat.” Dows’ primary task, then, was to reconcile reports from his interior network of correspondents with the state of grain markets in New York City and Liverpool.¹⁰⁰ This task became much more difficult in the years following the Panic of 1857 and the run-up to the American Civil War.

By the outbreak of the American Civil War, merchants in Liverpool and the Great Lakes-Empire Corridor had removed transportation bottlenecks and developed marketing strategies to enable American wheat to flow cheaply to New York City and the heart of industrial Great Britain. The Civil War represented a crucial moment in the Anglo-American grain trade by cutting off British merchants from their profit in southern cotton and leading them to invest more time, energy, and money in the northern wheat economy. The disruptive force of the American Civil War shifted the course of the Anglo-American grain trade in profound ways. Oddly, because the cotton and wheat economies had grown symbiotically due to British portfolio investments from Baring and Brown Brothers, the northern wheat economy boomed while the southern cotton economy withered. Union blockade and Confederate trade policy forced Liverpool merchants to move the balance of their investment portfolio north into trading wheat.

⁹⁸ “Printed Life Story”; *Brooklyn Daily Times*, March 21, 1885. Dows Papers.

⁹⁹ *Brooklyn Daily Times*, March 21, 1885. Dows Papers.

¹⁰⁰ J. Dony to D. Dows, February 10, 1861. Dows Papers.

The American Civil War broke out at a crucial moment in the economic development of the Anglo-American economy. Nearly fifty years of direct investment had left the transportation and financial system of the North and West robust, ready to respond – by design - to economic uncertainty and possible food shortage in Great Britain.

As war neared in 1860, wheat merchants on both sides of the Atlantic like David Dows and William Rathbone struggled for any sign about how the Anglo-American wheat market would respond. For many, it was unclear even if Britain would join the fray and, if they did, on what side. Dows reflected in a correspondence with his brother in December, 1861 on the possibility of hostilities with the country he had not a year prior considered “the greater consumer of the surplus of American wheat.” He brother reflected on the possibility of a British attack down the St. Lawrence that had only six years prior been opened to American commerce:

Now is there not great peril to your business interests? Is not New York, Brooklyn, Oswego, Buffalo, Detroit, etc endangered? In your business you must have large amounts of property at stake at these places and on the Lakes. She can readily push small vessels of war up the St. Lawrence and into the Lakes, of course in a great extent before spring.¹⁰¹

At the same time, William Rathbone weighed the prospects for war and what they would mean for their cotton and grain trades. One New York agent wrote to the Liverpool house reflecting on the possibility for a peaceful outcome “the general opinion here seems to be that the whole 15 Southern States will secede and that then a convention of all the 33 will meet and endeavor to reconstruct a new Confederacy.”¹⁰² Despite the political and financial uncertainty, Rathbone’s American agents were “endeavoring to buy both Wheat and Corn in Virginia during the past week” and working to secure “about 20000 Bushels prime red wheat at Baltimore and am endeavouring [sic] to secure about 24000 at the declining rates” despite the “rattled”

¹⁰¹ Ammi Dows to David Dows, 23 Dec, 1861. David Dows Papers, New-York Historical Society.

¹⁰² William Lidderdale to Henry Gair, Jan. 15, 1861. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

exchange of the U.S. in anticipation of being cut off from southern supplies in the event of hostilities.¹⁰³

Despite the lack of clarity in the geopolitical situation, Rathbone’s agents constantly reported that, while “Southern wheat districts supplies are falling off and the principle markets will soon be very low” the company “may look for a good demand for home [British] consumption” that could be supplied by a “very large quantity of breadstuffs waiting the opening of Lake and Canal navigation.”¹⁰⁴ Then, war. And blockade. A Rathbone agent reported in April, 1861 that “a blockade of the Southern Ports has been proclaimed – a good many vessels will ship away before it can be enforced, but there will still be a considerable quantity of cotton kept back for which the only other [option] will be overland.” “The wheat,” he concluded, “ought to command good prices now.”¹⁰⁵

British merchant firms like Rathbone Brothers, who acted opportunistically in a number of commodities, were primed to move the bulk of their attention towards wheat during the American Civil War. Using their New York agent house of Busk & Jevons to scout out and follow up on investments, Rathbone Brothers quickly focused their attention northward at the outbreak of hostilities. As a New York agent reported in April, 1861, all that waited were the seasons: “canal navigation will soon reopen, the weather having become quite warm and we shall be flooded with wheat.”¹⁰⁶ By the summer of 1861, Rathbone Brothers was forwarding orders as large as 12,000 bushels of wheat.¹⁰⁷ In 1861, there was so much wheat coursing around

¹⁰³ Eustace Greg to Rathbone Brothers & Co., Feb. 12, 1861. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

¹⁰⁴ William Lidderdale to Rathbone Brothers & Co., April 9, 1861. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

¹⁰⁵ William Lidderdale to Rathbone Brothers & Co., April 20, 1861. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

¹⁰⁶ Ibid.

¹⁰⁷ William Lidderdale to Rathbone Brothers & Company, April 16, 1861 “Rathbone Family Papers, American Business,” *University of Liverpool Special Collections*.

the North, “the end of inland navigation found New York with a stock of breadstuffs which not only filled all the grain warehouses to overflowing, but a great many boats as well were used for storage room.” Needless, to say, “the large quantities received in England are account for in this way.”¹⁰⁸

The outbreak of hostilities and the Union blockade served to guide Great Lakes wheat towards the industrial population of Great Britain. By the end of the 1860s, and aided by their partnerships with affiliated houses, railroad investment, and wired communication, Rathbone Brothers shipped 24,000 imperial quarters – roughly 192,000 bushels – over a three day period. “One agent though “the exports for the last fortnight from this country to the UK have been over 200,000 quarters of wheat – 77,068 barrel flour in June, 1861”¹⁰⁹ Virtually all of this wheat came through the Great Lake-Empire Corridor. “The Illinois flour” coursing to New York in 1861, one agent reported, “is well known and liked in England....and “Chicago No. 1 is being stored in considerable quantities on speculation and has gone up in face of heavy receipts...506,000 bushels arrived last Friday”¹¹⁰ The wheat headed through Rathbones network directly to their affiliates in Manchester.¹¹¹

It was in 1862 and 1863 that American exports to Great Britain reached new heights. Shipping companies, their holds empty of cotton their cabins empty of passengers, turned to the importation of wheat. In 1863, the *Great Eastern*, the same ship used in the laying of the Atlantic Cable three years later, temporarily converted to a grain ship ferrying supplies from the United States to Great Britain. That year, it carried at least 66,000 bushels of “Chicago spring

¹⁰⁸ Ibid.

¹⁰⁹ William Lidderdale to Rathbone Brothers & Co., June 19, 1861. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

¹¹⁰ William Lidderdale to Rathbone Brothers & Co., Dec. 21, 1861. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

¹¹¹ William Lidderdale to Rathbone Brothers & Co., Nov. 19, 1861. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

wheat” outward from New York City.”¹¹² Rampant inflation as a result of war forced down the value of the American dollar and merchants in England saw an opportunity. Due to the favorable exchange rate, remembers one Liverpool grain merchant, “Exports of all sorts were stimulated by the crisis, but none more than grain and provisions.”¹¹³ David Dows, Suydham Sage, and Hicks & Co. exported records amount of American wheat during the Civil War: 31 million bushels in 1861, 37 million bushels in 1862, and 36 million in 1863.¹¹⁴ These numbers constituted 36, 39, and 35 percent of all wheat imported into the United Kingdom during these years, respectively.¹¹⁵ While wheat merchants exported large volumes of grain from New York and Philadelphia directly to Liverpool and London, the rumblings of an economic shock from the loss of southern cotton threatened to send Britain’s textile industry into a tailspin. In 1862 the British industrial economy began to teeter on a financial precipice as factory owners searched in vain for cotton to run through their machines. By 1862, the flow of cotton from the American South that had fed British cotton looms for a generation was choked off by Union blockade. One report indicated in 1861 that the “Manufacturing production is much embarrassed by conflicting reports as to the quantity of cotton now stored in the Southern States, the estimates varying from 3,000,000 bales to 1,000,000 bales.”¹¹⁶ These great stocks on Southern wharfs meant an acute shortage of cotton in England. Cotton merchants and factory owners saw the price of cotton shoot upward. Their adjustment to this state of affairs involved a long-term response: building new trade connections with cotton merchants in Egypt and India. But it would take months if not years for this new cotton to arrive at British ports.

¹¹² George Broomhall and John Hubback, *Corn Trade Memories Recent and Remote*. (Liverpool: Northern Publishing Co., 1930), 45.

¹¹³ *Ibid.*, 46.

¹¹⁴ United States and Bureau of the Census, *Historical Statistics of the United States*, 510–512, 898–899.

¹¹⁵ Mitchell and Deane, *British Historical Statistics*, 97–102.

¹¹⁶ Robert Rawlinson, *Public Works in Lancashire for the Relief of Distress Among the Unemployed Factory Hands, During the Cotton Famine, 1863-66* (London: P.S. King and Son, 1898), 21.

Across England’s industrial North and particularly in cotton districts, factory owners placed workers on reduced hours, shortened wages, or simply released them altogether in response to the cotton shortage. One report noted that the American war, the supply of cotton, and the employment of large numbers of industrial workers were all wrapped together: “the present very high price of cotton will render a general resumption of production impossible; and if the aspect of the war in America should change, and the struggle approach a settlement, there would probably be a temporary and extensive cessation of employment in the cotton factories.”¹¹⁷ In this way, a dramatic reduction in the supply of cotton to the British market in 1860 and 1861 had direct implications on the means through which cotton workers could obtain work and, therefore, food.

Without wages necessary to feed themselves, English cotton workers nearly saw the cotton famine nearly turn into a true famine. Workers who were either laid off or placed on limited hours had to reduce their diet considerably. Prior the Cotton Famine, families spent upwards of six shillings per person per week on food. During the heights of the Famine, most could not afford over two shillings.¹¹⁸ Cotton “operatives,” as they were called, were amongst the higher paid laborers, their wages being “fair but reasonable,” enough that they “ought not to be [identified with] the masses.”¹¹⁹ Under fair conditions, then, the operatives “lived on a generous diet,” which, in lean times, worked against them. One reporter noted that without “the advantages of a careful domestic economy, and now in hard times, they have no knowledge how to make the most of their scanty incomes.”¹²⁰ The great adjustment involved the consumption of bread. While these laborers had enough money in good times to afford to eat meat fairly

¹¹⁷ *Ibid.*, 20.

¹¹⁸ W. O. Henderson, *The Lancashire Cotton Famine, 1861-1865* (Manchester, UK: Manchester University Press, 1934), 101.

¹¹⁹ Rawlinson, *Public Relief Works During the Cotton Famine*, 6–7.

¹²⁰ Dr. George Buchanan, quoted in Henderson, *The Lancashire Cotton Famine, 1861-1865*, 101.

consistently, W.N. Molesworth reported in 1861 that “bread constitutes the greatest part of their daily food.” Edward Smith, in his Fifth Report of the Medical Officer of the Privy Council in 1862 noted that “at present as compared with former times there is much less of nearly every kind of food eaten, but particularly potato, sugar, butter, meat and milk, with a considerable diminution also of bacon and tea. Bread is now the principle food.”¹²¹

To make matters worse, the layoffs coincided with a “partial failure of crops throughout western Europe,” which further raised the price of wheat and flour.¹²² The situation in Lancashire escalated throughout the spring and summer of 1862. After a “very deficient harvest” in 1860, and a light harvest in 1861, 1862 opened cold and wet. Persistent rain in March and April delayed sowing. The summer remained cool and wet. Wheat gave particularly low yields.¹²³

Reports leaked across the Atlantic of “the despairing wail of those poor famine-stricken work-people.”¹²⁴ By early December, 1862, the *New York Times* reported that merchants throughout the city of New York, including the Chamber of Commerce, were looking towards “practical action in the matter of sending relief to the starving operatives of the cotton manufacturing districts of England.”¹²⁵ Soon, the now decades-old trope of the abundant United States fulfilling food deficit in England began to take over on both sides of the Atlantic. The cotton famine would mark a wheat boom.

David Dows and other Anglo-American wheat merchants were primed to respond to food shortages in England in 1862. As reports filtered across the Atlantic of the impending economic

¹²¹ Quoted in *ibid.*, 102.

¹²² *Report of the American International Relief Committee for the Suffering Operatives of Great Britain, 1862-1863* (New York: C.A. Alvord, 1864), 9.

¹²³ Stratton, Brown, and Whitlock, *Agricultural Records, A.D.220-1977.*, 114–115.

¹²⁴ *Report of the American International Relief Committee for the Suffering Operatives of Great Britain, 1862-1863*, 7.

¹²⁵ *New York Times*, December 4, 1862.

collapse in England, Dows organized a group of New York merchants who met in late 1862 to discuss how they could help. What would become the “American International Relief Committee for the Suffering Operatives of Great Britain” (American Committee) met for the first time in mid-December, 1862 and resolved to “collect subscriptions, both in money and food, from all parts of the country, and especially from the great food-producing states.”¹²⁶ The call was made from New York towards the interior invoking the principle of Anglo-American brotherhood based on the principle of comparative advantage. In a latter address “To the American People,” the American Committee bellowed “our agricultural efforts, extended over a wide a fertile territory as yet thinly populated, have made our land one of the granaries to which the nations of Europe that subsist chiefly by manufactures now look for food.”¹²⁷ Like “when the Irish famine prevailed, in 1847,” the Committee called, Americans “from the Atlantic to the Mississippi [should] give freely of their abundance.”¹²⁸ This abundance would feed the dearth of England: “the operatives of Lancashire, temporarily deprived of American cotton, have more than ever occasion for American corn.”¹²⁹ This bounty would be brought forth willing by “railroad companies and owners of vessels on the lakes, whose prosperity has been of late largely augmented by the increase of our agricultural productions.”¹³⁰

The American Committee grew out of merchant associations within the Anglo-American grain trade. The founding members of its committee were all involved in the grain and transportation business. Jonathan Sturges, a well-respected commission merchant trading in tea, coffee, and flour, was also president of the Illinois Central Railroad, a director of the New York,

¹²⁶ *Report of the American International Relief Committee for the Suffering Operatives of Great Britain, 1862-1863*, 10.

¹²⁷ *Ibid.*, 16.

¹²⁸ *Ibid.*, 15.

¹²⁹ *Ibid.*, 17.

¹³⁰ *Ibid.*

New Haven, and Hartford Railroad, and a founding member of New York City’s Bank of Commerce.¹³¹ A.A. Low owned and operated a fleet of clipper ships, mainly serving the South American and Asian trades, fresh off participating in the financing of the 1858 Atlantic Cable.¹³² Robert Minturn owned a line of packets, shipped wheat and flour on commission for Baring Brothers throughout the 1840s and 1850s, and invested in the Illinois Central Railroad.¹³³ George Griswold was a New York flour merchant and original president of the Illinois Central Railroad.¹³⁴ Finally, there was Dows, Director of the operation.

The American Committee’s existence presupposed the cheap and efficient flow of grain from the United States to Great Britain. Much of the food arrived at Liverpool using routes and relationships established in the eighteen years since the repeal of the Corn Laws. While starting the subscription campaign, members of the Committee’s executive council engaged in active correspondence with business associates all around the Great Lakes-Empire Corridor, paying special attention to those who held prominent positions in new railroad companies. They sought, in addition to subscriptions, free transportation of all grain and flour shipped under the auspices of the American Committee. The long list of railroads that offered their right of ways and rolling stock free of charge included the New Jersey Central Railroad; the New York and New Haven Railroad; the Erie Railway; the New York and Harlem Railroad; the Pittsburgh, Fort Wayne, and Chicago Railroad; and the Great Western Railroad of Illinois. The American Telegraph

¹³¹ Richard Henry Greene et al., *The New York Genealogical and Biographical Record* (New York: New York Genealogical and Biographical Society, 1919), 234.

¹³² *New York Times*, January 8, 1893.

¹³³ Hidy, *The House of Baring*, 354–358, 401–401, 441–443.

¹³⁴ *Report of the American International Relief Committee for the Suffering Operatives of Great Britain, 1862-1863*, 9–10.

Company offered free use of its line to the Committee, and the New York Produce Exchange appointed a special committee “to procure contributions for British sufferers.”¹³⁵

The Committee’s next move was to select a small handful of New York and Liverpool firms who would handle the bulk of the grain. These merchants would be responsible for timing the shipments, procuring distribution methods, and arranging favorable or free rates with transportation companies. The Committee selected Stephen B. Guion, of Guion & Co., owners of the Black Star line connecting Liverpool and New York to handle much of the oceanic transport.¹³⁶ In Liverpool, the Committee sought the patronage of Sir William Brown, who oversaw the Liverpool house of Brown, Shipley & Co – the British affiliate of Baltimore’s great transatlantic banking firm Brown Brothers.¹³⁷ Brown was charged with writing Members of Parliament and various influential Liverpool merchant organizations “to secure the introduction into Great Britain of the consignments of provisions [with]...exemption from custom duties, dock and town dues, and all other expenses on merchandise...and from all charges on such vessels as may arrive in the Mersey wholly laden with provisions, freight free.”¹³⁸

Building upon these connections throughout the Anglo-American grain trade, the American Committee began forwarding wheat and flour from the American interior towards Lancashire in late December, 1862 and continued through the winter of 1862-1863. Ships such as the *George Griswold*, *Energy*, and *Arkwright* arrived at Liverpool’s Waterloo Dock laden with free grain. The Liverpool Chamber of Commerce addressed a letter of welcome to these ships, and the Union and Emancipation Society of Manchester invited the ships’ captains to a public reception filled with congratulatory addresses. Inside England, the Sir William Brown

¹³⁵ Ibid., 19–20.

¹³⁶ Ibid., 23–24.

¹³⁷ Perkins, *Financing Anglo-American Trade: The House of Brown, 1800-1880*, 40. 136–137.

¹³⁸ Ibid., 35.

negotiated deals with the London and Northwestern Railway and the Lancashire and Yorkshire Railway to ship flour without charge to those regions most affected by the scarcity of cotton, work, and, food.¹³⁹

All told, the American International Relief Committee shipped nearly 16,000 barrels of flour, 375 boxes of bread, 500 bushels of maize, 416 boxes of bacon, and 50 barrels of pork from New York to Liverpool between December 1862 and May 1863.¹⁴⁰ It was a considerable sum that undoubtedly helped to feed many needy families in Lancashire. Its significance for this story, however, stretches far beyond the actual food delivered. The effort allows us to pause and survey the growing connections among transatlantic grain merchants, railroads, and the agro-industrial economy of the Anglo-American world. An effort such as this, with 16,000 barrels of flour moved freely and quickly from the American interior to England’s industrial heartland in a matter of months, would have been unthinkable even a few years prior. Over the course of the 1850s, transatlantic grain merchants had embedded themselves into a transport-storage-communications economy that allowed them to engage in surer contracts and move ample grain. Those growing connections between New York grain merchants and their contacts with American railroads and British grain merchants came into clearer and more lasting focus based on the relief effort.

The American Committee, then, marked the coming of age of the Anglo-American grain trade as both idea and material reality. Evoking the principle of comparative advantage and transatlantic concord mentioned in merchants’ travel accounts and in Anti-Corn Law rhetoric, members of the American Committee shipped the actual grain in railroad cars, ocean ships, and elevators built primarily to remove uncertainty of price within the trade. The American

¹³⁹ *Ibid.*, 36–38, 50.

¹⁴⁰ *Ibid.*, 55–60.

Committee highlights the extent to which the transatlantic wheat trade grew more responsive and integrated throughout the 1840s and 1850s. In order to move wheat supplies to cotton districts, merchants used every component of the technological system they had built in the previous twenty years. The connections forged in the relief effort proved lasting, and by the late 1860s, merchants shipped growing volumes of American wheat to British markets.

Conclusion

In 1861, an agent for William Rathbone in New York wrote that “it is beyond question that this country has still abundance of wheat and corn to send to England.”¹⁴¹ Such an assertive statement would not have been possible only 20 years prior when the small American surplus left the United States from Baltimore and New Orleans bound for the slave populations of the Caribbean and South America. The growth of the Great Lakes-Empire Corridor as the main American conduit for grain accounts for this shift.

Most of the American wheat exported to Great Britain during the harvest disruptions of the late 1840s and mid 1850s came through the emerging Great Lakes-Erie Canal Corridor. Merchants in this region had by this time developed better storage and marketing strategies than their counterparts in the Ohio-Mississippi trade. The emergence of Buffalo as a grain transshipment point gave merchants further West a choice based on current wheat and transportation prices: consign their wheat straight through to New York, or sell it directly for cash on the Buffalo market. Not surprisingly given the vast increase in wheat supply, western

¹⁴¹ 9 July 1861

New York became a flour milling center, and Rochester, New York remained the interior’s largest milling center until the emergence of Minneapolis in the early 1870s.¹⁴²

In a short fifteen years, the American market went from exporting no wheat or flour to Great Britain to representing over one third of all imports into that country. The abruptness of this shift can be explained by a growing interest on the part of British merchants to buy wheat cheaply in the United States and sell it Great Britain and by a cooperative response by merchants in the American West to respond to local environmental and market conditions by innovating new strategies of storage, transport, and marketing. The latter accounts for the “push” of American wheat, the former the “pull” towards Great Britain. By the outbreak of the American Civil War, the British market depended on foreign sources for 1/3 of its necessary wheat. American supplies during this period accounted for 1/3 of this total. That means by the time the American Civil War broke out in 1860, one in nine British citizens depended on American wheat for their daily bread. This number would only grow in the next half-century.

¹⁴² Rothstein, “American Wheat and the British Market, 1860-1905,” 52–53.

Chapter 6 - Bonanza: California’s Wheat and the Liverpool Market, ca 1850-1890

The last two chapters of this work focus on the material construction of two streams of a larger Anglo-American grain trade. In two unlikely regions – California and the Spring Wheat Region – wheat production exploded in the 1870s due to a convergence of specific local factors and a network of merchants connecting regional surplus to the British market. Merchants in both California and the Spring Wheat Regions took dramatically different paths to tap the British market. The result was the same, however. By the late 1880s, both regions enjoyed dramatic similarities in wheat prices, standards of quality, and marketing practices with the British market and sustained flows of wheat and capital between California’s industrial farms and Europe.¹

In California, the path to market convergence with Great Britain lay not in business specialization, but in vertical integration. In the port of San Francisco, isolated from every wheat market of consequence by a long ocean voyage, farmers and merchants had to perform a number of operations to locate markets, establish business associations, and transport their goods. Despite the problem of isolation, California was a significant producer of wheat for the British market, sending on average 22 million bushels a year to Liverpool in the 1880s.² In the two “bonanza” regions of California and Dakota/Minnesota, merchants and farmers dealt with shifts in regional and international markets by expanding the scale of their operations which contributed to domestic overcapacity and the need to export surplus. Merchants in both regions

¹ Wilfred Malenbaum, *The World Wheat Economy, 1885-1939*. (Cambridge: Harvard University Press, 1953); Morton Rothstein, “American Wheat and the British Market, 1860-1905” (PhD Diss., Cornell University, 1960), 150–213.

² Rodman W. Paul, “The Wheat Trade between California and the United Kingdom,” *The Mississippi Valley Historical Review* 45, no. 3 (December 1, 1958): 391–412.

came to fix their eyes on Great Britain as the best bet to absorb their surplus. Chapters 6 and 7, then, place American bonanza farms in their proper international context.³

Between 1860 and 1890, merchants and farmers in California transformed the region’s economy from one dominated by the export of gold and the import of food to an economy based around the export of wheat to the British market.⁴ This period corresponds to a related shift in the sources of wheat feeding the British industrial class. In 1860, while American imports were rising, Russia and the Continent remained the single largest sources of imported wheat and flour in the British market. By 1890, the United States was by far the largest supplier of raw wheat and flour for the British market. Of the three regions that provided this wheat for Great Britain – the Great Lakes-Empire Corridor, California, and Dakota/Minnesota – California remained the most single largest and most regular region of supply throughout this period.⁵

This chapter argues that a network of merchants connected the California bonanza to the British market by expanding and integrating their operations across the production chain. The integration occurred simultaneously as a “push” of wheat from California and as a “pull” of wheat demand from Great Britain. As British merchants searched across the globe in the 1850s and 1860s for new regions of wheat production that could augment their supply, they encountered the growing production of an isolated California market. Here, individuals who purchased land in the wake of the Gold Rush began to produce wheat and flour for the domestic market by mobilizing technology to increase the scale of their operations. Capitalist farmers like

³ Hiram M Drache, *The Day of the Bonanza: A History of Bonanza Farming in the Red River Valley of the North* (Fargo, North Dakota Institute for Regional Studies, 1964); Donald Pisani, *From the Family Farm to Agribusiness: The Irrigation Crusade in California and the West, 1850-1931* (Berkeley: University of California Press, 1984); David Iglar, *Industrial Cowboys: Miller & Lux and the Transformation of the Far West, 1850-1920* (Berkeley: University of California Press, 2001); Wallace Smith, *Garden of the Sun: A History of the San Joaquin Valley, 1772-1939*, ed. William B. Secrest, 2nd ed. (Fresno, CA: Linden Publishing, 2004).

⁴ Paul, “The Wheat Trade between California and the United Kingdom,” 390–402.

⁵ Rothstein, “American Wheat and the British Market, 1860-1905,” 243–286.

Hugh Glenn adjusted to the lack of labor and the peculiarities of the growing season by mechanizing planting and harvesting. The growing supply of bonanza farms created a problem: these mechanized farms produced considerably more wheat than could be consumed locally. Up to this time, California merchants relied on a shifting set of markets all over the Pacific Rim to sell their wheat. The uncertainty about which market would absorb their crop did not encourage the steady growth of production on mechanized, extensive farms. As such, San Francisco merchants like Isaac Friedlander began to actively forge markets in the eastern United States and Great Britain. Friedlander was able to market the superior flouring qualities of California wheat to British merchants and millers and begin selling wheat on the California market in the late 1860s. At the same time, Liverpool merchant Stephen Williamson opened a branch office for his operation in San Francisco. This branch office, called Balfour, Gurthie & Co. (Balfour Guthrie), funneled British money into California, provided farmers like Glenn with loans to expand their operations further and began shipping more California wheat to Great Britain.

By the 1870s, Friedlander and Balfour Guthrie were moving large quantities of California wheat produced on heavily-capitalized, mechanized farms to the British market. While historians have told parts of this story of convergence between Liverpool and California, they have told it largely as a solely human story. Most economic historians have agreed with the analyses of Douglas North and C. Knick Harley and attributed the convergence of price on the international market to economic and technological forces, namely, decrease in shipping costs that came on the heels of widespread adoption of the steamer and a global drop in transportation prices following the Panic of 1873.⁶ Merchant had to mobilize and response to nature as the shaped the market convergence between California and Great Britain between 1860 and 1890.

⁶ D. North, “Ocean Freights and Economic Development 1750-1913,” *The Journal of Economic History* 18, no. 4 (December 1958): 537–55; C. Knick Harley, “Transportation, the World Wheat Trade, and the Kuznets Cycle, 1850-1913,” *Explorations in Economic History* 17, no. 3 (July 1980): 218–50.

First, the climate and geography of California played a large role in the expansion of bonanza agriculture. While the Great Flood of 1860 filled California’s Central Valley and made land prices extremely cheap for farmers like Hugh Glenn, the region’s dominant characteristic was aridity. The timing of winter rains and the arid conditions prevalent during most of the growing season meant that California’s wheat crop was hardy enough to withstand a long ocean voyage, made it a superior wheat to make into flour, and left it resilient to pest infestations that damaged crops in wetter environments. This combination of durability, workability, and regularity that grew out of environmental conditions of the San Joaquin Valley made California wheat very popular in England. Finally, a prolonged period of cool, wet weather in England during the late 1870s and early 1880s led to successive domestic harvest failures at precisely the same time that Friedlander and Balfour Guthrie forged tight marketing and transport links between San Francisco and Liverpool. This convergence of supply, demand, and transport network would help make the wheat markets of the two cities more alike than any other two in the world.

Searching for new wheat regions

In the 1850s, wheat merchants in Liverpool and New York performed a global search to find new sources of production. For some merchants, like Richard Cobden, this search was an effort to build on their political economic vision of comparative advantage, to build new markets for English manufactures and to find food cheaply in agricultural nations. For general merchants like William Rathbone, the search for new markets represented a new potential source of supply which Rathbone’s firm could buy at low prices and import it to England at a profit. For American merchants like David Dows, ever sensitive to the delicate price structure of the international market which could mean the difference between fortunes and failures, searching

out new sources of supply helped them anticipate competitor regions that could drop prices in their own. In the 1860s, the eyes of this adventurous merchant class in England and America came to be fixed squarely on post-Gold Rush California.

In 1859, Richard Cobden traveled to the United States to protect his faltering investment in the Illinois Central Railroad. Riding his newfound international fame as a liberal free trader, Cobden had directed the monetary gifts and donations he received following Repeal into investment in the United States. True to his vision of a vast American productive interior producing the food on which the British economy ran, Cobden wrote a friend that his investment was “not a railroad speculation, but the acquisition of a landed estate more than double the area of Lancashire, on the very terms of making it accessible to eager purchasers and cultivators.”⁷ But in 1859, the railroad was poorly managed and unable to support its construction costs with freight charges.⁸ While Cobden traveled to the United States to investigate the Illinois Central on behalf of a group of British financiers, he couldn’t help but investigate the growing agricultural bounty of the entire United States. In New York, Cobden attended an “agricultural museum” and, there, something surprised him. Cobden was taken aback by “monster specimens of vegetables and grain from California.”⁹ He had inadvertently stumbled onto one of the more unlikely developments in the history of the global grain trade: the California bonanza.

Other grain merchants connected to webs of information through their business associations were more in the know. Four years prior to Cobden’s trip, William Rathbone received word of a growing surplus of wheat from California. In July, 1855 – amid rising

⁷ Richard Cobden to George Moffat, Sept. 16, 1857, quoted in Nicholas C. Edsall, *Richard Cobden: Independent Radical* (Cambridge, MA: Harvard University Press, 1986), 317.

⁸ Paul W Gates, *The Illinois Central Railroad and Its Colonization Work* (Cambridge: Harvard University Press, 1934), 75–81.

⁹ Cobden Diaries, New York, April 16, 1859. *The British Library*.

demand in Britain due to the Crimean Crisis – Rathbone’s New York agent wrote him that “an application was made to me to know whether I would advance upon wheat to be shipped to Liverpool from California.”¹⁰ Sending a sample of this wheat to Rathbone via New York merchant house Goodhue & Co., the agent reported “it is good Wheat and I would not be surprised if some is shipped to England this year.”¹¹ Three years later, that same merchant hinted as to why California wheat, which grew so far from England, would eventually become so important for that market: “California is the only place that I know of that has had a good Wheat harvest and there I am told it has been excellent.”¹² Merchants were beginning to appreciate California for its harvest regularity and wheat quality.

The emergence of California could also be a potential threat to those with staked investments in other grain regions: like David Dows, the largest grain forwarder in the Great Lakes-Empire Corridor. In 1861, Dows, ever hungry for information about the state of world harvests, eagerly opened a letter from J. Doty, merchant in San Francisco. The letter allowed Dows to ponder a new potential source of supply, profit, and/or competition for his vast wheat concerns. The letter also allows us entry into the world wheat trade just prior to the California bonanza. In it, Doty reported a four million bushel export of wheat from California. He promised there would be more, an intriguing promise given the extreme isolation of the California market. “That you and the rest of the world [this] appears astonishing,” he conceded, “but next year as the season now indicates we shall have a still greater crop.”¹³ Doty went on to explain that farmers in California had produced a full eight million bushels of wheat in 1860, but

¹⁰ Henry Gair to Rathbone Brothers & Co., July 23, 1855. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

¹¹ *Ibid.*

¹² Henry Gair to Rathbone Brothers & Co., Oct. 25, 1859. “Rathbone Family Papers – American Business,” *University of Liverpool Special Collections*.

¹³ J Doty to D Dows, Feb 10, 1861 (San Francisco) “David Dows Papers,” New-York Historical Society

merchants were only able to distribute less than three million locally. This left nearly 4 million bushels of wheat available for the world market.¹⁴

Both Doty and Dows had, by 1860, grasped intuitively that the grain trades of various regions across the globe were beginning to impact one another. Doty warned Dows in his survey of the California wheat market “taking into consideration the great prospective production of the entire Pacific coast, may it not be a matter worth your consideration that we should affect the price of your [Atlantic coast] wheat in the English market. The Pacific coast may be a rock for the breadstuff men of NY to split upon.”¹⁵ In essence, Doty warned Dows that increased exports from California to Liverpool would devalue his own wheat shipped from New York to the British market. Despite the possible local shocks to the New York market, Doty could confidently predict that “from this time forward I think the price of bread stuffs will rule lower on the average throughout the civilized world.”¹⁶ Driven by the produce of new wheat-producing regions like California, Doty was proposing to Dows a new structure to the world grain trade. It was truly a global vision, wrapped in a letter that described how the interplay of grain prices between California and New York impacted potential returns for Dows’ investment in the eastern grain network and the sale of his grain in Great Britain.

Wheat regions around the world were brought into the global grain trade by merchants like Rathbone, Doty and Dows who constantly sought to discover new regions of productions. As reports filtered in during the late 1850s and early 1860s about the growing agricultural surplus of California, merchants began to view San Francisco and California as a market for sustained investment. During this period, some merchants especially well-positioned to move

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid.

into the California market began to actively establish a trade in wheat between San Francisco and England.

The California Bonanza, Nature, and Overproduction

As wheat merchants throughout the North Atlantic discovered the potential for California in the 1860s, it was businessmen like Hugh Glenn who were producing that surplus. Adapting to structural changes in the California economy in the wake of the Gold Rush, businessmen like Hugh Glenn invested in large chunks of land in the San Joaquin Valley. In an effort to make that land immediately profitable, Glenn planted it in wheat. To do so, he had to adapt to the region’s growing conditions. Farmers like Glenn came to California the East, and had to change their methods to account for the aridity of the environment and the lack of labor throughout the region. Bonanza farming came to characterize the San Joaquin Valley due to a mixture of seasonal rainfall and soil composition that farmers believed favored the extensive and mechanized wheat agriculture. This environment also gave California wheat the strong, nutritious, and flavorful characteristics that made it highly valuable on the British market.¹⁷

When Glenn arrived in California in 1849, he found a California economy dominated by the export of gold and service of the mining community. These conditions would not last. The flood of gold streaming out of California in the late 1850s caused its value to plummet and created a severe regional economic downturn, forcing merchants to look for other ways to make money. Thousands upon thousands of migrants flowed into California during the 1850s to capitalize on the gold boom, but very few actually made it struck it rich panning for gold. Many

¹⁷ Horace Davis, “California Breadstuffs,” *Journal of Political Economy* 2, no. 4 (1894): 517–35; Liverpool Corn Trade Association, *The Liverpool Corn Trade Association, 1853-1953* (Liverpool: Liverpool Corn Trade Association, 1953), 18.

looked to invest in food and agriculture because food, especially flour, grew extremely expensive during the Gold Rush, reportedly as much as one dollar per pound.¹⁸

During the transition away from the gold economy, Glenn grew his operations from livestock runner to land baron in the span of twenty years. Born in Virginia in 1824, Glenn moved to California in 1849 after a series of failed business ventures in Missouri. Upon arrival at San Francisco, he began working a short-lived gold claim on the American River. After a period of traveling between California and Missouri – he made “thirteen separate trips across the plains with bands of horses and cattle” – Glenn entered into a land-buying partnership with Major Biggs and S.E. Wilson. Using profits from his livestock ventures, Glenn and associates purchased 8,000 acres in what is now Glenn County, California. Over the next few years, Glenn came to own an additional 50,000 acres in Colusa County, 4,000 acres in Tehama County. By the late 1860s, Glenn was among the largest landowners in the State.¹⁹

Those farmers who bought land, like Glenn, needed to quickly settle and turn their land into production.²⁰ The best way they could do this is put as much land into production as possible. Wheat was not only easy to plant and harvest given sufficient investment in labor or mechanization, most of the largest bonanza farmers were businessmen who grasped that San Francisco’s market was turning increasingly towards exporting wheat to China and South America.

Bonanza farms in the early 1860s were quick moneymaking operations for businessmen who had sunk most of their capital and credit into land. From the beginning, farmers established close ties with exporting firms to generate operating credit from the sale of wheat. They planted

¹⁸ Smith, *Garden of the Sun*, 218.

¹⁹ Charles Davis McCormish and Rebecca T. Lambert, *History of Colusa and Glenn Counties California* (Los Angeles: Historic Record Company, 1918), 441.

²⁰ Richard J. Orsi, *Sunset Limited: The Southern Pacific Railroad and the Development of the American West* (Berkeley: University of California Press, 2005), 65–104.

their entire acreage in wheat and, because labor was scarce leased out portions of their lots to smaller tenants. The first investors in wheat in the Valley during the 1860s plowed shallowly and made no effort to turn or return nutrients in the soil, saw yields drop precipitously in the first few years. Eventually, weeds filled their fields. Tumbleweed became a familiar sight in the wake of these early farms: in 1869, one farmer’s rail fence was knocked down from the weight of tumbleweeds piled against it.²¹

In 1867, Glenn managed the cultivation of nearly 60,000 acres, “which made him the largest farmer in the world” at that time.²² To assist with the cultivation of his lands, Glenn fenced his property and leased it in subsections to other farmers. The San Francisco Evening Bulletin reported in 1873 “One tenant, G.W. Hoog, rents and cultivates about 10,000 acres of land, and the Gupton Brothers cultivate an equal portion...some 15,000 acres are rented out to a number of farmers who work on a smaller scale.”²³ These farms were planted entirely in wheat and were large enough to necessitate the use of machines when planting and harvesting, as there was not enough labor to harvest thousands of acres using traditional methods. A local newspaper reported in 1873 on the methods used by Glenn to thresh and harvest their grain:

He is threshing his grain with one of Case’s 48-inch cylinder threshing machines, which is run by a twenty-horse power steam engine. To supply his machine requires six large-sized headers and eighteen header wagons, all of which require the labor of one hundred and ten horses and fifty men...It will require about six weeks to thresh the entire crop.²⁴

²¹ Smith, *Garden of the Sun*, 219.

²² Justus H. Rodgers, *Colusa County: Its history traced from a state of nature through the early period of settlement and development to the present* (Orland, CA, 1891), 387-389.

²³ “A California Ranch,” *San Francisco Bulletin*, published as *Daily Evening Bulletin*, July 23, 1873, pg. 3.

²⁴ *Ibid.*

This work produced grain harvests of immense proportion. In 1874, the Glenn farms sowed wheat in 41,000 acres, for a total crop of nearly 180,000 bushels.²⁵

Bonanza wheat farmers like Glenn began making key adaptations to the environment of the Sacramento and San Joaquin Valley that allowed them to grow wheat monocultures over longer periods of time and reduce the loss of fertility that plagued the earliest farms. Glenn, like other farmers, quickly realized that “Eastern methods and policies will hardly fit the conditions as they exist on the Pacific coast...methods which give the very best results in the East would often be totally worthless on the Pacific coast.”²⁶ The most significant differences revolved around the region’s arid climate and soil composition.²⁷

As Glenn would find out, two climatic conditions impacted the quality and quantity of wheat in California: aridity and temperature. The Sacramento and San Joaquin Valleys lie within the rain shadow of the Coastal ranges. Annual precipitation for this region in the late nineteenth century amounted to only nine to twenty inches per year.²⁸ Much of this rain fell in the winter months and virtually none fell in the summer. Average rainfall for the months of June, July, and August was a mere one-tenth of an inch. To deal with these conditions, California growers would come adopt winter wheat, allowing their crop to mature during the warm, wet winter and harvest it before the dry summer months set in. This meant the wheat plants got plenty of water as they matured, but could be harvested in almost guaranteed dried weather.²⁹

²⁵ *San Francisco Evening Bulletin*, Jan. 12 1874, 1.

²⁶ Edwin Holmes, *Wheat Growing and General Agricultural Conditions in the Pacific Coast Region of the United States* (Washington: Government Printing Office, 1901), 7.

²⁷ Andrew C Isenberg, *Mining California: An Ecological History* (New York: Hill and Wang, 2005), 3–6.

²⁸ Holmes, *Wheat Growing in the Pacific Coast Region*, 11.

²⁹ *Ibid.*, 9–11.

Glenn and other bonanza farmers also noted that the light, stone-free soils on the broad valley plain favored the use of machinery modified to suit local need. The soil throughout the San Joaquin River’s course, comprised mainly of tule peat, was heralded as the richest soil in the world. It contained enough dry organic matter that the soil would burn to a depth of three feet if set aflame. Winter flooding and summer drought made the Valley’s soils light, broken, and fertile, further influencing the adoption of machine harrowers and planters.³⁰ Farmers thought “the broad level fields...favor the use of the most ponderous and complicated machinery.”³¹

Noted one early agricultural report:

On account of the softness of the soil, and the large cracks in the surface it is impossible to use horses on much of this land, and the greater part of the draft work is done by traction engines, and for this purpose the tires of the wheels are broadened by the addition of [unreadable] drums, which aid in supporting the tremendous weight of the machines and in carrying them safely over the cracks and marshy areas.³²

Additionally, summer drought made it difficult for the Valley’s soils to absorb straw after harvesting. To solve this problem, and to return whatever nutrients they could back to the soil, Valley wheat farmers soon began to burn their straw in the field. This practice reduced the need for fertilizer inputs, killed the Hessian fly and other pest larvae laying dormant in the straw, and gave California the light and airy textures and flavors it would become desired for on the Liverpool market.³³

³⁰ Ibid., 9.

³¹ Ibid.

³² Ibid., 26.

³³ Ibid., 9; Liverpool Corn Trade Association, *The Liverpool Corn Trade Association, 1853-1953*, 12.

By the early 1870s, California bonanza farms were the largest and most extensively mechanized in the world.³⁴ Many machines were developed in the Central Valley and those devised in the east, such as the McCormick reaper, often had to be modified in some way to work in the San Joaquin Valley. California farmers developed the Stockton gang-plow as an answer to their struggle against strong prevailing westerly winds to the region made cast seed and reaping problematic.³⁵ These farmers modified a McCormick reaper to add a series of drapers to the head spout in order to prevent harvested grain from blowing away with the wind.³⁶ In addition to high winds, summertime temperatures and aridity also encouraged farmers to find other methods of pulling machines; horses were known to die from heat exhaustion under the hottest conditions. California George Stockton Berry invented an early steam tractor in 1886 in an attempt to escape from the considerable expenses of maintaining hundreds of horses in the heat of summer during harvest.³⁷

By 1874, Glenn and farmers like him were managing farms the likes of which the world had never seen. Farms sprang up along the banks of the Tuolumne River, next to the tracks of the Central Pacific near what would become Fresno and Modesto. These farms were started by San Francisco capitalists like Isaac Friedlander and William Chapman, by transplanted eastern wheat farmers like Ransom McCapes, and merchant opportunists like Hugh Glenn. Bonanza wheat farms spread out across the San Joaquin Valley, across the reclaimed bed of Tulare Lake, and filled cars on the growing rail network with wheat bound for San Francisco.³⁸

California growers raised wheat that responded well to the region’s environment and became highly prized on the British market. As merchants would find out in subsequent years,

³⁴ Rothstein, “American Wheat and the British Market, 1860-1905,” 307.

³⁵ Smith, *Garden of the Sun*, 221.

³⁶ *Ibid.*, 228.

³⁷ *Ibid.*, 236.

³⁸ *Ibid.*, 239–247.

the timing of California rains and the distance to the British market meant that California wheat often landed in England during winter and the period of greatest demand for imported wheat. While drought could destroy crops occasionally, aridity also meant fewer pests and therefore fewer variables that could lead to crop loss. Dryness also meant that farmers could leave their crops in the field after harvest longer, curing the wheat which left it better able to stand shipping and processing into flour.³⁹ The heat and aridity of the San Joaquin Valley produced wheat with a thin but hard outer casing that could be shipped long-distances without significant damage.⁴⁰ The relative lack of failed or spoiled harvests made California extremely enticing for British merchants who needed a steady supply.⁴¹

Wheat grown on Glenn’s farm would come to be known the world over for its high-quality flour. Merchants in Liverpool and London were especially drawn to California wheat’s “unusual whiteness” that was “highly esteemed for its superior flouring qualities.”⁴² English millers knew the “dry seasons” of California gave “body to [its] flour” and, while English millers had send back specific instructions to California following the first few shipments on how to best work it, California wheat became prized in northern England and Ireland, in the words of one contemporary report, for the “comparative uniformity of this particular type of wheat.”⁴³

By the 1870s, California’s bonanza farmers adapted to local growing conditions and markets by growing vast quantities of wheat for export. British merchants were aware of this surplus and knew of its high-quality wheat. By the late 1860s and early 1870s, though, there were still considerable barriers. San Francisco merchants exported the growing produce of

³⁹ “Wheat in California,” *Overland Monthly and Out West Magazine*, Vol. 1, No. 5 (Nov. 1868): 442.

⁴⁰ Smith, *Garden of the Sun*, 253.

⁴¹ *Ibid.*, 254.

⁴² “Wheat in California,” *Overland Monthly and Out West Magazine*, Vol. 1, No. 5 (Nov. 1868): 442; Liverpool Corn Trade Association, *The Liverpool Corn Trade Association, 1853-1953*, 12.

⁴³ *Ibid.*

bonanza farms to a hodgepodge of markets across the Pacific world. Without established marketing connections, the 18,000 mile voyage from San Francisco to Liverpool was simply too risky. These voyages would have to be undertaken without an adequate knowledge of demand and prices when they arrived in England. They would be afloat for months without a guaranteed buyer. In the 1860s, then, the growing produce of the California bonanza had a high reputation but no clear market.

Marketing the Bonanza

San Francisco merchant Isaac Friedlander did much to connect the industrial wheat farms of California’s Central Valley to the industrial food markets of Great Britain. Building an integrated investment portfolio from extensive investments in land, Friedlander became the “Wheat King of California” by doing more than any single individual to encourage the export of California wheat to Great Britain. Friedlander built (and twice lost) his fortune by guessing the size of the California bonanza and chartering ships from around the world to take that wheat from San Francisco to Liverpool. Friedlander was, during his heyday, an important exception to the emerging specialization of merchant activities in the global grain trade following 1850. Modeling himself on the traditional general merchant, Friedlander made extensive initial capital outlays in shipping and production while he personally traveled between San Francisco and Liverpool to market his wheat.

Friedlander learned his mercantile skills supplying food for the Gold Rush. He arrived in California in July, 1849 amid a flood of immigrants brought by the discovery of gold at Sutter’s Mill one year prior. Born in Oldenburg, Germany in 1823, he immigrated to New York City as a boy. Trying his hand at the “business experience” he bounced around the East Coast, moving

from New York to Georgia and then South Carolina. Upon hearing of the discovery of gold, he immediately set off for California. He sailed from New York City in 1849 among “the first seekers of El Dorado.”⁴⁴ After a brief foray at gold prospecting hampered by “sickness and bad weather” Friedlander returned to the “more congenial atmosphere” of gold rush San Francisco.⁴⁵ From there, he “identified at a very early date with the agricultural interests” of California.⁴⁶

Friedlander soon realized – like Hugh Glenn – that food was a safe investment during the Gold Rush. Stymied in his gold prospecting efforts, Friedlander began to deal in grain and flour in the early 1850s. He engaged in a number of speculative ventures, including importing flour from new settlements in Oregon.⁴⁷ These early business deals earned him “a moderate fortune,” which he promptly lost in 1856. This failure led him to switch emphases and focus more of his efforts and capital on the development of wheat agriculture in the interior valleys and the exportation of that wheat to foreign markets. A considerable advance of credit from the Bank of California allowed Friedlander to “lay the foundation of the great export trade to Europe...with which his name has been so constantly associated.”⁴⁸

Friedlander constantly searched for new and steadier markets for California wheat and flour. In the 1850s, California oscillated between a food importer and food exporter based on the size of the crop from its thinly-settled interior. In periods of low domestic harvests, Friedlander would import wheat from Chile or the burgeoning Oregon Territory.⁴⁹ Friedlander first exported wheat in 1858, via the San Francisco shipping firm Falkner, Bell & Co., to Australia and

⁴⁴ “The California Grain King: Sketch of the Late Isaac Friedlander,” *The New York Times*, July 20, 1878, reprinted from *The San Francisco Chronicle*, July 12, 1878.

⁴⁵ “The California Grain King: Sketch of the Late Isaac Friedlander,” *The New York Times*, July 20, 1878, reprinted from *The San Francisco Chronicle*, July 12, 1878.

⁴⁶ “Death of Isaac Friedlander,” *San Francisco Bulletin*, published as *Daily Evening Bulletin*; July 11, 1878.

⁴⁷ Rodman W. Paul, “The Wheat Trade between California and the United Kingdom,” *The Mississippi Valley Historical Review* 45, no. 3 (December 1, 1958).

⁴⁸ “The California Grain King: Sketch of the Late Isaac Friedlander,” *The New York Times*, July 20, 1878, reprinted from *The San Francisco Chronicle*, July 12, 1878

⁴⁹ D. Morgan, *Merchants of Grain* (New York: The Viking Press, 1979), 78.

England.⁵⁰ This shipment of England, however, was the exception rather than the trend in the 1850s. During this period, wheat and flour cycled between South America, California, Oregon, China, the Philippines, and Australia as harvests and supply in each dictated.⁵¹ Friedlander teamed with Falkner, Bell & Co., in exporting wheat to places as far flung as Australia, China, Alaska, The Sandwich Islands, and South America in the 1850s.

Friedlander soon expanded his operations from merchandizing to land ownership. He made his biggest commercial play in response to the Great Flood of 1861, after which he became owner of a huge swath of undervalued land in the interior. The San Joaquin and Sacramento Valleys filled with water fed by heavy rains in November and December of 1861.⁵² William Brewer, then on the staff of the state’s Geologist, recorded in his journal “the amount of rain that has fallen is unprecedented in the history of the state... The great central valley of the state is under water--the Sacramento and San Joaquin valleys--a region 250 to 300 miles long and an average of at least twenty miles wide, a district of five thousand or six thousand square miles, or probably three to three and a half millions of acres.”⁵³ The floods sent farmers rushing to escape their farms and desperate to rid themselves of land rendered useless from waterlogging. In stepped Friedlander. Snatching up land throughout the interior at rock-bottom prices, Friedlander came to own upwards of 500,000 acres in the San Joaquin Valley by 1868.⁵⁴ Yes, 500,000 acres.

Now the owner of a large swath of land, Friedlander leased parcels of it to individual farmers who began to plant in wheat based on the methods developed by Glenn. Friedlander’s

⁵⁰ Paul, 401; “Shipping News,” *San Francisco Bulletin*, published as *Daily Evening Bulletin*, June 28, 1856.

⁵¹ Morgan, *Merchants of Grain*, 78.

⁵² David Iglar provides a more detailed description of the 1861-62 floods. See Iglar, *Industrial Cowboys*, 22–25.

⁵³ William Henry Brewer and Francis Peloubet Farquhar, *Up and Down California in 1860-1864: The Journal of William H. Brewer* (New Haven: Yale University Press, 1930), 241–242.

⁵⁴ “The California Grain King: Sketch of the Late Isaac Friedlander,” *The New York Times*, July 20, 1878, reprinted from *The San Francisco Chronicle*, July 12, 1878.

supply was growing. By the 1860s, he engaged in wheat forwarding on a large scale, moving wheat from his leased land towards San Francisco. To move the wheat from the interior, Friedlander also employed grain elevators, a telegraph line, and a network of agents that would help him get a sense of the supply and chartered the necessary ship space to transport it to Liverpool.

By the early 1870s, Friedlander was equally merchant and landowner, connecting streams of British capital to San Francisco through William Ralston and the Bank of California and shipping grain on his own account all the way to Liverpool. From his offices in San Francisco, Friedlander built and managed a systematic organization of agents, telegraph lines, railroads, canals, and shipping interests. Friedlander sold Glenn’s crop in England throughout the mid 1870s. One transaction between Friedlander and Glenn in 1876 amounted to 18,000 tons, which was reckoned “the largest single transaction ever made in this State.”⁵⁵

Friedlander, like so many other grain merchants, reinvested his profits to build local transportation infrastructure that would ease the movement of wheat from the San Joaquin to San Francisco. In 1871, Friedlander invested in 10,000 shares, enough to be named a director, in the “California Pacific Railroad, Eastern Extension Company,” which intended to build a railroad connecting California wheat country around Davisville to the wheat lands of Oregon and the Central Pacific’s main line.⁵⁶ In addition to his railroad investments, Friedlander also became a major shareholder and founding member of the San Joaquin and Kings River Canal and Irrigation Company, which provided water to the large ranching outfit of Miller and Lux.⁵⁷ While Friedlander was interested in irrigation, he invested in these canals first as transportation routes for his wheat. The larger canals were deep enough to accommodate shallow draught

⁵⁵ *San Francisco Evening Bulletin*, Nov. 16, 1876, 3.

⁵⁶ *San Francisco Evening Bulletin*, Nov. 11, 1872, 4.

⁵⁷ Iglar, *Industrial Cowboys*, 73, 78, 83, 85.

boats, providing wheat farmers and cattle ranchers a transportation route at a time when railroads had not yet completely connected the Central Valley to its primary market in San Francisco.⁵⁸

Friedlander made most of his money from brokering the shipment of wheat from San Francisco to Liverpool following the explosion of wheat agriculture in the San Joaquin he helped create. Friedlander realized he would have to go abroad to attract ships to California.

Forwarding wheat around the Pacific to uncertain markets would not protect his extensive outlays in land and transportation. During the early 1870s, he began traveling throughout the North Atlantic to contract ships to arrive in San Francisco to take his produce to the world’s largest market: England. He also knew he would have to base these contracts on his perception of the crop size and thus the total space needed to move it.⁵⁹ Friedlander began to charter vessels in the 1860s. In some seasons, he would corner the entire shipping fleet of San Francisco, thereby setting his own price for transport.⁶⁰ By 1873, Friedlander had set up his own shipping concern and was making yearly trips to England to cultivate business. The San Francisco Bulletin reported in April, 1873 – just before that year’s harvest – that “Isaac Friedlander is about departing for Europe to perfect his arrangements for shipping the next wheat crop.”⁶¹ A San Francisco Evening Bulletin reporter eulogized Friedlander upon his death in 1878, “In the height of his business he controlled millions of capital, and had a fleet of the best merchant ships at his command.”⁶²

Because Friedlander managed integrated investments through an entire production chain he enjoyed a big picture view of Californian, British, and global wheat markets. By the early

⁵⁸ *San Francisco Evening Bulletin*, Feb. 22 1874, 1.

⁵⁹ Morton Rothstein, “A British Firm on the American West Coast, 1869-1914,” *The Business History Review* 37, no. 4 (December 1, 1963): 395–396.

⁶⁰ *Ibid.*

⁶¹ *San Francisco Evening Bulletin*, April 24, 1873, 3.

⁶² *San Francisco Evening Bulletin*, July 11, 1878, 2.

1870s, Friedlander occupied a dominant position within California’s grain trade, earning him the grudging respect of his fellow merchants, the ire of farmers, and the title of “California’s Grain King.”⁶³ So complete was Friedlander’s information network that by the mid-1870s, it was he who provided much shipping information to *The San Francisco Evening Bulletin*, forwarding his own bills of sale, proof slips, and freight carriers to be republished in much-abridged form by the newspaper.⁶⁴

Friedlander saw investments in a number of points along the production chain as a way to counterbalance the considerable risk and high costs of shipping wheat from California to San Francisco. The journey from San Francisco to Liverpool took three to four months and presented an overlaid series of problems for merchants in both ports. A voyage could spoil wheat - and profits - in a number of ways. First, the wooden sailing ships that dominated the trade’s early years allowed moisture to accumulate in the holds, leading to rot, infestation, or spoilage through germination. Virtually all of the wheat transported from California to Liverpool was shipped in sacks which did nothing to keep out moisture or weevil infestation.⁶⁵ Second, the long distance around Cape Horn, rendering it incredibly difficult to time prices between California and Liverpool. In the wheat trade, five months was an eternity, a span that could make or break the fortunes of an entire house. Third, wooden clipper ships ran the risk of fire – a major factor in their high insurance rates.⁶⁶

The balancing act could be too much, even for insiders like Friedlander. Friedlander himself went bankrupt twice due to his practice of buying shipping rights before the harvest

⁶³ “The California Grain King: Sketch of the Late Isaac Friedlander,” *The New York Times*, July 20, 1878, reprinted from *The San Francisco Chronicle*, July 12, 1878.

⁶⁴ *San Francisco Evening Bulletin*, July 1 1873, 3.

⁶⁵ George Broomhall and John Hubback, *Corn Trade Memories Recent and Remote*. (Liverpool: Northern Publishing Co., 1930), 49–51.

⁶⁶ Basil Lubbock, *The Colonial Clippers* (Charles E. Lauriat Company, 1921).

came in. In 1876, Friedlander loaned liberal amounts of capital to bonanza farmers and shippers, but a severe drought in the winter of 1876-1877 killed much of the wheat crop, left farmers unable to meet their obligations, and Friedlander’s capital stretched too thin. With delicately enmeshed investments in shipping, banks, grain elevators, irrigation companies, railroads, and farms, Friedlander declared bankruptcy in the spring of 1877.⁶⁷ An *Evening Bulletin* reporter explained the circumstances of Friedlander’s demise:

It is well known that Mr. Friedlander is a heavy land-owner in the San Joaquin Valley, where crops are not always certain. Much of this land he has sold to others on credit, and when the yield was poor, he has carried his clients along year to year, by not only waiting on them for payments, but advancing seed and supplies to bridge them over the difficulties attending poor harvests. In this way he has been accumulating a burden, which even his broad shoulders were unable to much longer bear. The drought this year, in connection with other losses on Wheat and ships, has culminated in his suspension. Over a year ago, in view of the promise of an unparalleled Wheat crop, he chartered large numbers of ships to arrive from four to eight months ahead at 60s to 75s... As the season wore on, freights gave way and Wheat went up. Mr. Friedlander undoubtedly tried to get enough Wheat before the advance to make good what he knew he must loose on ships, but was not altogether successful.⁶⁸

Despite these risks, Isaac Friedlander sent immense quantities of grain to British markets between the late 1860s and 1870s. This period coincided with a dramatic increase in general wheat exports from California to Great Britain. The takeoff was abrupt. In 1866, California merchants shipped 184,972 centals of wheat to Great Britain (a cental is a 100 pound dry weight

⁶⁷ “Death of Isaac Friedlander a Brief of His Career Cause of Death Meeting of the Produce Exchange,” *San Francisco Bulletin*, published as *Daily Evening Bulletin*, July 11, 2878, 2.

⁶⁸ “Finance and Trade,” *San Francisco Bulletin*, published as *Daily Evening Bulletin*, April 4, 1877, pg 4.

measurement). Just one year later, that number jumped to 2,168,113 centals. By 1868, California merchants exported 2,562,167 centals of wheat into Great Britain. By 1870, California’s export of 3,612,225 centals ranked behind that of only Russia and the eastern United States as imports into Great Britain in terms of volume.⁶⁹ Large exports continued well into the 1880s. Between 1880 and 1881, over 600 ships plied the waters between Oregon, San Francisco, and Liverpool.⁷⁰ Indicative of the convergence between California and Liverpool, wheat merchants sent upwards of 98 percent of their total exports directly to Great Britain in the early 1880s.⁷¹ These numbers had much to do with the expansion of Friedlander’s network, but they were also driven by a push from Liverpool to invest in California and reap immediate returns on that investment with wheat.

Market Convergence between San Francisco and Liverpool

San Francisco merchant firm Balfour, Guthrie & Co. (Balfour Guthrie) stitched a network of capital from Liverpool to the California bonanza farms by the mid 1870s. Balfour Guthrie used their connection to British business associations and capital to extend farmers working Glenn’s and Friedlander’s land credit, purchase their wheat, and market it in Britain. The culminating event that stitched together the California and British markets was a series of harvest failures in Great Britain during the late 1870s and early 1880s. These failures triggered the stabilization of business relationships that had been developing since the mid 1800s in California and led to Balfour Guthrie exporting record volumes of wheat from San Francisco to Liverpool. As a result of the forwarding network established by Friedlander in the 1870s and by

⁶⁹ *Annual Statement of the Trade and Navigation of the United Kingdom with Foreign Countries and British Possessions in the Year 1870* (London: Her Majesty’s Stationary Office, 1871), 63, 273.

⁷⁰ Paul, “The Wheat Trade between California and the United Kingdom,” 403.

⁷¹ *Ibid.*

Balfour Guthrie in the 1880s, the wheat markets of California and San Francisco locked in step during the harvest disruptions of the early 1880s. By the end of that decade, both cities used identical weighting and grading systems, and California wheat became the standard for futures contracts in Liverpool.

In 1850, Stephen Williamson, a Scotsman recently arrived in Liverpool, pooled his limited money to buy a ship with another recent arrival from Scotland, Alexander Balfour. Hoping to expand ownership of that vessel into a general consignment business, the two men entered into a partnership later that year. Both Williamson and Balfour were Scottish Presbyterians, heavily committed to the ideal of work and the ethics of proper business. Their story, like countless others, highlights how the 1850s witnessed a large increase in ocean shipping to and from Europe and allows us to stitch a web of merchant connections from Liverpool, the center of world trade, to San Francisco, in 1850 a minor gold boom town. Over the next two decades, Stephen Williamson and Alexander Balfour, under the name Balfour, Williamson & Company (Balfour Williamson) would provide an impetus to the growth of wheat production in California akin to the role occupied by Baring Brothers in the eastern United States a generation prior.⁷² Through their funding of a San Francisco agent house, Balfour Guthrie, Alexander Balfour and Stephen Williamson sought to increase regions of potential supply for their shipping concerns. In the process, they helped provide essential capital and markets for a California economy transitioning from mining to agriculture.

Both Balfour and Williamson agreed from the outset that the Liverpool firm needed a foreign house in order to ensure their ships hold the greatest possible cargo. In the early 1850s, the partners agree to capitalize on the relative openness of trade in the Pacific by establishing their foreign branch office in Valparaiso, Chile, and that Stephen Williamson would venture

⁷² Rothstein, “A British Firm on the American West Coast, 1869-1914,” 392–393.

there to “first acquire a knowledge of dry goods...and then proceed to gain a thorough knowledge” of potential markets across the western coast of the Americas.⁷³ The company built their reputation on importing English manufactured goods into Chile. They were also lucky enough to capitalize on a growing need in Europe and the United States for fertilizer, and made a nice profit shipping guano.⁷⁴ The firm soon became well-respected across Liverpool circles and the firm, “secured the confidence of the very best manufactures in a way a few new houses have ever done.”⁷⁵ Williamson, however, sensed by the early 1860s that (1) the firm was nearing the limits of market expansion in Chile and (2) a series of hostilities among Spain, Chile, and Peru for control over the guano trade necessitated a new agent house somewhere else along the American Pacific coast. Having arranged a few small shipments of flour and finished goods to California during the Gold Rush, likely under joint account with Isaac Friedlander, Williamson fixed his sights on San Francisco.⁷⁶

Williamson saw the California market as the best bet for expanding their shipping trade to a ready market that also had potential for development as an export market for agricultural surplus. The isolated market of San Francisco produced virtually nothing for export other than gold in the late 1850s and early 1860s, and the potential for immediate profit in extending their trade in finished products was enticing. Those goods that Balfour Williamson traded - whisky, claret, paint, chemicals, painting, carpets, boxes of herring, buttons, and textiles – were in demand in California and readily available through Balfour Williamson’s connection to manufacturers in England’s industrial north.⁷⁷

⁷³ Wallis Hunt, *Heirs of Great Adventure: The History of Balfour, Williamson and Company Limited, 1851-1901* (London: Balfour Williamson and Co., 1951), 19–23.

⁷⁴ Rothstein, “A British Firm on the American West Coast, 1869-1914,” 393–394.

⁷⁵ Quoted in Hunt, *Heirs of Great Adventure*, 23–24.

⁷⁶ *Ibid.*, 24–25.

⁷⁷ *Ibid.*, 25–26.

While Williamson realized he would profit from exports to California, he also knew the trade would not be profitable unless he could find a way to fill his ships on the return voyage. His plan was to establish an agent house in San Francisco with the avowed goal of facilitating the expansion of agricultural produce in the interior. The two commodities with the greatest potential were wheat and leather. Wheat production was risky, however - the market for those crops remained unclear. Unlike leather, wheat could not be cured for a long ocean voyage.⁷⁸ The possible export markets nearby - Oregon and Washington – were already producing their own surplus. The eastern United States remained inaccessible to vast shipments of wheat by rail until a sufficient number of transcontinental lines were completed in the 1880s and 1890s. Wheat merchants in New York like David Dows were more interested in riding establishing connections to interior markets than they were in risking a complex business deal and shipment around South America.⁷⁹

Despite these obvious shortcomings, Williamson saw an emerging wheat trade as the ideal way to further develop California economy and protect his expanding business. In 1869 Balfour Williamson opened its first branch office in North America in San Francisco, to be headed by three employees of the Liverpool office: Robert Balfour (no relation to Alexander), Robert Forman, and Alexander Guthrie.⁸⁰ The firm, chartered as Balfour, Guthrie & Company, operated between San Francisco and Liverpool. Balfour Guthrie made their early living by importing British manufacturing goods and brokering deals in various agricultural commodities

⁷⁸ Igler, *Industrial Cowboys*.

⁷⁹ Morgan, *Merchants of Grain*, 78.

⁸⁰ Hunt, *Heirs of Great Adventure*, 47–52.

throughout South America and the South Pacific.⁸¹ From the start, the firm was attracted to deals with were likely to bring quick returns. Soon, their attention came to focus on wheat.⁸²

Balfour Guthrie’s first sought to gain an understanding of the new environment and market in which they worked. They undertook an “extensive” survey of the Central Valley, made arrangements with San Francisco banks before moving into the grain trade.⁸³ Operating opportunistically, they held to no one purchasing strategy. Sometimes they acted as consignment merchants, taking a commission for the shipment of grain between two other parties. Other times they worked with Robert Forman to sell grain in Liverpool before it left San Francisco and ship it on their own account. In less ideal circumstances, they sold the wheat “on spot” in Liverpool, risking damage or price drop during the course of the grain’s four-month voyage.⁸⁴ Early on, both parent and agent house decided the best course of action was to limit their transactions as much as possible to consignments, taking as a model the Barings’ operations in wheat during the 1840s and 1850s. Through this strategy, and with the assistance of the Liverpool house in commissioning vessels and advancing credit to farmers, Balfour Guthrie was able to weather the Panic of 1873 relatively unscathed. Indeed, by the early 1870s, Balfour Guthrie’s position in the San Francisco market became increasingly secure. In 1874, the firm became the American agents for the British and Foreign Marine Insurance Company, thus providing organizational and fiscal protection from the risks of the long voyages between California and England.⁸⁵

The firm changed its course with regards to consignments in the late 1870s and began to ship more wheat on their own account and build ancillary business to protect that investment.

⁸¹ Rothstein, “American Wheat and the British Market, 1860-1905,” 336.

⁸² Hunt, *Heirs of Great Adventure*; Rothstein, “A British Firm on the American West Coast, 1869-1914,” 393.

⁸³ Rothstein, “A British Firm on the American West Coast, 1869-1914,” 395.

⁸⁴ *Ibid.*, 396.

⁸⁵ *Ibid.*, 398.

During the 1870s, as the size of wheat imports into Liverpool grew dramatically, merchants in that port had their choice of spot purchases that carried none of the risk of advance purchases half a world away. This strategy meant Balfour Guthrie adopted more risk, both from damage and price fluctuations. To assist with their expansion into “on account” purchases, and to facilitate a further expansion into the growing wheat markets of Oregon and Washington, Balfour Guthrie constructed a new storage warehouse in San Francisco in 1878 under the auspices of a subsidiary firm – the California Wharf and Warehouse Company – created for this purpose. The firm also began using extensive loans advanced from Liverpool to provide farmers with the credit necessary to expand their operations.⁸⁶

While using business associations, capital, and technologies to slowly build their portfolio, Balfour Guthrie was not completely protected from the oscillations of the grain trade produced by nature. Between 1882 and 1884, the company lost over \$500,000 on their wheat transactions alone.⁸⁷ These losses had much to do with the international market: rising exports from Canada, the eastern US, Russia, and India led to a world-wide decline in wheat prices. All of this wheat flooded into Great Britain. Because California exported so much of its crop to England, it was especially affected by this price drop.⁸⁸ But the decline in prices also responded to a series of perfectly-timed and “copious” spring rains – just as the crop was maturing – that led to record harvests in 1880.⁸⁹ The harvests of 1881 and 1882, prompted less by rainfall than an expansion in total acreage brought on by increased land speculation in the wake of the wet year, were similarly plentiful. But these record harvests placed merchants like Balfour and Guthrie in a bind. While they had their pick of the choicest grain, record harvests had reduced

⁸⁶ Ibid., 400.

⁸⁷ Ibid., 401.

⁸⁸ Davis, “California Breadstuffs,” 530.

⁸⁹ California’s yield in 1880 amounted to 1,626,868 tons. Ibid., 531.

demand in San Francisco and, when coupled with the sagging international price of wheat, explains the considerable losses of the firm between 1882 and 1884. This was also a time when production sagged in Great Britain itself and the world’s wheat began to flood the international market in response.

Nature could also intervene at a larger scale to shift the contours of the global grain market. A series of failed harvests throughout Great Britain in the late 1870s and early 1880s produced an acute need for wheat imports in Great Britain to which Balfour Guthrie responded by exporting the record harvests of California amid a glutted market. Poor harvests in England began with the wet autumn of 1875. This was followed by abnormally heavy rainfall in the winter of 1876-1877. Spring of 1878 opened very wet and continued so well into the fall harvest season. Following 1878, there was two and a half years of exceptionally cold and wet years: there was significant flooding throughout England in March of 1878, and livestock numbers were dramatically reduced due to the cold and duration of the winter of 1878-1879. For the rest of 1879, the average temperature was below the thirty-eight-year average *in every month*. Throughout these wet years, the rainfall was greatest in the south and east of England, in the largest domestic wheat-producing areas. The Midlands experienced another long and severe winter in 1880, followed closely by another wet summer that brought more flooding to Lancashire. Soils were further saturated by heavy snows in January and February 1881, and the summer of 1882 was a cold and wet as the notorious summer of 1879.⁹⁰ The period from 1875 to 1883, in short, was devastating to English agriculture.

Contemporary economic theorist Thorstein Veblen called this era of harvest failures and increasing British imports between 1878 and 1885 “the most remarkable period that has been

⁹⁰ Christabel Susan Lowry Orwin, *History of British Agriculture, 1846-1914* (London: Longmans, 1964), 242–243.

seen in American wheat growing.”⁹¹ In response to unprecedented British demand and the rise of the railroad/elevator system, American wheat acreage rose from 27 million in 1873 to 38 million in 1882. The total American wheat annual harvest grew from 322 to 571 million bushels during that time. Most remarkably, wheat exports rose from 26 million bushels in 1872 to 150 million bushels at the height of English crop failures in 1881.⁹² During the 1880s, California exported a total of 136,074,031 centals of wheat and flour to Great Britain, which amounts to 226,745,051 bushels, or an average of 22.6 million bushels a year. In the 1880s, nearly 830,000 tons of wheat a year flowed from San Francisco to Liverpool.⁹³

While it is difficult to establish clear causation as to whether growing American supply or British demand drove convergence between the two markets, it is worth noting that much of the production in wheat regions seeing the greatest rise in export during this period (California and the Spring Wheat Region) were dominated by merchants like David Dows with close associations with their counterparts in Great Britain. These merchants would have known that the British market could readily absorb increase in wheat yields as a result of agricultural expansion in the United States.

Failed English harvests in the 1870s and 1880s marked the death-knell of British domestic wheat farming and a growing dependence on foreign food imports. Wheat acreage in the United Kingdom declined from almost 4 million in 1869 to less than 1 ½ million in 1896.⁹⁴ During the food crises of the mid 1850s, Great Britain imported a total of 26 percent of her total wheat requirements. In the late 1860s and early 1875, this percentage of imports grew to 48 percent. By the end of the harvest failures in the early 1883s, Britain imported a full 70 percent

⁹¹ Thorstein Veblen, “The Price of Wheat Since 1867,” *Journal of Political Economy* 1, no. 1 (1893): 77–78.

⁹² United States and Bureau of the Census, *Historical Statistics of the United States: Colonial Times to 1970*. (Washington: United States Government Printing Office, 1975), 512, 898–899.

⁹³ Davis, “California Breadstuffs,” 532.

⁹⁴ Rothstein, “American Wheat and the British Market, 1860-1905,” 157.

of its wheat requirements. By the 1890s, British authorities concerned with national food security could estimate that domestic farmers produced only enough wheat annually to feed the entire nation for only six weeks.⁹⁵

In Great Britain crop failures created an enormous need for imported food but, importantly, no dearth or famine. This is because by the late 1870s, British merchants like William Rathbone, David Dows, Isaac Friedlander, and Stephen Williamson succeeded in forging a global market in wheat centered in Liverpool. During this period, the grasslands of Argentina, Canada, and India provided food for the British market for the first time.⁹⁶ For the previous three decades British merchants had invested in rail transport in these countries. Following the harvest failures of the 1870s and 1880s, Liverpool merchant began culling an increasing amount of wheat from these locations, driving down the general price on the Liverpool market.

Most importantly, the crop failures seemed to confirm the wisdom of comparative advantage and convince merchants of the profitability of importing foreign wheat to feed Great Britain. *The Economist* captured this shift in 1883, noting:

People think of the old days when the British harvest really fed the British people. Now we have to go further afield. A good wheat harvest is still as much needed as ever to feed our closely-packed population. But it is the harvest already turning brown in the scorching sun of Canada and the Western States - the wheat already ripe in India and California, not the growth alone of

⁹⁵ J. H. Clapham, *An Economic History of Modern Britain*, vol. I: The Early Railway Age, 1820–1850 (Cambridge: The University Press, 1926), 280.

⁹⁶ Mike Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (London; New York: Verso, 2001).

the Eastern Counties and of Lincolnshire, that will be summoned to feed the hungry mouths of London and Lancashire. ⁹⁷

By 1890, Liverpool merchant houses such Samuel Sanday & Company, Rathbone Brothers & Company, and Balfour Williamson sat at the center of a global food network designed remove the problem of seasonality and provide Europe with consistent, inexpensive wheat. As the world tilted towards and away from the sun, and seasons changed all around the world, wheat continued to flow into Liverpool. As English farmers laid their seeds to ground in March, wheat poured in from Argentina. In April, Australia was the main source. Wheat from northern Africa and India came in June. In late summer came the winter wheat of southern Russia and North America, in fall the spring wheat from the northern American plains. Finally, in the depths of the English winter, came California wheat.⁹⁸

By 1880, Liverpool was the largest grain port in the world. In 1870, Rathbone and other Liverpool merchants imported 1,752,000 quarters of wheat (a quarter is roughly 8 bushels). A decade later, that number had climbed to 3,153,000 quarters.⁹⁹ In 1880, British merchants imported a total 55,261,924 centals. Of this total, Liverpool merchants imported the largest single share of any port, 15,177,939 centals. Next came London, who’s merchants imported 12,808,355 centals in 1880. These were the two principle ports for wheat imports in Great Britain by a considerable margin. The two next largest importing ports – Bristol and Hull – registered only 2,878,605 and 4,435,552 centals respectively.¹⁰⁰

⁹⁷ *The Economist*, vol. XLI (July 28, 1883), 877

⁹⁸ Morgan, *Merchants of Grain*, 69.

⁹⁹ Liverpool Corn Trade Association, *The Liverpool Corn Trade Association, 1853-1953*, 17.

¹⁰⁰ *Annual Statement of the Trade and Navigation of the United Kingdom with Foreign Countries and British Possessions in the Year 1870* (London: Her Majesty’s Stationary Office, 1880), 72-73.

The Liverpool grain merchant community standardized measurements in their port that had come to import from all the diverse producing regions in the world . The Liverpool Corn Trade Association, formed by Liverpool merchants to streamline the importation and marketing of foreign wheat in their port, organized an international campaign to tout the benefits of standardized weight measurements based on the cental. Merchants like William Rathbone, Samuel Sanday, and William Lowe who imported their wheat from a variety of locations often encountered problems in cobbling different measurements together in one sale.

The 100 pound measurement development by the Corn Association sought to ease the difficulties associated with importing wheat from markets using many different types of measurement. But since many other major grain ports served a particular stream with its own marketing standards and practices, merchants around the world proved less willing to adopt the cental. London importers, dealing largely in entire cargo holds while afloat, did not see an advantage to adopting the cental.¹⁰¹ While merchants in London and New York proved less willing, merchants in San Francisco, then a major source of grain for the Liverpool market adopted the cental as their standard measurement. Connected through the networks of Friedlander and Balfour Guthrie, Liverpool was the only international market on which San Francisco merchants sold their wheat. While many other American merchant organizations passed resolutions sympathetic to the cental, San Francisco remained the largest and most consequential international supplier to adopt the measurement in the 1870s.¹⁰²

Between 1870 and 1900 - a crucial time during the development of a global food system – the flows of wheat and capital through the merchant networks of San Francisco and Liverpool were uncommonly tight. This connection was forged by the business associations of Isaac

¹⁰¹ Rothstein, “American Wheat and the British Market, 1860-1905,” 160–165.

¹⁰² *Ibid.*, 171.

Friedlander and Stephen Williamson, but cemented during the harvest failures in Great Britain during the late 1870s and early 1880s. While San Francisco adopted the central, California No. 1 became the standard grade at the Liverpool Corn Exchange. This meant that grains of wheat grown in Poland, Russia, India, Australia, Argentina, the eastern United States and Canada were judged in Liverpool based on the grain characteristics created by the temperature, precipitation, and soil conditions encountered in the San Joaquin Valley.¹⁰³ This practice began first in 1883 when supplies from all over northern Europe fell off and when wheat from California was “in large and constant supply.”¹⁰⁴ As merchant shipped immense quantities of grain from San Francisco and realized that the long voyage made agreeing to a price upon future delivery was another way to hedge their bets against damage and loss over the long ocean voyage. When the Corn Exchange decided to make a standard futures contract in 1886, they used California No. 1. This contract also made California wheat the standard grade in the arbitration of disputes between merchants dealing with the problems of long ocean voyages and uncertainty about the wheat quality of new regions coming online.¹⁰⁵

By the 1880s, the grain merchant communities of San Francisco and Liverpool were intimately connected and this convergence worked to the mutual benefit of both communities. One prominent member of the Liverpool grain trade went so far as to suggest that it was that port’s monopoly on the desired California wheat that made it the center of the nation’s wheat economy. Liverpool, by the 1870s, enjoyed “a practical monopoly of American descriptions” of wheat. These supplies were “then chiefly Californian.” This meant that millers from all over Great Britain who desired this type of wheat to make their bread had to travel or send agents to

¹⁰³ Morgan, *Merchants of Grain*, 79.

¹⁰⁴ George Broomhall and Hubback, *Corn Trade Memories Recent and Remote.*, 34.

¹⁰⁵ Liverpool Corn Trade Association, *The Liverpool Corn Trade Association, 1853-1953*, 12.

the Liverpool Corn Trade Association.¹⁰⁶ While California figured prominently into the standardization of the wheat trade in Liverpool, so too did Liverpool figure prominently in the minds of a farmer in the San Joaquin Valley. Highlighting the complex interplay between local environmental forces and international markets bonanza farmers operated within, one remarked "rain is the staple of conversation in the country, next to the Liverpool market."¹⁰⁷ This seemingly simple statement connect that farmer to an emerging world food system designed to facilitate population grow in Europe with cheap food procured around the world. For Europe, this system truly was a bonanza.

Conclusion

This chapter has pieced together the gradual evolution of a crucial tentacle of the global grain trade as it emerged in the late nineteenth century. The California bonanza was a process that including multiple intersecting human-nature relations across different scales that connected the structure of wheat cells to the evolution of global industrial trade patterns. At all points, individuals mobilized business associations, capital, technologies, and nature to connect the wheat surplus of the San Joaquin Valley to demand in Great Britain.

Between the 1850s and the 1880s, British wheat merchants contributed to the development of wheat districts around the globe designed to feed industrialization in Europe with cheap wheat. As in California, each one of these districts grew in response to unique environmental and market conditions in that region. The California wheat bonanza fulfilled the interests of local businessmen looking to diversify their portfolio and British merchants who were consciously seeking to tap new wheat markets.

¹⁰⁶ George Broomhall and Hubback, *Corn Trade Memories Recent and Remote.*, 4.

¹⁰⁷ "Wheat in California," *Overland Monthly and Out West Magazine*, Vol. 1, No. 5 (Nov. 1868): 442.

Men like Liverpool grain merchant Stephen Williamson stitched these trade structures together trying to better their position in specific markets. Williamson himself entertained business concerns in Liverpool, Chile, California, and Oregon and traded with merchants across the world. His decisions read as a constant drive to protect past investments by diversifying into new ones. Thus, the San Francisco house of Balfour Guthrie was meant initially as an outlet house for Balfour Williamson’s concern in Valparaiso, Chile. Then, in 1879 Williamson traveled from San Francisco to Minnesota and Dakota, hoping to invest in the Red River Bonanza. That year, he purchased a large tract of land in remote northwestern Minnesota. In doing so, Williamson would participate in the next great phase of the Anglo-American grain trade: one centered on the revolutionary grain mills of Minneapolis and the rail empires of the spring wheat region.

Chapter 7 - Convergence: The Spring Wheat Region and the British Market, ca 1860-1890

The third major American wheat-producing region to export its surplus to the British market in the nineteenth century was the spring wheat region of Minnesota and the Dakota Territory. In the spring wheat region during the period 1840-1870, merchants marshaled technology and nature to grow production (bonanza farms), processing (Minneapolis mills), and transportation (the Northern Pacific Railroad) before they wove markets together through business associations and capital. In the 1850s, farmers moved into the region and realized after a series of crop failures that winter wheat was not suited to the region's growing season. Minneapolis millers built huge facilities in the early 1870s that often ran at less than half capacity for their first few years. Railroads such as the Northern Pacific expanded into prairies largely empty of people and full of grasshopper swarms. Farmers obtaining that cheap land planted ten thousand acres of wheat before they were entirely sure where they were going to sell it.

Finally, in the late 1870s, this scramble began to take on structure as merchants and capitalist farmers throughout the region began to weave networks of business associations and capital that integrated production, processing, and consumption. They also sought new and steady markets for their wheat and flour. Their ultimate goal was to tap the British market. Just as in California, producers in this region attempted to manage their overproduction and overcapacity by marketing some of their surplus in Great Britain. Additionally, British merchants operated in constant search for new cheap producing regions, infiltrated the spring wheat economy, and began in the late 1870s to divert a growing share of that region's surplus to London and Liverpool.

While many of the important decisions leading to regional overproduction, consolidation, and the foreign marketing of surplus occurred in the board room in response to changing market conditions, many others occurred in the fields themselves in response to the environments which enabled and limited wheat production and crucial times and places. In the spring wheat region, farmers had to cope with a dramatically cooler and shorter growing season than anything they were used to in the East. They adopted new types of spring wheat that could grow in this region. They had to deal with persistent pest infestations. Railroad land managers had to figure out how to settle lands rife with grasshoppers and with a poor reputation for fertility. Millers in Minneapolis had to harness the power of the Mississippi River for industrial production and find new ways of processing spring wheat despite making heavy investments in facilities designed to produce wheat with entirely different cellular and fibrous characteristics. And finally, everyone had to adjust to the new reality of a glutted international market in response to the widespread harvest failures of English crops in the 1870s and 1880s. Through the stories of Minneapolis millers Cadwallader Washburn and Charles Pillsbury, bonanza farmers James B. Power and Oliver Dalrymple, railroad man James J. Hill, and British merchants Richard Hadwin and Sidney Klein, this chapter describes how individuals in the spring wheat region wove business associations, capital, technology, and nature to increase their capacity for producing breadstuffs and market their products in Great Britain.

Washburn and Pillsbury: Growing Processing Before Supply

Between 1865 and 1875, Minneapolis became the milling center for the spring wheat region. In the ensuing decade, the city became the world’s largest milling center. This rise came about as a community of merchants attempted to wrest control of supply away from grain

merchants in Chicago, Milwaukee, and St. Louis, and no two individuals had a greater impact on this effort than Cadwallader Washburn and Charles Pillsbury. These two individuals did more than anyone else to grow Minneapolis as a milling center in the decade following the American Civil War. While this was indeed their avowed goal, the process was anything but straightforward, and their path anything but clear. A number of barriers forced Pillsbury and Washburn to repeatedly shift course between 1865 and 1875. First, the Mississippi River, the source of processing power for their mills, was difficult to contain and harness into canals that ran towards their mills. Second, Washburn and Pillsbury struggled to buy their wheat from established producing regions already plugged into markets in Chicago, Milwaukee, and St. Louis. Finally, they struggled to sell their flour because the wheat grown nearby was difficult to mill and disfavored by consumers due to the large amount of bran that remained after processing. Due to these limitations, both Washburn and Pillsbury had to take massive losses in the early 1870s as their large and expensively-constructed milling facilities ran half-used.

Cadwallader Washburn was born in Maine in 1818. Moving west, he settled first in Iowa, then Wisconsin Territory in 1842. Washburn soon opened a law firm, then expanded into land sales and banking. By brokering land deals and providing credit to farmers, Washburn helped open the region around La Crosse, Wisconsin to wheat farming. Elected to the House of Representatives from the new state of Wisconsin in 1854 as a free soil Republican, Washburn eventually became a one-term Wisconsin governor and Major General of Volunteers during the Civil War. He expanded his business dramatically in the 1850s, becoming involved in lumbering, mining, and – in 1866 – flour milling. In that year, he opened what was known as “Washburn’s Folly,” a flour mill across from the little-known St. Anthony Falls on the Mississippi River in Minnesota. Never shy about pouring large investments to unknown

markets, Washburn invested \$100,000 to build the mill at a time when no infrastructure existed around the Falls to divert water and power mills, when nearby farmers sent their wheat to Milwaukee and Chicago, and at a time when domestic and foreign markets universally disliked the grainy, discolored flour of wheat produced in the region. The large stone mill, the only building of its kind on the west side of the Mississippi River at the time of its construction, could generate 840 barrels of flour a day.¹

At the same time Washburn launched into the brave new world of large-scale flour milling on the frontier of wheat production, Charles Pillsbury journeyed west to join his cousin John in Minnesota. Pillsbury, a recent graduate of Dartmouth College, traveled from family’s homeland of New Hampshire to the burgeoning city of St. Anthony on the east side of the Mississippi River across from Minneapolis in 1866.² In 1869, the Pillsburys purchased a one-third interest in the Minneapolis Flour Mills on the west side of the river. From the beginning of their partnership, John remained the financier while Charles managed the mills. In 1870, the Pillsburys bought a foreclosed mill next to the Minneapolis Mill and renamed it the Pillsbury Mill. When fire gutted that mill in 1871 – a common problem in the industry as the air filled with tiny flour particles itself became flammable – Pillsbury rebuilt it to produce 350 barrels a day.³ Charles Pillsbury would go on to become a central figure in the Minneapolis milling community.

As Washburn and Pillsbury established their fledging businesses on the west side of the Mississippi River, they also had to manage the environment around and within them to power

¹ Albert V. B. Kelsey, “C.C. Washburn: The Evolution of a Flour Baron,” *The Wisconsin Magazine of History* 88, no. 4 (July 1, 2005): 41–48, <http://www.jstor.org/stable/4637149>; William Edgar, *The Medal of Gold: A Story of Industrial Achievement*. (Minneapolis: Bellman Co., 1925), 3–13.

² The towns of Minneapolis and St. Anthony would merge in 1872.

³ Lori Sturdevant and George S. Pillsbury, *The Pillsburys of Minnesota* (Minneapolis, MN: Nodin Press, 2011), 13–46; “John S. Pillsbury and Family Papers, 1827-1901,” n.d., Minnesota Historical Society Library.

their growing mills. As Pillsbury discovered during the Minneapolis Mills fire – and as Cad Washburn would discover in more spectacular fashion with the explosion of his “A” Mill in 1878 - expansion in business was as much about harnessing the power of nature as it was about building markets.⁴ While fires ignited by airborne wheat dust plagued Washburn, Pillsbury and the entire wheat and flour industry throughout the nineteenth century, the most intractable problem facing early Minneapolis millers was the river itself. The Mississippi River and St. Anthony Falls were at once the source of the city’s great milling potential and its milling community’s most daunting obstacle prior to 1870. The flow of the Mississippi was seasonally variable: spring floods gave way to low water in the summer. Second, and most crippling, the shifting geologic structure of the riverbed in the 1860s was not conducive to stationary industrial power. Simply, the river moved. Throughout the 1860s, millers in Minneapolis struggled to dig tunnels, canals, and holding ponds that would deliver water when they need it. These water systems, however, were literally built upon shifting sand. A series of devastating floods culminating in an 1869 deluge that destroyed much of the milling district convinced millers that they would have to impose a level of stability upon the river if they were to grow their milling operations.⁵

Washburn and Pillsbury built their stone structures on the Mississippi River at a point where a band of limestone shot up into the bedrock, making a ledge across the riverbed. The resulting waterfall, named St. Anthony Falls, stretched across the river and provided millers from an early date with power to drive their mills. Under this band of limestone lay a porous layer of sandstone that allowed water filtering down through cracks to seep deep into the soil and flow underneath the surface. The sandstone underneath the falls left a substructure of groundwater

⁴ Edgar, *The Medal of Gold*, 83–84.

⁵ *Ibid.* 25-28.

which moved the falls upstream at a pace that was actually noticeable. State geologists in the 1860s contrasted a description left by early explorer and missionary Louis Hennepin in 1680 with their contemporary findings to discover that in the intervening two centuries, the Falls had moved upstream several hundred feet. Additionally, porous sandstone made initial tunneling and channeling into mills easy, but heightened the risk of collapse and flooding.⁶

The risks of water development for grain processing in Minneapolis were made all too apparent in 1869 when a massive flood destroyed a network of tunnels and three mills. While working on a tunnel to bring water to a mill on the east side of the river in October, 1869, workers were overtaken by a sudden rush of water. Just upriver, seepage within the sandstone had weakened the limestone ridge over which the falls ran. The limestone ridge broke, and into the hole rushed the full force of the Mississippi River. The workers emerged running from the tunnel to find a vast whirlpool which was simultaneously eating away at the eastern bank of the river and rushing into the newly constructed tunnels. During this event, several hundred feet of bedrock from Hennepin Island fell into the river, carrying with it a planting mill, a gristmill, part of the Island flour mill, and fifty square feet of the Saint Anthony Water Power Company’s mill pond – the primary source of power for millers on the eastern bank. Immediately following this flood, Washburn and leading members of the city’s milling community petitioned the Federal government for assistance.⁷

The Federal engineers who arrived following the merchant’s petition quickly isolated the geologic forces at work and designed a comprehensive project that would impose stasis on the river. Engineers stabilized the limestone ridge with heavy cribbing and a layer of planking. To prevent seepage, engineers constructed a concrete dyke which extended across the river and fifty

⁶ Edgar, *The Medal of Gold*, 11, 25–28.

⁷ *Ibid.*, 22–31.

feet to either side – effectively creating a subterranean wall forty feet high and seven feet thick. With its base sunk considerably lower than the riverbed, this dyke all but eliminated the risk of seepage. These improvements were completed in 1874 and cost nearly \$900,000. They succeeded in stabilizing the river bed at Minneapolis so that millers could feel confident building the tunnels, canals, and holding ponds they needed to ensure precise enough power to expand their operations by building new large-capacity mills like those that Washburn and Pillsbury built and rebuilt on the west side of the Mississippi in the 1870s and 1880s.⁸

At the same time Washburn and Pillsbury were attempting to remake the geology and hydrology of the Mississippi River at St. Anthony’s Falls, they were also attempting to find a steady source of supply to fill their growing mills. Throughout the 1850s and 1860s, farmers in southeastern Minnesota, northern Iowa and western Wisconsin established diversified enterprises that grew small amounts of wheat, corn, barley, and oats and sent them to markets in Milwaukee, Chicago, and St. Louis in carts, or on rivers and early railroads. Washburn and Pillsbury sent agents across this region in an attempt to secure wheat for their mills, but the farmers those agents encountered had established and unbreakable contracts with local merchants. These country merchants provided farmers credit extended to them from banking establishments in the East and would forward their wheat to an elevator owner in Milwaukee or Chicago who would grade it, mix it, and make it part of a futures deal that would send it across the Great Lakes-Empire Corridor to New York City. There, a merchant would distribute it domestically or export it to Europe.⁹

⁸ Ibid., 28–31; David B. Danbom, “Flour Power: The Significance of Flour Milling at the Falls,” *Minnesota History* 58, no. 5/6 (April 1, 2003): 269–285.

⁹ H.M. Larson, *The Wheat Market and the Farmer in Minnesota* (New York: Longmans, Green & Co., 1926), 17–51; Morton Rothstein, “American Wheat and the British Market, 1860-1905” (PhD Diss., Cornell University, 1960), 72–109; William Cronon, *Nature’s Metropolis: Chicago and the Great West*, 1st ed (New York: W. W. Norton, 1991), 97–119.

To help understand the competitive and uncertain market Washburn and Pillsbury faced in southeastern Minnesota in the 1860s and 1870s, imagine this market from the perspective of a farmer. Edward Harkness was like many other farmers of this period who managed their business like general merchants, selling multiple commodities to many markets. Harkness worked his farm in Fillmore County, Minnesota and presumably moved there due to the availability of timber in the area which would have provided a second source of income: he periodically sold timber crossties to railroads.¹⁰ Harkness planted a different ratio of wheat, oats, and barley on his farm based on his understanding of the market price for each. Most importantly, he had to travel between 20 and 40 miles to the nearest market town to sell his wheat. His primary market was Decorah, Iowa, a town serviced by the Milwaukee & St. Paul Railway, but he also sold wheat at Brownsville, Minnesota (a Mississippi River town), and Rushford and Lanesboro, both interior market towns in southeastern Minnesota. All of this wheat would eventually end up in Chicago, Milwaukee or St. Louis.

During the fall, Harkness would harvest between 800 and 1100 bushels of wheat, depending on weather and pests throughout the growing season. Due to the distance from market, Harkness’ strategy was to make many trips throughout the year to market towns, carrying with him 30-35 bushels at a time and fetching anywhere between 80 cents and \$1.50 per bushel. Based on his choice of market, Harkness’ wheat would then make its way to Chicago (if he sold at Decorah), La Crosse, or St. Louis (if he sold at Brownsville) or would have stayed local if he sold at Lanesboro or Rushford.¹¹ This business method meant that Harkness and other farmers like him were dependent on small infusions of cash throughout the year rather than the “big sale” every fall following harvest.

¹⁰ “Edward Harkness: Extracts from Diary, 1842-1933,” *Minnesota Historical Society*.

¹¹ “Edward Harkness: Extracts from Diary, 1842-1933,” *Minnesota Historical Society*

The system of store pay forced farmers to sell their crop at lower prices in exchange for dry goods and manufactures.¹² These goods were often sold at exorbitant prices, a result both of the merchant’s lack of competition and of the filtering effect of the American tariff system, which depressed the price of agricultural produce and inflated the price of manufactured goods. The tariff and the merchant store would become center platforms for nearly all farmers’ movements in the last half of the nineteenth century.¹³ While this strategy could prove beneficial when farmers sold during times of high prices, the lack of a set market or price for their grain limited their production from year to year as farmers were forced to hedge their bets by growing multiple crops. Wheat, corn, barley, and oats were all plagued by different pests and thrived in different weather conditions.¹⁴ In this sense, diversification as it was practiced in the Upper Midwest in the 1860s was a strategy designed to deal with the shifting reality of both nature and market. Diversification, however, ran counter to the steady needs of Minneapolis millers like Washburn and Pillsbury, who needed large and steady inputs of grain from reliable sources in order to fill the capacity of their mills.

As Washburn and Pillsbury moved into the Upper Mississippi region in the 1840s and 1860s, they bought wheat from a group of farmers who were struggling to adapt to the region’s climate.¹⁵ The most important single factor for the development of the hard spring wheat economy in Minnesota and Dakota was the relatively cool and short growing season as compared to wheat districts farmers were used to in the Great Lakes-Empire Corridor. In the coldest months, winterkilled grain was common throughout the early settlement era, livestock required

¹² Quoted in Larson, *The Wheat Market and the Farmer in Minnesota*, 20.

¹³ This is the essential relationship Larson focuses throughout the course of her study of the Minnesota wheat market. Larson, *The Wheat Market and the Farmer in Minnesota*.

¹⁴ Percy Bidwell and John I. Falconer, *History of Agriculture in the Northern United States, 1620-1860* (Washington: Carnegie Institution of Washington, 1925), 10–23.

¹⁵ A.L. Olmstead and P.W. Rhode, *Creating Abundance: Biological Innovation and American Agricultural Development* (Cambridge: Cambridge University Press, 2008), 17–65.

extra care, and virtually all transportation ceased. Harvests all over Minnesota and Wisconsin consistently failed from 1847 to 1853 as Washburn began expanding his business from funding agricultural land deals to mining and logging.¹⁶

The climate was the essential limiting factor for wheat agriculture during the 1840s and 1850s in the Upper Mississippi Region, and thus of the supply, processing, and marketing problems encountered by Washburn and Pillsbury. Until the mid-1860s, farms across Wisconsin, Minnesota and Iowa generally produced more corn than wheat, as many settlers felt that Minnesota and Wisconsin were too far north for suitable wheat production.¹⁷ The failures of the late 1840s and early 1850s made most farmers realize that region was unsuited for winter wheat. As a result, the dominant variety of wheat grown in the region slowly transitioned from winter to spring habit between the 1850s and the 1870s. By the 1880s, spring wheat was dominant in Minnesota.¹⁸ This shift is important for, though winter wheat produces greater yields, spring wheat grew a harder casing of bran to protect the berry from fluctuations in temperature and precipitation.¹⁹

The shift to spring wheat created yet another layer of problems for Washburn and Pillsbury. Prior to the mid-1870s, was no market for hard spring wheat because there was no way to effectively mill it. Until the late 1870s, Washburn and Pillsbury outfitted their mills with a series of large stone millstones that pulverized grain into flour. When this process was applied to hard spring wheat, the result produced universally-disfavored flour. Stones had to be set close together to pound the hard bran, which invariably shattered it. The action made flour produced

¹⁶ Benjamin Horace Hibbard, *The History of Agriculture in Dane County, Wisconsin* (Madison, Wis.: University of Wisconsin, 1904), 125, <http://search.lib.virginia.edu/catalog/u901951>.

¹⁷ W.E. Lass, *Minnesota: A History* (New York: W.W. Norton & Company, 1998), 154–156.

¹⁸ *History of Steele and Waseca Counties, Minnesota* (Chicago: Union Pub. Co., 1887), 515.

¹⁹ Merrill E Jarchow, *The Earth Brought Forth: A History of Minnesota Agriculture to 1885* (St. Paul: Minnesota Historical Society, 1949), 180; Rudolph Peterson, *Wheat: Botany, Cultivation and Utilization* (London: L. Hill Books, 1965), 14–63.

from hard spring wheat more grainy and discolored compared to softer winter varieties. This, coupled with the fact that most hard springs were of the red variety and would be slightly tinted even if the bran was completely removed, meant that until the 1870s, most flour produced from hard spring wheat had to be sold at a marked discount.²⁰ In the early 1860s, some desperate Minneapolis millers falsely marketed their flour as winter variety from traditional producing areas in the Great Lakes region. One labeled his wheat “Muskingum Mills, Troy Ohio – The Genuine” due to the lack of sales.²¹

Both Pillsbury and Washburn were quick to recognize that the future of the Minneapolis milling community was dependent upon their ability to process desirable spring wheat-based flour. Desperate to produce marketable flour, they both resorted to stealing. In the 1870s, the only millers in the world producing desirable spring wheat flour operated in Budapest, Hungary, and closely guarded their secret.²² Sometime in the 1600s, Hungarian millers began using a succession of porcelain rollers designed to coax the hard wheat out of its shell without pulverizing it. Not much was known about the process abroad. The millers kept their process under strict secrecy: visitors were not admitted and communication not easily established.²³ In 1877, Cad Washburn himself visited Budapest to investigate the Hungarian roller mills under agreement he would not replicate the process, and established a correspondence with a disaffected Hungarian milling engineer centered on devising ways to adapt the technology in his Minneapolis mills. Never to be outdone by his chief competitor, Charles Pillsbury also traveled Europe to view new milling technology that same year. As a result of these trips, Washburn, Pillsbury, and their engineers became convinced the system would work in Minneapolis if they

²⁰ Olmstead and Rhode, *Creating Abundance*, 27.

²¹ Larson, *The Wheat Market and the Farmer in Minnesota*, 132–133.

²² Peterson, *Wheat*, 139–140.

²³ Edgar, *The Medal of Gold*, 95.

employed iron rather than porcelain rollers. Both the Washburn and Pillsbury Mills set up experimental rollers in 1878 and by 1880 were rolling virtually all of their flour.

Another processing problem remained for Washburn and Pillsbury. While rollers coaxed the wheat out of its shell, the composition of hard spring wheat meant that large quantities of bran, or “middlings,” remained. The answer came from the work of a French emigrant named Edmund LaCroix, who came to Minnesota in 1860 and began to experiment with a purifying system. LaCroix would prove the prototype of the purifying systems adopted by Minneapolis millers a decade later. Middlings purifiers sent a blast of air through the flour mixture as it was being sieved, causing the undesirable bran to separate from the berries. LaCroix was soon employed by Cad Washburn, and a series of modifications gave those milling spring wheat a competitive edge: flour that retained its nutrition and enjoyed fine bread-making qualities without the discoloration or grainy texture that had plagued earlier spring wheat flours.²⁴

By the late 1870s, both Pillsbury and Washburn had solved their processing problem. Both millers sought recognition for their new brands. When Washburn submitted his “new process” flour in a competition at the International Milling Conference in Cincinnati in 1880, his flour won the “Gold Medal” - and the name stuck.²⁵ Pillsbury named his new rolled brand “Pillsbury’s Best.”²⁶

Buffeted by the new recognition, Washburn and Pillsbury built huge new facilities for their new process flour in the mid 1870s. By the 1880s, the capacity of Washburn’s revolutionary “A” Mill, plush with rollers and purifiers, was a whopping 6,000 barrels a day.

²⁴ Ibid., 42–45; Herman Steen, *Flour Milling in America* (Westport, CT: Greenwood Press, 1973), 43–45.

²⁵ *The Northwestern Miller*, 11 June, 1880.

²⁶ Sturdevant and Pillsbury, *The Pillsburys of Minnesota*, 42–43.

Pillsbury’s “A” Mill ran at 4,000 per day.²⁷ But the supply problem remained. Washburn and Pillsbury fed these huge facilities with a network of agents designed to feed smaller operations. The “A” mills ran at constant under-production. As late as 1881, Washburn completely shut down his mill “for a time,” because, there was simply not enough supply nor, despite awards, steady demand.²⁸ Clearly, Washburn and Pillsbury needed access to more wheat and more hungry mouths. A convergence of market and environmental forces in the late 1870s and 1880s throughout the spring wheat region and in Great Britain would provide both. They looked first to the flat, grasshopper-infested wasteland of the Red River Valley.

Railroads and Grasshoppers: The Origins of the Dakota Bonanza

When James B. Power, land commissioner for the Northern Pacific Railroad, stepped out of the rail car terminating at Moorhead, Minnesota in 1875, he immediately saw the problem. His company, desperate for revenue in the wake of its failure in 1873 wanted to sell land and begin charging farmers for freight. But Power appreciated the difficulty of that plan. The table-flat and treeless land was known across the country for its hostility to white settlers. Winters were deeply cold, summers hot and dry. Settlers associated trees with fertility and, here, there were none. Worse still, the sky darkened with swarms of grasshoppers that regularly threatened to consume a farmer’s crop. Power hatched a plan to deal with these elements and return profits to the railroad. In the process he and farmer Oliver Dalrymple hatched a brilliant scheme to make the unlikely Red River Valley one of the world’s largest grain-producing districts.

Power’s challenge was to develop this region for white settlement and to generate income for his failing transcontinental railroad. Railroad line extension was the most significant

²⁷ Edgar, *The Medal of Gold*, 111; *A History of Pillsbury’s “A” Mill: Opened in 1881 at Minneapolis, Minnesota* (Minnesota: s.n., 1919).

²⁸ Edgar, *The Medal of Gold*, 110.

economic development in Minnesota during the 1870s, as large lines like the Northern Pacific and smaller branch lines connected farms to emerging markets on the Mississippi River.²⁹ Those moving west into the prairies of the Dakota Territory extended into lands emptied by the conquest of Sioux tribes following the 1862 Lakota War.³⁰ Historians have long recognized the great impact that railroads had in stimulating agricultural produce in the spring wheat region by dramatically reducing transportation costs over time.³¹ They have also paid attention to the degree to which this net benefit (at least from a macroeconomic perspective) came about despite inopportune strategies, competition, and corruption.³² During this period, the Chicago and Milwaukee lines entered into a series of freight wars for control of the growing spring wheat produce of Minnesota. These wars led to declining rates for farmers and local merchant, but a drop in profits for the railroad. Railroads during this period, far from paragons of managerial order and virtue, were often constantly scrambling to scramble to catch up to the considerable cost of construction. One major way the larger railroads managed these problems was to establish cozy relations with state and federal policy makers who would pass laws, award grants, and structure rates that allowed some railroads to at least keep their head above water.³³ Other railroads, particularly in Iowa and Minnesota, gradually combined their interest in increasingly formal “pools” that set common rates, avoided competition, and contributed to the consolidation

²⁹ Larson, *The Wheat Market and the Farmer in Minnesota*, 55–56.

³⁰ *Ibid.*, 59; M. John Lubetkin, *Jay Cooke’s Gamble : The Northern Pacific Railroad, the Sioux, and the Panic of 1873* (Norman: University of Oklahoma Press, 2006).

³¹ Stanley N. Murray, “Railroads and the Agricultural Development of the Red River Valley of the North, 1870-1890,” *Agricultural History* 31, no. 4 (October 1, 1957): 57–66, <http://www.jstor.org/stable/3740486>; Paul H. Cootner, “The Role of the Railroads in United States Economic Growth,” *The Journal of Economic History* 23, no. 4 (December 1, 1963): 477–521.

³² Julius Grodinsky, *The Iowa Pool: A Study in Railroad Competition: 1870-1884* (Chicago: University of Chicago Press, 1950); Richard White, *Railroaded: The Transcontinentals and the Making of Modern America*, 1st ed. (New York: W.W. Norton & Co., 2011).

³³ White, *Railroaded*.

of the rail network in terms of price and ownership in the 1870s and 1880s.³⁴ One of the most common ways railroad companies managed the problem of expanding faster than profits of supply was to encourage settlement on their grant land through a land company.³⁵ In Minnesota, Power was in charge of this effort, and things weren't going well.

In the late 1860s, the Northern Pacific found itself struggling to meet dividend and bond repayments and sought the expertise Jay Cooke. Cooke had made his reputation and fortune by marketing government bonds during the Civil War. His success in selling these bonds at a time when foreign and domestic houses alike were reticent to invest in the United States convinced him he could sell securities for a railroad that stretched across regions thought unfit for white settlement.³⁶ He was wrong. Northern Pacific bonds went unsold in New York and London and, desperate to fund construction, Cooke began funneling his personal funds into the railroad. These advances left his personal finances stretched thin and when investors, made wary from a wave of failures stemming from panic on the Vienna stock exchange in May, 1873, called for payments, Cooke shut his doors and declared bankruptcy in September 1873.³⁷ Treading water for a time, the railroad slipped into bankruptcy two years later.³⁸

Because the Northern Pacific's sole worthwhile asset was its land, the railroad turned to Power. He first came to the railroad as chief clerk of the Minnesota division in 1871 and rose quickly to general agent in the land department in 1873. He was appointed the railroad's Land

³⁴ Grodinsky, *The Iowa Pool: A Study in Railroad Competition: 1870-1884*.

³⁵ Paul W Gates, *The Illinois Central Railroad and Its Colonization Work* (Cambridge: Harvard University Press, 1934).

³⁶ Jay Cooke, "Jay Cooke's Memoir," n.d., 10–15, HJ251.C6, St. Olaf Collge Library.

³⁷ Henrietta M. Larson, *Jay Cooke, Private Banker*, Harvard Studies in Business History,; II; (Cambridge, MA: Harvard University Press, 1936); Cooke, "Jay Cooke's Memoir," 20–40.

³⁸ Eugene Smalley, *History of the Northern Pacific Railroad* (New York: G.P. Putnam's Sons, 1883), 190–211.

Commissioner in 1875 at the same time the company was simultaneously seeking revenue and looking for a way to pay back investors.³⁹ Power had to get creative.

Power was especially ready to sell the Northern Pacific land to absentee owners because so many who saw or read about the Red River region had an unfavorable opinion as to its quality. The region was known for Indian troubles. It had been subject to a widely-publicized drought in the late 1860s, and dry weather prevailed until 1875.⁴⁰ The greatest barrier was insects. Power wrote to railroad president Fredrick Billings in 1877 that “fear of grasshoppers is the great obstacle” to settlement.⁴¹ “Hoppers” had plagued the Dakota region since at least the 1810s, and a series of infestations beginning in 1864 kept away settlers that had been driven away by the Lakota War two years prior. A farmer near Yankton, Dakota Territory, recorded the spectacle of the 1864 swarm to a local newspaper. “The grasshoppers invaded the fields like a living river pouring upon it,” the farmer wrote, “the stream stretched away to the south and west as far as one could see in either direction and the flutter of their wings created a roaring noise that was almost deafening.”⁴² Grasshopper infestations were cyclical, operating at epidemic levels for two to three years before disease and over-consumption of food caused a major decline in population.⁴³ The outbreak of 1864 led to infestations in 1865 and 1866. Then, grasshoppers vanished – until 1873. Small locust outbreaks were reported throughout the northern plains in 1871 and 1872. But in 1873 and 1874, grasshoppers were so numerous they clogged farm

³⁹ Hiram M Drache, *The Day of the Bonanza: A History of Bonanza Farming in the Red River Valley of the North* (Fargo, North Dakota Institute for Regional Studies, 1964), 39–41.

⁴⁰ *Ibid.*, 41.

⁴¹ James B. Power to Fredrick Billings, Sept. 2, 1877. “James B. Power Papers,” n.d., North Dakota State Institute for Regional Studies Box 1, Folder 5.

⁴² C.G. Moody, in the *Yankton Weekly Dakotan*, July 30, 1864. Quoted in Harold E. Briggs, “Grasshopper Plagues and Early Dakota Agriculture, 1864-1876,” *Agricultural History* 8, no. 2 (April 1, 1934): 52, <http://www.jstor.org/stable/3739497>.

⁴³ Harold E. Briggs, “Grasshopper Plagues and Early Dakota Agriculture, 1864-1876,” *Agricultural History* 8, no. 2 (April 1, 1934): 51–63.

machinery. A line of grasshoppers flowed into Minnesota in such numbers that insects were reported simultaneously at all telegraph stations between Moorhead and Mankato – a distance of 225 miles. Grasshoppers returned in even greater numbers in 1876.⁴⁴

As Power experienced, dealing with pests and diseases was an elemental problem for farmers and businessmen alike in the nineteenth-century grain trade. In the nineteenth century pests made 15-20 percent of every wheat crop unusable to humans.⁴⁵ Pest outbreaks made up-to-date information on harvest conditions, and thus wheat prices, an important element of success of grain merchants and were the primary reason why boards of trade in grain centers like Buffalo and New York City were the first locations to be wired with telegraphs.⁴⁶ As Power and Minneapolis grain dealers would observe in the 1870s, however, these pest outbreaks could shift the production of entire regions and dramatically remake market relationships. A Hessian fly outbreak throughout the Hudson Valley in 1790s destroyed production in the nation’s colonial breadbasket and marked the death-knell of eighteenth century grain trade connections between United States and Great Britain.⁴⁷ The fly outbreak helped push grain production west and, by the 1840s New York’s Genesee Valley was the nation’s wheat center, connected to New York City by the Erie Canal. In 1836 a severe infestation of Hessian flies resulted in a crop shortage aggravating the financial problems of farmers prior to the Panic of 1837.⁴⁸ An outbreak of midge during the 1850s damaged many crops throughout New York, seriously weakening the once-strong position of wheat farmers along New York’s Genesee River in relation to

⁴⁴ Ibid., 56.

⁴⁵ Joel Mokyr, *The Oxford Encyclopedia of Economic History* (London: Oxford University Press, 2003), 43.

⁴⁶ John Langdale, “The Impact of the Telegraph on the Buffalo Agriculture Commodity Market, 1846-1848,” *The Professional Geographer* 31, no. 2 (May 1979): 165–69.

⁴⁷ Philip J. Pauly, “Fighting the Hessian Fly: American and British Responses to Insect Invasion, 1776–1789,” *Environmental History* 7, no. 3 (July 1, 2002): 485–507, doi:10.2307/3985919; Bidwell and Falconer, *History of Agriculture in the Northern United States, 1620-1860*, 95.

⁴⁸ Reginald Charles McGrane, *The Panic of 1837: Some Financial Problems of the Jacksonian Era* (Chicago: University of Chicago Press, 1965), 92.

competition from Ohio.⁴⁹ Between 1849 and 1859, wheat production in New York State fell by 44 percent and most authorities of the time, including the U.S. Census Bureau, attributed this drop to the wheat midge.⁵⁰ In the 1870s, a stem rust epidemic in southeastern Minnesota destroyed much of the wheat production of that region just as the grasshopper plague further west subsided.⁵¹

Due to the prevalence of grasshoppers and the publicized difficulties of agriculture in the Red River Valley, Power needed some good press, and one harvest changed everything. In late 1874, one of the farmers who had bought a 40 acre tract from the Northern Pacific arrived in Fargo with 1,600 bushels of wheat which he sold at the then-astronomic price of \$1.25 per bushel at the Fargo elevator. Upon hearing this news, Power hatched a scheme to provide the moribund company with some working capital and allow investors to recoup their worthless stock with land pinned to a dollar amount of their previous investment. He proposed to repay investors with land from the railroad’s immense Federal grant. Not only would this plan stave off bankruptcy, but hopefully lead to settlement along the railroad, thereby generating revenue from freight.⁵² In 1873-74, the railroad approached investors with the idea. Many accepted the offer. The largest grants went to eastern investors that dealt with their newly-acquired lands in three different ways. Some, like railroad directors George Cass and Benjamin Cheney had little or no interest in settling themselves in remote Dakota Territory and even less interest attempting to manage their investments through correspondents. These investors hired managers to oversee

⁴⁹ New York State Agricultural Society, *Transactions of the New York State Agricultural Society for the Year 1858*, vol. XVIII (Albany: Charles van Benthuyzen, 1859), 287–295.

⁵⁰ Neil Adams McNall, *An Agricultural History of the Genesee Valley, 1790-1860* (Philadelphia: University of Pennsylvania Press, 1952), 124; Alan L. Olmstead and Paul W. Rhode, “Biological Innovation and American Wheat Production: Science, Policy, and Environmental Adaptation,” in *Industrializing Organisms: Introducing Evolutionary History* (New York: Routledge, 2004), 50–51.

⁵¹ Laura M. Hamilton, “Stem Rust in the Spring Wheat Area in 1878,” *Minnesota History* 20, no. 2 (June 1, 1939): 156–64.

⁵² Drache, *Day of the Bonanza*, 10–43.

their new lands. Other investors, like the Grandin family, moved all or a portion of their family west to the Dakotas, taking up active management of their own lands. Finally, some investors – like the townspeople of Amenia, New York and Sharon, Connecticut, formed land companies and appointed one of their own as manager.⁵³

Regardless of the method, by 1874, most of the Red River Valley in Dakota and western Minnesota was privately owned by those anxious to turn their sour investment in the Northern Pacific into a profitable investment in land and agriculture. Investors who took Power up in this scheme suddenly owned plots of land as large as 10,000 acres nears the desolate Red River in the Dakota Territory.⁵⁴ Powers marketed the 1874 wheat harvest as a way for absentee investors to generate cash by putting empty land into wheat production (which would, incidentally, also give the struggling railroad more freight income). Within three years, the strategies of Power and the manager of the Cass-Cheney Farm, Oliver Dalrymple led to a wheat bonanza comparable to that in California.

The Dakota Bonanza, a collection of extensive, mechanized wheat farms clustered around the Red River of the North in the 1870s and 1880s, would become Washburn’s and Pillsbury’s main source of supply following the mid 1870s. Growing up first in response as Power’s plan to recoup company losses in the wake of the failure of the Northern Pacific and grasshopper swarms in the early 1870s, the Dakota bonanza soon came to be controlled by farmers like Oliver Dalrymple who dramatically increased the scale of wheat production in the Red River Valley and attempted to market their crops in a wide variety of markets. Dakota bonanza farms, like their counterparts in California, were marvels of sheer size. At upwards of 40,000 acres in their heyday in the 1880s, Dakota bonanzas farms were international celebrities.

⁵³ Drache, *Day of the Bonanza*.

⁵⁴ For a detailed history of bonanza farming and farmers, see Ibid.; Hiram Drache, *The Challenge of the Prairie: Life and Times of Red River Pioneers* (Fargo: North Dakota Institute for Regional Studies, 1970).

The subject of running articles by *Harpers*, *The Atlantic*, and *Frank Leslie's Illustrated*, illustrated on a two-cent U.S. Postage Stamp in 1898, and featured British magazines and newspapers, the Dakota bonanza illustrated the novelty of scale of American agriculture in the second half of the nineteenth century.⁵⁵ One account from *Field and Stream* magazine read “all through Western Minnesota and Dakota the railroad passes through wheat seems like a continuous farm” where nature was “now clothed with a vegetation more luxuriant than that of bygone years.”⁵⁶ Due to the high costs of putting huge farms into production, bonanza farmers actively sought consistent markets for their wheat and by the 1880s, had come to favor Minneapolis.

Oliver Dalrymple would emerge as the central figure of the Dakota bonanza as James Power's hand-picked man to prove the agricultural potential of the region. After growing up in Warren County, Pennsylvania and attending college at Yale Law School, Oliver Dalrymple moved to St. Peter, Minnesota in 1856. From an early date, Dalrymple demonstrated an eye for land and finance that would help him become America's most famous farmer. Opening a “Law, Land, and Loan” office, his work took him across the developing southeastern Minnesota wheat belt centered around Faribault, Minnesota. During his travels across the state, he recalled “I looked very covetously myself at that good black soil.”⁵⁷ After moving to St. Paul and taking up partnership in the firm responsible for litigating the claims of displaced settlers in the wake of the 1862 Lakota War. Dalrymple used his substantial \$40,000 cut of the final settlement with the Federal Government to buy 2,600 acres of land in Cottage Grove, Minnesota, about twenty miles

⁵⁵ The Postage Stamp, titled “Farming in the West,” was featured as part of the 1898 Trans-Mississippi Issue and showed harvesting on the bonanza farm of the Amenia and Sharon Land Company near Fargo.. See www.continentalcollectibles.com/1898-trans-mississippi-exposition-and-concurrent-indian-congress/2c-farming-in-the-west-copper-red/. Accessed Feb. 23, 2013.

⁵⁶ “The Granary of the World,” *Field and Stream*. Vol. XXV, No. 15 (Nov. 5, 1885), 282.

⁵⁷ John Dalrymple, *No. 1 Hard: Oliver Dalrymple, the Story of a Bonanza Farmer* (Minneapolis: Privately Printed, 1960), 14.

southeast of St. Paul. It was a large holding by standards of the day, and it was here that Dalrymple cut his teeth as a farmer. Knowing that Dalrymple had experience managing extensive farms in Minnesota, Power approached him in 1874 on behalf of the Northern Pacific directors George Cass and Benjamin Cheney and asked if he might be willing to manage their lands and produce wheat that the railroad could publicize.⁵⁸

Upon meeting with Power regarding the prospects for wheat farming in Dakota, Dalrymple traveled out to the Red River Valley to inspect the land and send soil samples back to St. Paul for analysis. Despite lingering doubt as to the viability of the Red River Valley in supporting wheat agriculture, Dalrymple made up his mind and traveled to New York City to meet with George Cass and a few other prospective financial backers. The group agreed to take control of 69,000 acres of land along the Red River using the Northern Pacific’s land-exchange policy. Dalrymple was tasked with breaking as much land as he could during the remainder of 1874, manage the farms, and reinvest the profits from harvest in expanding the operation in 1875. He agreed, provided that he maintained full managerial control over the farms and that land ownership be divided on a 50-50 basis between investor and manager. In one fell swoop, Dalrymple became owner and manager of some of the largest farms in the world.⁵⁹

Breaking the virgin soil and turning it towards agricultural production required a considerable application of capital. First, Dalrymple had to purchase mechanized harvesters, planters, and hundreds of horses that would together allow him to plant as much land as possible. Then, he had to secure a labor force and make sure they were housed and fed.⁶⁰ During the first year of planting, Dalrymple broke the ground after the first thaw of spring. The compacted soil

⁵⁸ Drache, *Day of the Bonanza*, 93–95.

⁵⁹ Harold E. Briggs, “Early Bonanza Farming in the Red River Valley of the North,” *Agricultural History* 6, no. 1 (January 1, 1932): 26–37.

⁶⁰ Dalrymple, *Oliver Dalrymple*, 7–15.

around the Red River made this a particularly arduous task. The deep roots of native grasses allowed vegetation to quickly rebound from initial soil turning, and thus the same lands would have to be backset (re-plowed) in the fall of the first few years. An account from the Dalrymple bonanza farms shows that this process of breaking and backsetting cost on average \$4.50 more per acre on new ground than old. This doesn't seem like much until we account for the full scale of the bonanza farm. Spread out over 10,000 acres, this \$4.50 difference per acre translates into \$45,000. Transforming prairie into bonanza farm was an expensive affair.⁶¹ The cost of getting the land into production was enough to convince some investors to walk away after one or two poor harvests.

From the beginning, Dalrymple and other bonanza farmers conceived of wide markets for their produce in attempt to recover from initial outlays. They were initially unsure where they could sell their produce consistently. During the early years of bonanza farming – 1874 and 1875 – Dalrymple originally planned to send his produce north via the Red River to Winnipeg and onto the Montreal market. This direction changed somewhat when Dalrymple brought on his brother William as a managing partner and rerouted crops through Duluth, Buffalo, and New York City. In 1876, William and Oliver Dalrymple began to approach Minneapolis millers Cad Washburn and Charles Pillsbury.⁶²

Connecting Supply with Demand: William Dunwoody

In the late 1870s and 1880s, Cad Washburn and Charles Pillsbury innovated new process milling at the same time they moved towards new sources of supply in the Red River valley and sought to forge new markets in the industrial cities of the eastern seaboard and in Europe. Eager

⁶¹ “1879 Diary,” *William Dalrymple Papers*, Wisconsin Historical Society.

⁶² *Ibid.*

to move away from competition with Chicago and Milwaukee merchants and spurred by an outbreak of stem rust in southeastern Minnesota, they looked towards the Red River Bonanza as a source of supply. At the same time, they attempted to move around Chicago and New York merchants by entering into direct associations with merchants in London and Liverpool. No individual assisted Washburn and Pillsbury more in this process than William Dunwoody who, as head of the Minneapolis Millers Association, began buying Red River wheat en masse for Minneapolis millers at the same time he ventured to Liverpool and began sending Minneapolis flour to that port.

Dunwoody was a grain specialist. He typified a new breed of merchant who grew up within the trade as it matured in the mid-nineteenth century and began to favor those individuals who could make use of associations, capital, technology, and nature to link regions of supply to deficit markets. Born in Chester County, Pennsylvania in 1841, he became a grain and flour merchant in Philadelphia in his uncle’s firm and eventually established his own partnership. Sensing opportunity in a Minneapolis where millers had just succeeded in stabilizing the Falls and began building larger facilities, Dunwoody moved to Minnesota in 1871, having journeyed there numerous times in the previous years buying low-quality flour for export to the Caribbean. There, he became a partner in two firms operating the Arctic Mill and the Union Mill on the western bank of the Mississippi.⁶³

Knowing firsthand the difficulty Washburn and Pillsbury experienced in finding steady access to wheat supply, Dunwoody spearheaded the move to organize all of the mills in the city as one buying agency. In 1875, he helped organize the Minneapolis Millers Association.⁶⁴ At that time, the millers sensed an opportunity to corner the supply of wheat then growing along the

⁶³ Edgar, *The Medal of Gold*, 66–71; William Hood Dunwoody and Family Papers. Minnesota Historical society A/D928 Box 1 Folder 4.

⁶⁴ William Hood Dunwoody and Family Papers, Minnesota Historical society, A/D928, box 1 folder 7.

Red River and with the elevator line systems of George Van Dusen and Frank Peavey still years away, had no set system for purchasing wheat at this location. Dunwoody organized the Millers’ Association as a general body that would send agents to the Red River and buy wheat on joint account for all its members, dividing the supply based upon subscription ratios.⁶⁵

For the first few years of its existence, the future of the Minneapolis Millers’ Association was in question. Then, nature intervened. In 1875, bonanza farms were not yet producing enough to sustain processing in the new mills, were marketing a large portion of their wheat downriver in Winnipeg, and southeastern Minnesota continued to be the center for wheat production in the region but served established markets to the east. An epidemic of stem rust, which in the nineteenth century killed between 5 and 10 percent of the American wheat crop, changed this regional orientation.⁶⁶ In 1878, crops in southeastern Minnesota were reportedly on their way to a record crop. As late as July 10, the estimated state-wide yield was nineteen to twenty bushels an acre.⁶⁷ At that time, farmers noticed a reddish tint to their wheat stalks. The fungus attached itself to the above-ground portion of the plant, creating dusty or reddish pustules which became black as the plant matured. The grain became shriveled and worthless.⁶⁸ In 1878, the rust hit with the greatest ferocity in the southernmost counties of Minnesota, the center of wheat production in the region. Seeing their once-promising crops shrivel, farmers throughout the region burned their crops in the field or fed them to livestock. Many moved away or took the opportunity to diversify their crops. As a result, 1877 – the year before the stem rust outbreak – was the high water mark of wheat production in southeastern Minnesota.⁶⁹

⁶⁵ Edgar, *The Medal of Gold*, 67.

⁶⁶ Olmstead and Rhode, “Biological Innovation and American Wheat Production,” 50–51.

⁶⁷ Hamilton, “Stem Rust in the Spring Wheat Area in 1878,” 158.

⁶⁸ Peterson, *Wheat*, 160–65.

⁶⁹ Hamilton, “Stem Rust in the Spring Wheat Area in 1878,” 162–164.

Dunwoody and the Millers’ Association responded to the stem rust outbreak in southeastern Minnesota by forging a monopoly on Red River wheat. “It is well understood,” reported the Minneapolis-based *Pioneer Press* in October, 1878, “that the Millers’ Association will not let any outside buyers come in to compete with them, that they will run up the prices on them so as to drive them out.”⁷⁰ Such a practice would not have been possible in southeastern Minnesota in competition with well-backed agents from Chicago.⁷¹ After they sought to dominate the price and marketing of wheat from the Red River by establishing cooperative buying, some Minneapolis Millers began to build their own storage facilities. In 1882, Charles Pillsbury purchased a line of elevators stretching along the St. Paul, Minneapolis, and Manitoba railroad line in order to ensure that his mills would be steadily supplied with large quantities of wheat at exactly the time he needed it.⁷²

Having solved their supply problem, Washburn and Pillsbury then turned towards marketing. The poor reputation of hard spring wheat flour would not melt away as easily as they thought. Even in the late 1870s, new process millers sold their flour largely in the American South and Southwest, which they did not consider enticing long-term markets. Cad Washburn was quick to see the deficit regions of industrial Europe as a great potential market for his booming production. He believed that the Millers’ Association model of agent selling could be adopted for selling flour in England. In 1874, C.C. Washburn sent his partner George Christian to England introduce the firm’s flour to potential buyers. Three years later Washburn approached Dunwoody. “Go to England,” exhorted Washburn, “start the people there buying

⁷⁰ Quoted in Charles Byron Kuhlmann, “The Influence of the Minneapolis Flour Mills upon the Economic Development of Minnesota and the Northwest,” *Minnesota History* 6, no. 2 (June 1925): 146.

⁷¹ *Ibid.*, 146–147.

⁷² Larson, *The Wheat Market and the Farmer in Minnesota*, 143.

our flour, and, where stand these mills, which now seem so large, will be erected others far surpassing them in importance and capacity.”⁷³

Dunwoody faced a number of difficulties as he tried to sell Minneapolis flour in England. Chief among them was the widespread belief that the new process flour contained whitening agents and that the flour was still the same poor quality underneath. Based on spring wheat’s reputation for discoloration, many English importers believed new process flour was spiked with alum to whiten its color. Second, most American flour was marketed in England through general wheat exporters like David Dows in New York. Merchants in Liverpool then marketed that wheat to provincial millers who preferred to mix American flour with their own fine flour milled from soft English wheat. These networks were quite insular, and Dunwoody encountered much difficulty in marketing his flour directly to British millers.

Rebuffed by British merchants at first, Dunwoody changed tactics. After traveling in Scotland for months, he returned to Liverpool and called on many of the city’s prominent grain merchants.⁷⁴ Eventually partnering with the Liverpool grain firm Horne Brothers, Dunwoody consistently wrote and cabled Washburn with news about the British market at the same time he forged new accounts with London and Liverpool merchants.⁷⁵ By 1881, Dunwoody was coordinating complex wheat shipments and credit accounts between the Bank of Liverpool, London grain merchant J.J. Walker, the Bank of Montreal in New York, and Washburn, Crosby & Co in Minneapolis.⁷⁶ William Edgar, writing a history of the Washburn companies in 1925, noted that “many of the firms to whom Mr. Dunwoody sold flour on this trip in 1877, nearly fifty

⁷³ Edgar, *The Medal of Gold*, 68–69.

⁷⁴ *Ibid.*, 69–70.

⁷⁵ William H. Dunwoody to Washburn Crosby & Co., Feb 22, 1878, “William H. Dunwoody and Family Papers”, 1915- 1837, Minnesota Historical Society Library, Box 2, folder 1..

⁷⁶ William H. Dunwoody to JJ & R Walker, May 23, 1881, *Ibid.* Box 2, folder 1.

years ago, remain customers of the Washburn Crosby Company to this very day.”⁷⁷ Staying in Liverpool for two years and make annual trips thereafter, Dunwoody sold flour direct to bakers in London, Liverpool, and Glasgow, and established a consistent demand for Minneapolis flour in England.

After William Dunwoody’s visit to Liverpool in 1877, exports from Minneapolis to Liverpool rose dramatically. In 1878, Minneapolis millers directly-exported 109,183 barrels of flour to England, which was 10 percent of their total production for that year.⁷⁸ By 1884, 20 percent of the total flour exports from the United States went from Minneapolis to Europe.⁷⁹ The number of barrels shipped to foreign markets from Minneapolis amounted to 2,000,000 barrels in 1885 and 4,000,000 barrels in 1895. Almost all of these barrels went to Great Britain.⁸⁰ Liverpool and Glasgow received large portions of these early shipments. London merchants were slower in purchasing American hard spring flour but were, by the mid-1880s, the largest market for Minneapolis flour. Convinced by Dunwoody, British bakers came to desire Minneapolis new process flour because it helped make their loaves rise higher, and allowed them to stretch smaller amounts of flour over multiple batches.⁸¹ As economic historian Henrietta Larson notes, British miller had, by the late 1870s, buying increasing amounts of Minnesota wheat and flour.⁸² Because the new process rolled flour was strong without being overly coarse, it mixed well with other wheat types, providing added nutrition, structure, and stability to bread. The result was bread universally favored in England, which combined the taste and appearance

⁷⁷ Edgar, *The Medal of Gold*, 70. The description of Dunwoody’s trip was taken from the same, 67-70.

⁷⁸ Bureau of Statistics, “The Grain Trade of the United States, and the World’s Wheat Supply and Trade,” in *Monthly Summary of Commerce and Finance of the United States, January 1900* (Washington, D.C.: Government Printing Office, 1900), 2010–2014.

⁷⁹ Larson, *The Wheat Market and the Farmer in Minnesota*, 132–133.

⁸⁰ James Gray, *Business Without Boundary: The Story of General Mills* (Minneapolis: University of Minnesota Press, 1954), 34.

⁸¹ *Northwestern Miller*, Holiday Number, 1889.

⁸² *Ibid.*, 141.

of soft wheat with the strength of hard wheat needed to produce bread via new mechanized processes.⁸³ British millers were willing to pay a premium for it.⁸⁴

As the eventual director of Washburn, Crosby & Co. and the Dunwoody Grain Company, Dunwoody controlled much of the wheat pouring out of the Red River in the 1890s to Minneapolis and then to Europe. Dunwoody’s investments helped moved the bonanza section further west and north following the 1890s decline of the Red River bonanza. As a close correspondent with James J. Hill, Dunwoody and the Great Northern often agreed together on the best location for new grain elevators along the tracks. He was an early investor in the dry wheat farming district surrounding Great Falls, Montana. In an attempt to increase wheat consumption throughout the day, Dunwoody spearheaded the move to market “breakfast flakes” from his Royal Mill in Great Falls. He oversaw an aggressive marketing campaign which saw Washburn’s Gold Medal flour become the most visible flour brand in the United States. By the late 1890s, Dunwoody sat at the center of a merchant network that spanned from Montana to Manchester, connected by a constant stream of information and capital sent by his business associates in Britain, Horne Brothers of Liverpool.⁸⁵

Just as Dunwoody’s effort to connect the Red River bonanza to Minneapolis was shaped by stem rust and grasshoppers, so to was his connection to Great Britain shaped by environmental processes, specially the same string of low-NAO-induced harvest failures that led to consistent crop failures in Great Britain during the early 1880s. English crop failures were reported widely throughout the United States, especially by newspapers serving the bonanza

⁸³ R. Perren, “Structural Change and Market Growth in the Food Industry: Flour Milling in Britain, Europe, and America, 1850-1914,” *The Economic History Review* 43, no. 3 (August 1990): 423–424.

⁸⁴ Larson, *The Wheat Market and the Farmer in Minnesota*, n. 140.

⁸⁵ “William Dunwoody Papers,” *Minnesota Historical Society*.

districts. On January 5, 1880, the Red River-based *Fargo Argus* reported on the harsh English winter:

Returns to the register from nearly every county of England confirms the worst accounts of serious crop failures generally. The markets for American products are very firm, and not likely to lower for some time, although the relatively high price of wheat from the United States is a sore burden for the poor.⁸⁶

This quote stands out for a number of reasons. First, it is a small newspaper on the fringes of Anglo-American settlement in 1880 reporting on weather and crop failures in England. This fact points to a wider understanding of the connections between American wheat agriculture and British consumption in the closing decades of the nineteenth century. Second, the *Fargo Argus* served the Red River bonanzas with market information, and this report indicates to the bonanza growers that a large potential market is sitting across the Atlantic. Finally, it highlights the extent to which wheat consumption of the poor in Britain came to be associated directly with American surplus. No longer was this a vision of a small network of free traders in England and the United State. The Anglo-American grain trade was a material reality.

Newspaper reports included a discussion on the weather of England, the price of grain, and perhaps a short mention of competing districts. Take this illustrative example from the *Fargo Argus* in the fall of 1880:

Liverpool, Oct. – The weather in England is very heavy and copious rains are everywhere prevalent. This has caused a marked advance in breadstuffs, and holders are extremely firm in their confidence that prices will go still higher. The wheat market opened to-day strong and a penny higher, cargoes strong. In London, wheat has advanced one shilling per quarter; winter wheat off coast three pence higher, California wheat off coast six pence higher; California wheat to arrive one shilling and sixpence higher.⁸⁷

The report combines complex market and weather information from distant locations and places them within the same frame. By the early 1880s, regional environmental and market processes in California produced significant surplus that remade the shape of agriculture and processing those regions as merchants like Isaac Friedlander, Balfour Guthrie, Cad Washburn,

⁸⁶ *Fargo Argus*, January 7, 1880

⁸⁷ *The Fargo Argus*, Oct. 12, 1880.

and William Dunwoody connected the industrial farms and mills of the United States to the industrial markets of Great Britain.

James J. Hill’s Transatlantic Wheat Empire

The final piece of the puzzle connecting supply, production and distribution within the spring wheat region and between that region and Great Britain was a dramatic drop in transportation prices. This drop in transportation price occurred largely due to railroad consolidation, pooling, and expansion of capacity in the rail and ocean shipping networks.⁸⁸ In Minnesota the most important force driving the drop in transportation prices was the consolidation of the region’s transportation network in the hands of erstwhile grain merchant, bonanza farmer and new-process miller James J. Hill, known as the “Empire Builder of the Northwest.”⁸⁹

In the summer of 1884, James J. Hill reported “last year we carried over one-fifth of the entire spring wheat crop of the United States and this year I think we will carry one-fourth.”⁹⁰ During the 1870s and 1880s, much of the spring wheat region left for market via the port of Duluth through Hill’s Empire. Grain agents employed by Hill and Dunwoody established agencies in Duluth charged with finding the cheapest shipping rates across the Lakes. These agents would often wire associated elevator operators in Buffalo detailing shipments headed east.

⁸⁸ Marion H. Herriot, “Steamboat Transportation on the Red River,” *Minnesota History* 21, no. 3 (1940): 245–71, <http://www.jstor.org/stable/20162405>; George Rogers Taylor, *The Transportation Revolution, 1815-1860* (White Plains, NY: M.E. Sharpe, 1951); D. North, “Ocean Freights and Economic Development 1750-1913,” *The Journal of Economic History* 18, no. 4 (December 1958): 537–55; C. Knick Harley, “Ocean Freight Rates and Productivity, 1740-1913: The Primacy of Mechanical Invention Reaffirmed,” *The Journal of Economic History* 48, no. 4 (December 1, 1988): 851–76, <http://www.jstor.org/stable/2121620>; Al Miller, “Workhorses and White Flyers: The Northern Steamship Company,” *Inland Seas* 55, no. 1 (1999): 18–30, <http://search.ebscohost.com/login.aspx?direct=true&db=ahl&AN=A000480534.01&site=ehost-live>; M. Ejrnaes, K.G. Persson, and S. Rich, “Feeding the British: Convergence and Market Efficiency in the Nineteenth-Century Grain Trade,” *Economic History Review* 61, no. S1 (2008): 140–71.

⁸⁹ Albro Martin, *James J. Hill and the Opening of the Northwest* (New York: Oxford University Press, 1976).

⁹⁰ Quoted in *ibid.*, 277.

Finally, the Duluth agent cabled the New York house, where the firm’s partners would find potential foreign buyers on the floor of the Produce Exchange or through their personal connections. This practice changed somewhat in the 1890s as Hill’s Great Northern system came to dominate shipping on Lake Superior. The Railroad built two giant elevators at Duluth and Buffalo and offered cheap storage to grain merchants and fobbers who shipped their grain via lake and rail from Dakota to New York.⁹¹

Like so many other merchants, Hill grew to oversee a financial empire based on humble beginnings in the grain trade. Hill began his business career as consignment merchant in St. Paul in the 1850s and 1860s specializing in negotiating the steamboat-rail transportation network to find cheap freight rates for wheat towards eastern markets. His next business venture was a steamship company on the Red River, shipping wheat from bonanza farms to railroad depots up and down the river. By the mid-1870s he began purchasing railroads in receivership.

To grow the freight business available to his steamboats and railroad cars, Hill also began to invest directly into agriculture, milling, and storage. During the 1880s, Hill came to own all or portions of the St. Paul, Minneapolis, and Manitoba Railroad, Red River Rolling Mill in Fergus Falls Minnesota, two bonanza wheat farms (one in western Minnesota and one near St. Paul), a chain of grain elevators from the Red River through Duluth and onto Buffalo, New York, a steamship line on the Great Lakes, and the St. Anthony Falls Water Power Company—which controlled all the water power required for milling on the eastern shore of the Mississippi River at Minneapolis.⁹² By the late 1880s and early 1890s, then, Hill had come to own much of the transportation and storage capacity that connected wheat farms in western Minnesota to the Twin Cities and beyond.

⁹¹ Rothstein, “American Wheat and the British Market, 1860-1905,” 281.

⁹² “James J. Hill Papers, 1823-1985,” n.d., Minnesota Historical Society Library, “Red River Rolling Mill, 20.G.6.1-3; “St. Anthony Falls Water Power Company,” 20.H.4.3.

Hill solidified his wheat portfolio with calculated railroad purchases. Another casualty of reaching to far too fast in the yet-undeveloped northern plains, the St. Paul & Pacific Railroad (SP&P) company filed for bankruptcy in 1873. Connecting St. Paul with the Red River, Hill saw this as an opportunity to increase his hold on transportation between the growing Twin Cities and the booming Dakota Territory. While a small collection of investing associates, Hill purchased the St. Paul and Pacific in 1877 and, buying up trackage rights from the Northern Pacific revamped the moribund SP & P and renamed it the St. Paul, Minneapolis, & Manitoba Railway (STPM&M). Borrowing on his experience as a consignment merchant, Hill soon set about ensuring that the STPM&M transported the bulk of wheat then exploding out of the Dakota bonanza. He fostered colonization efforts by corresponding with gentlemen and business associates in England – no doubt proving to be one of the main marketers of the Dakota bonanza in Great Britain.⁹³

Hill was further able to channel grain from the bonanza farms through his ownership of the Red River Rolling Mill, located on the Otter Tail River in Fergus Falls, Minnesota. The mill’s ledgers show that when the mill opened in 1879, it received grain from a large number of smaller farms. By 1880, the number of farms it received grain from was growing smaller at the same time shipments were rising.⁹⁴ By 1882, the mill received grain from bonanza farms via the Northern Pacific Elevator in Fargo, or shipped direct from farmers themselves. The mill featured six corrugated steel rollers, the kind recently made popular by the success of Minneapolis millers. Much to the chagrin of other businesses in Fergus Falls, the mill impounded the Otter Tail River to power its operation and entered into a favorable contract with Hill’s own St. Paul,

⁹³Martin, *James J. Hill and the Opening of the Northwest*, 276.

⁹⁴ Grain Books 1879, 1881, 1882-1884. 20.G.6.5. James J. Hill Papers, MNHS.

Minneapolis, and Manitoba Railway Company to transport grain from farm to mill, and mill to market.⁹⁵

While Hill enjoyed tight business connections with millers and bankers in Minneapolis, he also wished to sell his flour in widespread markets. While Minneapolis represented a large nearby market, the powerful mills of the Pillsbury and Washburn family were also potential rivals. In addition, the Minneapolis Millers Association began to flex its newfound clout in the late 1870s and early 1880s and effectively demanded that the mill set prices that were beneficial to the millers in the Twin Cities.⁹⁶ In an attempt to divert some of their grain away from the price controls imposed by Minneapolis millers, the mill established regular contact with George M. Smith, a commission merchant operating in Duluth and New York City. Through Smith, and through the consignment services of the merchant company Traders Despatch, the Red River Rolling Mill was selling flour in the major domestic grain ports of Minneapolis, Chicago, Buffalo, New York City, and Baltimore by 1884.⁹⁷

By the late 1870s and 1880s the British market emerged as a clear objective for Hill. Through Washburn and Dunwoody, the Minneapolis market opened to Liverpool in the late 1870s. Hill followed this trend.⁹⁸ His effort to sell wheat in England also came on the heels of English harvest failures and Dunwoody’s effort to evangelize new process flour, so agents faced an easier task than Dunwoody.⁹⁹ Larson notes, “the production of a growing surplus [in

⁹⁵ “Red River Rolling Mill,” James J. Hill Papers, Minnesota Historical Society; Joseph E. Turner to Red River Rolling Mill,” May 24, 1883. 20.G.6.1. James J. Hill Papers, Minnesota Historical Society (hereafter cited as MNHS).

⁹⁶ R.M Hubbard, Minneapolis Millers Association to Red River Rolling Mills, November 2, 1883 and R.M. Hubbard, Minneapolis Miller Association to Red River Rolling Mills, January 4, 1884. 20.G.6.2 James J. Hill Papers, MNHS.

⁹⁷ Jas. W. Thom to Red River Rolling Mills, October 30, 1885. 20.G.6.2. James J. Hill Papers, MNHS.

⁹⁸ “James J. Hill Papers”, 1985 1823, Minnesota Historical Society Library (MNHS). Farms (Series F), M458; James Hill, *Highways of Progress* (New York: Doubleday Page & Co., 1912); Ralph Hidy et al., *The Great Northern Railway: A History* (Boston: Harvard Business School Press, 1988), 67, 78.

⁹⁹ While Great Britain was experiencing a demographic boom, England received much of the highest quality wheat imports, particularly from the United States - while Scotland, Ireland, and Wales were generally the destination for

Minnesota] was contemporaneous with an increase in the demand for food in the industrial areas of western Europe – especially England.”¹⁰⁰

Hill capitalized on this trend. He opened an account with Liverpool wheat merchant Stolterfoht, Sons & Co in the early 1880s. The two firms corresponded regularly about the state of the flour market in both England and the United States. Stolterfoht, Sons & Co. noted that English merchants particularly favored one of the Red River Rolling Mill’s new process brands - “Our Best” - and would be willing to pay slightly higher prices to obtain it.¹⁰¹ The English market had come to appreciate spring wheat flour and the networks of Washburn, Dunwoody, and Hill had not only made that flour widely known but easily moved to England at low cost. The stage was now set for the final phase of the convergence between the spring wheat region and the English grain market: the 1889 purchase of Washburn and Pillsbury’s mill by a syndicate of British capitalists lead by a London flour broker.

British Direct Investments in the Spring Wheat Region

British money began to flow into the spring wheat region after 1875. Foreign direct investments in land, manufacturing, transportation and finance picked up in the years following the Civil War as government debt was increasingly handled by domestic firms (bought in secondhand markets in Europe well below par) and as transatlantic agencies such as Drexel, Morgan & Co; Morton, Bliss & Co; Brown Brothers & Co.; etc; began to specialize in the marketing of private securities in railroad, baking, and insurance.¹⁰² The need for foreign capital

lower quality wheat. Thus, I can make a distinction between the population growth, industrialization, and trade policy of Great Britain, while isolating England as the destination of the majority of wheat imports from the U.S.

¹⁰⁰ Larson, *The Wheat Market and the Farmer in Minnesota*, 25.

¹⁰¹ Stolterfoht, Sons & Co. to Rd River Rolling Mills, April 1, 1884. 20G.6.2. James J. Hill Papers, MNHS.

¹⁰² Edwin J. Perkins, *Financing Anglo-American Trade: The House of Brown, 1800-1880* (Cambridge, MA: Harvard University Press, 1975); Dolores Greenberg, *Financiers and Railroads 1869-1889* (Newark, NJ: University of

became even greater in the years following 1875 as companies like James J. Hill’s eventual Great Northern system integrated towards production and processing at the same time consolidating transportation. American capitalists often turned to the New York and British markets for funding through houses like Drexel, Morgan & Co., Morton Bliss & Co. or their London counterparts.¹⁰³

In the 1870s, direct investment by British merchants with at least a modicum of decision-making control grew over their pre-war volume.¹⁰⁴ While this trend occurred across economic sectors and geographic regions, British investment in the spring wheat region during the late 1870s and 1880s is particularly illustrative of the foreign drive to expand towards U.S. production. Such investment reduced transaction costs associated with traditional portfolio investments through intermediaries and general consignments through affiliated merchant firms.

Owing to a long tradition of recognizing the comparative advantage in trading foreign food for British capital and manufactured goods, and a new material need resulting from English harvest failures, British direct investment in American food production, storage, and processing grew significantly in the years following 1875. As business became standardized, regularized and organized around specialist firms in the Great Lakes-Empire Corridor, California, and the spring wheat region, investors in Britain could make direct investments with greater confidence. Therefore, American food production was one of the sectors in which British direct investments came to outnumber portfolio investments.¹⁰⁵

Delaware Press, 1980); Mira Wilkins, *The History of Foreign Investment in the United States to 1914* (Harvard University Press, 1989), 119–138.

¹⁰³ Wilkins, *The History of Foreign Investment in the United States to 1914*, 143; Larson, *The Wheat Market and the Farmer in Minnesota*, 147–207.

¹⁰⁴ Wilkins, *The History of Foreign Investment in the United States to 1914*, 141–182.

¹⁰⁵ *Ibid.*, 298–299.

In the 1870s and 1880s, British investors moved into the spring wheat region in an attempt to reduce the significant transaction costs of conducting their business through middlemen in New York City, Buffalo, and Chicago. At least six major bonanza farms in the Red River Valley were owned or operated by Englishmen. There was the Williamson, Lockhart, Fisher, and Kilrenny farms in Northwestern Minnesota and the Hadwin and Sykes farm in Dakota. Many of these farms were owned by Englishmen and managed in absentia, and arrangement that caused difficulties for more than one.¹⁰⁶

While most of these Englishmen left little record of their existence, we can glean some of their aspirations from Robert Hadwin, an Englishman by way of Canada who bought his first tract of Dakota land thirty miles west of Fargo in 1876. Hadwin was a land speculator, bound to profit by selling potential. In 1876, Hadwin bought Dakota land at \$4.50 per acre. Over the course of two years, he planted two wheat crops. In 1880, he offered the same piece of land – with crop – for sale in the *Fargo Argus* for \$28 per acre. This price cannot only reflect the actual improvements that Hadwin would have made to the land itself - the grading, plowing, backsetting, and erection of buildings and storage facilities, etc – but also the market’s opinion on the future productivity of the land. While many speculators did not actually break ground, Hadwin hedged his land bets by producing wheat for market during “improving” years. Hadwin earned income on his potential investment and also made it more attractive for potential buyers by putting the land into production and eliminating the time a buyer would have wait to begin producing their own crop. During the first year under production, Hadwin’s farms – located near the town eventually named Wheatland – produced 19,000 bushels from 1,900 acres, a modest bushel-per-acre ration that nonetheless assuredly provided much-needed income as he bided his

¹⁰⁶ Morton Rothstein, “A British Investment in Bonanza Farming, 1879-1910,” *Agricultural History* 33, no. 2 (1959): 72–78.

time until he sold the land outright.¹⁰⁷ After his initial success at profiting from the sale of wheat and the speculation of land, Hadwin attempted to replicate the process. In late 1880, it was reported that Hadwin owned three sections that he was actively improving, and seven tracts of unimproved land he soon expected to put into production.¹⁰⁸

Not content to let the whims of railroad companies determine the profitability of his own ventures, Hadwin built his own public relationships campaign centering on his country of birth. He wrote numerous letters back to newspapers in England, alerting them to the business prospects of the Red River bonanzas and enticing English settlers. The *Fargo Argus* reported that “one of the chief reasons why the golden wheat fields of the Red River Valley have become so quickly and favorably known throughout the world” was Hadwin, who the paper “recognized as a very important factor in the development and success of the region.”¹⁰⁹ During the 1878-1879 season, Hadwin composed a series of letters to “friends” (read: business associates) in Lancashire, England. The letters were published “in the leading county newspapers” across the region, advertising the Red River Valley as a prospective location for both English settlers and English capital. The *Argus* reported that “ever since such publication the author has been flooded with letters of from all classes and conditions of people throughout Lancashire, asking every conceivable question about North Dakota, how to get there, what land would cost,” et cetera.¹¹⁰ In his public relations campaign, Hadwin hit on point consistently: “we could grow wheat and send it to England, cheaper than the English farmers could.”¹¹¹ For Hadwin, this meant that English laborers should emigrate to Dakota, bring capital with them, and sell the

¹⁰⁷ Drache, *Day of the Bonanza*, 108.

¹⁰⁸ *Ibid.*, 54.

¹⁰⁹ *Fargo Argus*, March 31, 1880. Newspapers that published excerpts of Hadwin’s letters include *The Lancashire Gazette* and *The Lancaster Guardian*.

¹¹⁰ *Fargo Argus*, March 31, 1880

¹¹¹ Richard Hadwin in *The Lancaster Guardian*, Feb. 14, 1880, quoted in *the Fargo Argus*, March 31, 1880.

fruits of their labor in England. Even if the emigrants never came in the great numbers that Hadwin dreamt, the flurry of correspondence in the winter and spring of 1880 led the *Fargo Argus* to proclaim “The Red River Valley fever has struck Lancashire and the neighboring counties in the most aggravated form.”¹¹² Through this public relations campaign, Hadwin sought to increase the value of land, but he also significantly raised the profile of the spring wheat region – and American wheat production in general - in England.

While Hadwin moved towards production, many other British investors moved towards processing and storage facilities spurred by a now-universal confidence in the American wheat economy. British companies were particularly active in purchasing American grain - and the required investments in railroads, farm mortgages, and trade infrastructure - following the widespread failure of British wheat crops in the 1880s.¹¹³ 1889 was particularly active. In that year, a British company with the seemingly American name of Chicago and Northwest Granaries Company, Ltd. bought Star Elevator and Van Dusen and Co. which together held a string of granaries that connected the Dakota bonanza to the milling centers of Minneapolis and southeastern Minnesota. Another British company bought the City of Chicago Grain Elevators, Ltd. With these purchases, British grain merchants sought to gain a greater control over the flow of grain by removing intermediaries between American farms and British stomachs or, in the words of one contemporary, “to free the British of the grip Americans had over the grain trade.”¹¹⁴

The most significant foreign deal came in Minneapolis. In July 1889, three Englishmen caused a stir in Minneapolis when they began asking questions about flour and waterpower in the booming city. London flour merchant Sidney Klein first approached the Washburn Company to

¹¹² *Fargo Argus*, March 31, 1880

¹¹³ Wilkins, *The History of Foreign Investment in the United States to 1914*, 319.

¹¹⁴ *Ibid.*

gauge interest in a sale, likely meeting with Dunwoody who, fresh from his European marketing success, had taken a leadership role within the company. The British also met with part-owner William Washburn, who hoped to turn his investments in milling and waterpower into immediate cash.¹¹⁵ The British group, with a collection of outside investors, approached the well-known transatlantic bank New York bank Morton, Bliss & Co. in the spring of 1889 to broker a sale of Midwestern wheat and flour interests.¹¹⁶ After a complex business negotiation, a group of British investors led by Klein bought the Pillsbury and portion of the Washburn companies, which had split following Cad Washburn’s death in 1882. The British corporation that resulted, named the Pillsbury-Washburn Flour Mills Company, Ltd, came into existence with a board headed by Richard Glyn, Director of the British Bank of North America, and J. Flower Jackson and Sydney Klein, both London grain merchants.

It is clear that James J. Hill's connection to the London money market helped the effort. Several of his associates, including Lord Mount Stephen, were among the company's original investors and, when the company experienced severe difficulties in 1908, Baring Brothers' then-director and longtime Hill associate Gaspard Farrer, took a close look at investing in or buying out the enterprise in full. Klein's London wheat firm became the chief agent for Pillsbury-Washburn in Great Britain. Charles Pillsbury stayed on to manage the firm locally.¹¹⁷

With this one transaction, the British company assumed control of the majority of wheat traveling from country elevators in Minnesota and Dakota to the terminal elevators in Minneapolis, the facilities to process the wheat, and the water to power the processing. The new Pillsbury-Washburn Flour Mills Co. held three Pillsbury mills and two Washburn mills, two elevator companies, and the capital stock of the Minneapolis Mill Co. Knowing they had to

¹¹⁵ Sturdevant and Pillsbury, *The Pillsburys of Minnesota*, 118–121.

¹¹⁶ *The Times* (London), Nov. 1, 1889; *The New York Times*, Nov. 2, 1889.

¹¹⁷ Wilkins, *The History of Foreign Investment in the United States to 1914*, 319–321.

control the natural systems which surrounded milling, the British also purchased the St. Anthony Water Power Co directly from James J. Hill, and thus came to own most of the power taken from the Falls of St. Anthony.¹¹⁸

The 1889 purchase of Washburn Pillsbury meant that a single British-owned company controlled two-thirds of the flour output of Minneapolis, and 170 grain elevators in Minnesota and the Dakotas. The system could produce 14,500 barrels of flour a day, making it by far the single largest milling outfit in Minneapolis, and very likely the world.¹¹⁹ Klein and his London syndicate could now count on a steady supply of American flour flowing entirely through their company. For the first time, an English merchant had direct control over the processing and marketing of American flour from its purchase as wheat by the Minneapolis Milling Association in Dakota to its eventual sale to a Lancashire baker.

Klein’s purchase of Pillsbury Washburn in 1889 materialized from the efforts of many throughout Britain and the spring wheat region to systematize capital, technology, and nature to increase the production of breadstuffs. While the 1889 purchase of Pillsbury Washburn has largely been described from the perspective of the board room, few have appreciated how the hydrology of the Mississippi River, outbreaks of grasshoppers and stem rust, and successive harvest failures in Great Britain influenced the contours of that sale. That is because by the late nineteenth century nature had become increasingly mobilized by merchants, removed as a disruptive force within the Anglo-American grain trade, and subsumed in the implicit logic of business contracts by the successive efforts of Cad Washburn, Charles Pillsbury, James Power, Oliver Dalrymple, William Dunwoody, James J. Hill and Sidney Klein. While it is correct to point out that the American and British wheat markets came together amid the forces of

¹¹⁸ *The Times* (London), Nov. 1, 1889.

¹¹⁹ *Ibid.*

economic convergence, it is more complete to acknowledge convergence came about as individuals scrambled to respond to the forces of the natural world and human markets by forging lasting relationships in regions of supply, places of processing, and locations of demand.

Conclusion

As business historian Morton Rothstein notes “the Industrial Revolution generated demands for fiber, and then food that...created increasingly powerful instruments for processing and transporting the output of American farms. Big farmers and small farmers alike seized the market opportunities that technological externalities, such as cotton gins and automated flour mills, steamboats and railroads, intensified.”¹²⁰ Nowhere were these relationships between industrialization and market integration more complete than in the Spring wheat region of Minnesota and Dakota.

This chapter traced how the management of overcapacity in American grain and flour production and the rise in demand for imported wheat on the British market led to a corresponding rise in flour exports from the United States to the United Kingdom during the 1870s and 1880s. The relationship of railroads to overproduction in grain (relative to the needs of regional and domestic markets) was most significant in the spring wheat region between 1870 and 1890. During this period, the land and settlement policies of the Northern Pacific Railroad gave rise to the famed Dakota Bonanza. Railroads carried this wheat to the flour mills at Minneapolis who, by the 1870s, were producing high-quality flour. Managerial measures account for some of this produce, but individuals and organizations also had to contend with natural forces.

¹²⁰ Morton Rothstein, “The Big Farm: Abundance and Scale in American Agriculture,” *Agricultural History* 49, no. 4 (1975): 586–587.

Merchants throughout the region consistently looked to the British market as an outlet for their considerable production. Between 1870 and the 1880s, spurred both by American production and British demand, the spring wheat region and the British wheat market became closely connected. The close relationship between the spring wheat region and the British market was cemented in the 1889 purchase of 60 percent of Minneapolis’ milling capacity by a British corporation.

In early 1890s Minnesota and Dakota, nearly 70 percent of grain acreage was wheat and nearly 85 percent of that crop was exported out of the region as wheat or flour.¹²¹ A dramatic increase in American exports coincided with the emergence of the spring wheat region and the failure of English harvests in the late 1870s and early 1880s. Flour exports from the U.S. doubled between 1878 and 1880, from 3 to 6 million barrels, and reached 11 million barrels by 1887.¹²² Between 1840 and 1880, the British market absorbed about 30-35 percent of American flour shipments abroad and received near 60 percent during the 1880s and 1890s.¹²³ Richard Cobden’s political vision had, in the span of one generation, become economic reality centered in the revolutionary mills, bonanza farms, and rail networks of the spring wheat region

¹²¹ C. Knick Harley, “Transportation, the World Wheat Trade, and the Kuznets Cycle, 1850-1913,” *Explorations in Economic History* 17, no. 3 (July 1980): 232.

¹²² Bureau of Statistics, “Grain Trade of the United States,” 2000.

¹²³ Rothstein, “American Wheat and the British Market, 1860-1905,” 388–389.

Chapter 8 – Epilogue: How America Came to Feed the World

While the Anglo-American grain trade remained at high levels past World War I, over the course of the twentieth century the American conveyor belt of grain moved away from supplying Europe to supplying Asia, Africa, and Latin America. In January 2011, Egyptians congregated in Cairo’s Tahrir square to demonstrate against Hosni Mubarak’s regime by waving loaves of bread and pita. Egyptians rallied against Mubarak not only because his dictatorship was arbitrary and brutal, but also because his administration was in charge of food supply, and wheat harvests in the United States and China had failed. The price of bread in Egypt skyrocketed. As a result of these failures, wheat prices were high all over the world in 2010 and 2011. Hardest hit were Middle Eastern countries. Nine out of ten world’s largest wheat importers resided in North Africa and the Middle East. In remarkably similar fashion to the early English working class, Egyptians spent 38 percent of their income on food, one-third of which comprised wheat products.¹ In 2011, when world wheat harvests failed, those who had come to depend on that wheat rioted. In time, the demonstrations against high food prices would combine with other local and regional issues and turn into the “Arab Spring.”²

How do we get from English industrial cities to Cairo’s Tahrir square in 2011? Despite considerable differences in the time and circumstances, the 1795 London riots and the 2011 Tahrir Square demonstrations bookend a larger story of American wheat exports. The Tahrir demonstrations came as a result of the third stage in American wheat exports from the seventeenth century onward. First, American wheat exports powered slavery in the American

¹ Thomas L. Friedman, “The Scary Hidden Stressor,” *The New York Times*, (March 2, 2013), http://www.nytimes.com/2013/03/03/opinion/sunday/friedman-the-scary-hidden-stressor.html?_r=0; accessed Nov. 25, 2014.

² Caitlin E. Werrell and Francesco Femia, eds., *The Arab Spring and Climate Change: A Climate and Security Correlations Series* (Center for American Progress; The Stimson Center; The Center for Climate and Security, 2013), <https://climateandsecurity.files.wordpress.com/2012/04/climatechangearabspring-ccs-cap-stimson.pdf>.

South, Caribbean, and Latin America.³ In the nineteenth century, this stream of wheat powered industrialization in Europe. In the twentieth century, American wheat came to power capitalist market development in Asia, Africa, and Latin America. This final stage grew directly out of the merchant networks developed to direct the Anglo-American grain trade.

This dissertation has focused on the second phase of American wheat exports, the flow of wheat from the United States to Great Britain in the nineteenth century. It has demonstrated that those who lived the industrial revolution – merchants, politicians, factory-owners, and the workers themselves – grasped that industrialization depended as much on food as it did on coal. This was the central idea behind comparative advantage, British foreign investment in agricultural nations, the move to repeal protectionist barriers, and the active construction of trade networks designed to import foreign wheat in exchange for British manufactured goods and capital. Nowhere did this set of values and objectives reach their fullest articulation and exert the greatest implications for producing and consuming markets as the Anglo-American grain trade.

While this dissertation has told the story of the Anglo-American grain trade through the lives of the merchants who created it, its organizing principle is structural: industrialization in Great Britain required two energy inputs, fossil fuels to power machines and food to power the human who ran those machines. That food need helped stimulate the growth of American commercial agriculture. There is no denying that industrialization in Great Britain was based upon new sources of fossil fuel energy, nor is there any dispute that mechanical productivity

³ W. F. Galpin, “The Grain Trade of New Orleans, 1804-1814,” *The Mississippi Valley Historical Review* 14, no. 4 (March 1, 1928): 496–507, doi:10.2307/1897152; John G. Clark, *The Grain Trade in the Old Northwest* (Westport, CT: Greenwood Press, 1966).

reached new heights during the industrial revolution.⁴ But this only tells part of the story of the industrial revolution. If as historian of technology Maxine Berg notes, the industrial revolution was as much social and organizational as it was technological, then historians must account for the food on which new labor practices, and settlement patterns depended.⁵ People seemed to have worked harder for longer hours in the eighteenth and nineteenth century, certainly in England and probably for the rest of the world.⁶ Perhaps the industrial revolution was, as Jan de Vries argued, an “industrious revolution” punctuated by more human labor and expanded energy regimes that underpinned human labor.⁷ Wheat bread powered that vast majority of that work.⁸

The grain merchants of the Anglo-American grain trade were the main mechanisms for the delivery of wheat from the United States to Great Britain. Between 1800 and 1890, these merchants built the Anglo-American grain trade from wishful thinking to one of the largest food flows in the world, comprising on average 41 percent of total wheat imports to Great Britain from 1865 to 1900.⁹ These merchants achieved this objective by marshalling business associations, capital, technologies, and nature to achieve a vision held by nearly all: the laws of

⁴ Joel Mokyr, *The Lever of Riches: Technological Creativity and Economic Progress* (New York: Oxford University Press, 1990); K. Pomeranz, *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (Princeton: Princeton University Press, 2000); E.A. Wrigley, *Energy and the English Industrial Revolution* (Cambridge: Cambridge University Press, 2010).

⁵ Maxine Berg, *The Age of Manufactures, 1700-1820: Industry, Innovation, and Work in Britain* (Totowa, NJ: Barnes and Noble Books, 1985). For examples of histories of the industrial revolution that privilege fossil fuels and machines, see David Landes, *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present* (London: Cambridge U.P., 1969); E.A. Wrigley, *Continuity, Chance and Change: The Character of the Industrial Revolution in England* (Cambridge: Cambridge University Press, 1988).

⁶ Kenneth Pomeranz, “Introduction: World History and Environmental History,” in *The Environment and World History* (Berkeley: University of California Press, 2009), 11–12.

⁷ Jan De Vries, “The Industrial Revolution and the Industrious Revolution,” *The Journal of Economic History* 54, no. 2 (June 1, 1994): 249–70, <http://www.jstor.org/stable/2123912>.

⁸ D.J. Oddy, “Food in Nineteenth Century England: Nutrition in the First Urban Society,” *The Proceedings of the Nutrition Society* 29, no. 1 (1970): 150–57; John Burnett, *Plenty and Want: A Social History of Diet in England from 1815 to the Present Day*, Rev. ed. (London: Scolar Press, 1979); Christian Petersen, *Bread and the British Economy, c1770-1870* (Hants, UK: Scolar Press, 1995).

⁹ Brian Mitchell and Phyllis Deane, *Abstract of British Historical Statistics* (Cambridge: Cambridge University Press, 1962), 100–102.

natural economy dictated that Britain trade its manufactured goods and capital for American wheat.

Building on a belief that human economies must mimic the divinely-inspired laws of nature, British and American merchants guided paths of investment through specific merchant networks that over time built stability into the transportation and market structure of the North Atlantic. Then, following the 1860s, merchants responded to these conditions, and to a series of sustained harvest failures in England, by shipping American wheat in three great streams from the Great Lakes-Empire Corridor, California’s Central Valley, and the Spring Wheat Region of Minnesota and Dakota. By the 1880s, New York, Chicago, San Francisco, and Minneapolis were the central markets in the Anglo-American grain trade. Merchants in these cities formed two communities: those devoted to distributing regional surpluses throughout the domestic market, and those committed to exporting surplus to England and Europe.¹⁰ By the late 1880s, merchants had structured the Anglo-American grain trade in such a way that it maintained its momentum into the twentieth century. American wheat pumped out of the three surplus areas and made its way across the ocean to feed the industrial labor force of Great Britain.

In the late nineteenth century, the global grain system of which the Anglo-American trade was a part reached new levels of productivity. Wheat streamed into Europe from North America, Argentina, Russia, and India. Viewed from Europe, this productivity meant more volume, stable food prices, and more predictability in the food economy. Around the world, however, the benefits were less clear, more troubling, or downright disastrous for those who produced the grain on which European industrialization ran. Depressed agricultural prices as a result of imports created widespread poverty in Europe’s peasant and agricultural classes,

¹⁰ Joseph Stancliffe Davis, *Wheat and the AAA* (Washington, D.C.: The Brookings Institution, 1935), 3–10; Wilfred Malenbaum, *The World Wheat Economy, 1885-1939*. (Cambridge: Harvard University Press, 1953), 9–23.

especially in eastern and southern Europe. Many people in those regions responded to the erosion of their market position by moving to the new American breadbaskets: Argentina, Canada, and the United States.¹¹ Commercial food exports and a glutted international helped create the debt and soil erosion that American farmers decried in a succession of late-nineteenth century agrarian movements.¹² Millions died in India as food exports to England continued despite a disastrous series of droughts that coincided with English harvest failures in the late 1870s and early 1880s.¹³

The twin forces driving the expansion of the global grain trade between 1850 and 1900 were population growth and industrialization in Europe. Due to sustained economic growth and governmental policies easing the restriction on agricultural imports, many European nations became food deficit areas as they industrialized. By World War I, the countries of Western and Central Europe imported over 30 percent of their wheat requirements and the United States remained one of the world’s largest wheat exporting countries.¹⁴ Some, like small industrial Belgium, imported over three-quarters of their total food needs.¹⁵

While the British market was subject to periodic food crises prior to the 1860s, it was largely insulated from shortage by importing wheat from Russia, India, Argentina, Canada, and

¹¹ Morton Rothstein, “Frank Norris and Popular Perceptions of the Market,” *Agricultural History* 56, no. 1 (January 1, 1982): 50–66; Morton Rothstein, “Centralizing Firms and Spreading Markets: The World of International Traders, 1846-1914,” *Business and Economic History*, Second Series, Volume Seventeen (1988): 103–13.

¹² George H. Miller, “Origins of the Iowa Granger Law,” *The Mississippi Valley Historical Review* 40, no. 4 (March 1, 1954): 657–80, doi:10.2307/1895862; Rodman Wilson Paul, “The Great California Grain War: The Grangers Challenge the Wheat King,” *Pacific Historical Review* 27, no. 4 (November 1, 1958): 331–49; Solon Buck, *The Granger Movement: A Study of Agricultural Organization and Its Political, Economic, and Social Manifestations, 1870-1880* (Lincoln: University of Nebraska Press, 1963); Lawrence Goodwyn, *The Populist Moment: A Short History of the Agrarian Revolt in America* (New York: Oxford University Press, 1978).

¹³ Mike Davis, *Late Victorian Holocausts: El Niño Famines and the Making of the Third World* (London; New York: Verso, 2001).

¹⁴ C. Knick Harley, “Transportation, the World Wheat Trade, and the Kuznets Cycle, 1850-1913,” *Explorations in Economic History* 17, no. 3 (July 1980): 218.

¹⁵ William C. Edgar, *The Millers’ Belgian Relief Movement, 1914-1915: Final Report of Its Director* (Minneapolis, MN: The Northwestern Miller, 1915), 5–10.

the United States. During a period of nearly six straight harvest failures in England between 1878 and 1884, prices on the domestic and international markets actually fell as merchants in grain-surplus regions like California and Dakota exported greater quantities of breadstuffs to English markets. There were no recorded food riots, lay-offs occasioned by the export of capital to buy food, or deepened starvation in English industrial cities. The development of the Anglo-American grain trade then, helps connect the rise of commercial wheat agriculture in the United States with industrialization, urbanization, and the decreased volatility of the working-class in Great Britain.¹⁶

But American wheat would not feed Europe for much of the twentieth century. Just as the Anglo-American grain trade represented a shift from American wheat feeding slavery to feeding industrialization, so too did the twentieth century American surplus shift from feeding industrialization to feeding development. Beginning in the 1890s, a growing portion of the American wheat surplus flowed to Russia, Asia, Latin America and Africa. The shifting conveyor belt of American grain in the twentieth century helps explain why London was a grain-deficit center in 1795 but well-supplied in 1890 and why Cairo was so dependent on wheat imports in 2011.

The two mechanisms for diverting Americana grain away from Great Britain and toward Egypt and the rest of the developing world were a tight community of multi-national grain corporations and United States federal agencies. Due to its high barrier of entry, the international grain trade had always been controlled by a few small firms. In the twentieth century, however, this insularity achieved new levels at the same time the volume of wheat

¹⁶ Morton Rothstein, “The Big Farm: Abundance and Scale in American Agriculture,” *Agricultural History* 49, no. 4 (1975): 583; Rothstein, “Centralizing Firms and Spreading Markets: The World of International Traders, 1846-1914”; Morton Rothstein, *The United States and the United Kingdom as Centers of the World Wheat Trade, 1846-1914* (Davis, CA: Agricultural History Center University of California Davis, 1990).

traded on the international market exploded. The twentieth century international wheat market was controlled by five family firms that journalist Dan Morgan calls “the Big Five”: Andre, Bunge, Cargill, Continental, and Louis Dreyfus. These firms grew directly out of the nineteenth century international trade and had by 1900 each carved out spheres of influence on the international market. Andre came to control much of the wheat streaming out of Argentina in the 1890s, Louis Dreyfus dealt in the flow of wheat heading from southern Russia and the lower Danube region to Europe, Bunge operated out of Australia. Continental and Cargill dealt primarily in American and Canadian wheat.¹⁷ Cargill, a small family firm operating out of LaCrosse, Wisconsin in the 1870s, developed into a huge multinational company that controlled one-quarter of the wheat exports of the United States in the twentieth century.¹⁸

There was one crucial difference between the Big Five and the merchant networks of the nineteenth century Anglo-American grain trade: the CEOs of Cargill, Continental, Andre, Bunge, and Louis Dreyfus had very little interest in becoming social engineers. Very different from the grain merchants of the early Anglo-American grain trade, and twentieth century governmental programs of food aid, these Big Five sought to remain neutral in ideological and geopolitical struggles. “They see their main interests,” writes journalist Dan Morgan, “as residing in a non-ideological, non-nationalistic world in which trade is unencumbered by regulations.”¹⁹ This does not mean that they were free market orthodox, however. The Big Five, Cargill and Continental in particular, would often closely associate with American governmental agencies to help built markets in the developing regions of Asia, Africa, and Latin America in the twentieth century.

¹⁷ D. Morgan, *Merchants of Grain* (New York: The Viking Press, 1979), 109.

¹⁸ Wayne Broehl, *Cargill: Trading the World's Grain* (Hanover, NH: Dartmouth College, University Press of New England, 1992).

¹⁹ Morgan, *Merchants of Grain*, 32.

While the Big Five controlled the majority of wheat flows in the twentieth century, they were often assisted in directing those flows to developing countries by American federal agencies. These federal agencies, in turn, worked in close relationships with non-for profit foundations to formulate a geo-political vision in the twentieth century that saw hunger and poverty as vital battlegrounds in the global war between capitalism and communism.²⁰ American agencies and policies such as the U.S. Food Administration and its attendant Grain Corporation, the American Relief Administration (ARA), the Agricultural Adjustment Administration (AAA), the Marshall Plan, the U.S. Agency for International Development (USAID), and the U.S. Department of Agriculture (USDA) all came to see American wheat exports to developing countries as vital to the strategic interests of the United States and vital to the creation of a global marketplace based on the international trade of staple goods. These agencies regulated, purchased, and exported American wheat - often through contracts with Cargill or Continental - to support their attempt to keep key regions of Asia, Africa, and Latin America within the American sphere of influence during the Cold War.

Following bonanzas in the California and the Spring Wheat regions, the 1890s and 1900s saw the emergence of a new centralized trade American wheat trade. Conditioned by producer cooperatives, grain marketing corporations, elevator line specialists, and a growing international market, farmers began producing wheat on an unprecedented scale. Grain specialists like the Dunwoody Grain Corporation and Cargill absorbed this overproduction by finding markets abroad. By the end of the nineteenth century, the integrated Anglo-American grain trade began to favor these specialists over general merchant firms like Rathbone Brothers and Balfour

²⁰ Nick Cullather, *The Hungry World: America's Cold War Battle Against Poverty in Asia* (Cambridge, MA: Harvard University Press, 2010).

Guthrie. By 1900, Rathbone Brothers and Balfour Guthrie had moved beyond their dependence on wheat trading to diversify into shipping and finance.²¹

World War I was the high-water mark of American grain exports to Europe. During this era, however, U.S. government agencies also began to incorporate a large portion of the American surplus into food relief efforts. Headed by Herbert Hoover, the Belgian Relief Commission, the U.S. Food Administration, and the U.S. Grain Corporation sent massive shipments of wheat and flour to Europe to offset disruption to those markets due to loss of shipping and destruction of producing regions.²² Samuel Sanday & Co of Liverpool was the primary agent for the British government in moving wheat supplies from New York City to Liverpool.²³

Farmers, buffeted by a huge wartime increase in demand, dramatically expanded their production in the late 1910s and early 1920s. During the 1920s, wheat prices collapsed as a result of this overproduction and farmers cooperatives and businessmen tried to sell their wheat wherever they could. In the 1920s and 1930s, grain corporations and government agencies began search for an outlet for overproduction through government aid and new markets in Asia, Africa, and Latin America. Hoover was among the first to envision food as a tool of American influence around the globe. Hoover reported to Wilson that the efforts of the Belgian Relief, the US Food Administration, and the ARA worked “to preserve these countries from Bolshevism

²¹ Samuel G. Rathbone to Rathbone Brothers and Company, June 23, 1884. “Rathbone Business Papers,” *University of Liverpool Special Collections*; Morton Rothstein, “A British Investment in Bonanza Farming, 1879-1910,” *Agricultural History* 33, no. 2 (1959): 75–78.

²² Avner Offer, *The First World War: An Agrarian Interpretation* (Oxford, UK: Clarendon Press, 1989); Rae Katherine Eighmey, *Food Will Win the War: Minnesota Crops, Cooks, and Conservation during World War I* (St. Paul, MN: Minnesota Historical Society Press, 2010).

²³ George Broomhall and John Hubback, *Corn Trade Memories Recent and Remote*. (Liverpool: Northern Publishing Co., 1930), 183.

and rank anarchy.”²⁴ As a result of the ARA, a growing portion of the American surplus flowed towards the non-traditional markets of Eastern Europe and Russia.²⁵

As they were directed towards new markets, American wheat surpluses reached an all-time high in the 1920s. Before World War I, American wheat harvests never reached 800 million bushels, but in the 1920s, harvests rarely sank below that number. During this decade, a quarter of the American wheat crop went unsold.²⁶ This overproduction played a key role in creating the conditions ripe for massive soil erosion in “the Dust Bowl” and policies of the New Deal Agricultural Adjustment Administration to pay wheat (as well as cotton and other cash crop) farmers to put land out of production to replenish soil health and stabilize prices.²⁷ American farmers responded to overproduction by either diversifying their holdings, going bankrupt in the face of sagging prices, or consolidating into huge industrial farms based partly on the bonanza model and partly on scientific management then being preached at land-grant agricultural universities.²⁸ Farmers cooperatives became more important in storage and transportation during the 1930s, and began negotiating directly with the U.S. government and large grain corporations like Cargill on behalf of individual farmers.²⁹ New Deal programs also conditioned the American wheat economy to farm price supports, wheat export subsidies, and farm programs that regulated the amount of acreage devoted to particular crops.³⁰

²⁴ Quoted in Cullather, *The Hungry World*, 22.

²⁵ Joan Hoff Wilson, “Hoover’s Agricultural Policies 1921-1928,” *Agricultural History* 51, no. 2 (April 1, 1977): 335–61.

²⁶ Cullather, *The Hungry World*, 46.

²⁷ Davis, *Wheat and the AAA*; Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (New York: Oxford University Press, 1979).

²⁸ Deborah Fitzgerald, *Every Farm a Factory: The Industrial Ideal in American Agriculture* (New Haven: Yale University Press, 2003).

²⁹ Morgan, *Merchants of Grain*, 120.

³⁰ Davis, *Wheat and the AAA*.

The American government responded to overproduction in the 1920s by creating partnerships with private institutions like the Rockefeller Foundation to devise ways to get rid of the surplus and solidify geopolitical strength of American capitalism in Asia.³¹ World War II and the Marshall Plan increasingly diverted American wheat first towards Europe and then the developing world. In the 1920s and 1930s, much of the food aid that had fallen under the purview of Herbert Hoover’s ARA transitioned into private institutions like the Rockefeller Foundation. Acknowledging that food supply was now more of an issue for the poor nations of the developing world rather than rich industrial nations, the Rockefeller Foundation funded a number of studies in agricultural universities around the United States that sought to increase production through innovations in plant breeding, fertilization, and irrigation that would allow wheat to be grown in many regions around the globe with arid climates and poor soils. Among their most famous projects was Norman Borlaug’s International Maize and Wheat Improvement Center in Mexico, the result of an effort begun by the Rockefeller Foundation in partnership with the Mexican government in 1943 to increase yields and production in food deficit regions around the globe.³² But the Rockefeller Foundation also knew these innovations would take time before they reliably produced food in developing regions, and advocated for food aid in Asia and Africa to preserve those areas for capitalism by making them dependent on American largess.³³

The Marshall Plan sent government-bought food to Europe in the years immediately following World War II, but then expanded to include developing areas thought to be at risk of falling to communism. While officials knew the Marshall Plan would have to be modified to fit the population and economies of Asia and Africa, they believed a fitting test for this transition

³¹ Morgan, *Merchants of Grain*, 121–122.

³² Cullather, *The Hungry World*, 205–262.

³³ *Ibid.*, 72–108, 142–144.

would be Japan. As a result of the Marshall Plan, the U.S. shipped one-sixth of the total American wheat harvest to Europe and Japan in 1945-1946.³⁴ The involvement of these governmental agencies helped turn the attention of politicians and businessmen toward the problem of food deficit in developing countries in Africa, Asia, and Latin America. Not only were these areas of dramatic population growth and lagging food production, they also became set-pieces in a brewing geopolitical battle between the United States and the Soviet Union for allies and markets.³⁵

As American wheat exports move towards Asia, Canadian wheat began to fill the void in Europe. In the 1910s and 1920s, the Canadian Wheat Board took control of national prices and oversaw the export of Canadian wheat to Europe. The Wheat Board then began contracting with Cargill, Continental, and Louis Dreyfus in the 1930s and 1940s to send even more wheat to Europe.³⁶ At the same time, British firms like Samuel Sanday and Ralli Brothers began to lose out in the international market as large milling outfits like Joseph Rank & Co. began to deal directly with Cargill, Louis Dreyfus, and foreign exporting agencies like the Canadian Wheat Board. With the erosion of British firms like Sanday, the streams of wheat they maintained from the United States to Britain began to trickle off as Cargill, Continental and others began to direct the international flow of grain from Canada to Europe and from the United States to Asia.³⁷

In the 1950s and 1960s the efforts of the Rockefeller Foundation, the American Government, and the Big Five to forge markets in the developing world came together in the United States Agency for International Development (USAID). During this era, the international wheat trade focused on developing regions achieved momentum. The American government and

³⁴ Allen J. Matusow, *Farm Policies and Politics in the Truman Year* (New York: Atheneum, 1967), 35–36.

³⁵ Cullather, *The Hungry World*.

³⁶ Morgan, *Merchants of Grain*, 328–333.

³⁷ *Ibid.*, 113–114.

the Big Five, especially Cargill, worked to feature subsidized wheat imports and economic aid that was designed to bring areas outside of global capitalist market into the international system of staple production and consumption-driven growth. In 1954, the Eisenhower administration linked development, geo-politics, and American food surplus with the Agricultural Trade Development and Assistance Act (P.L. 480), which the president maintained laid “the basis for a permanent expansion of our exports of agricultural products with lasting benefits to ourselves and peoples of other lands.” Renamed the Food for Peace Program by President John Kennedy in 1961, the program has exported between 17.3 and 133 million tons of food – “usually wheat and corn” – to 135 countries between the 1950s and the present.³⁸ The primary mechanism for the program was USAID. Thanks to this program and the continued efforts of the Big Five to create markets in East Asia, a split international market developed in the 1950s and 1960s: Russia fed Eastern Europe, Cuba, North Korea, North and Vietnam, while the U.S. fed South Korea, Japan, Algeria, Indonesia, India, and Brazil.³⁹

During the 1950s and 1960s, the Big Five and the United States government cooperated closely to forge markets in Asia and the Middle East by encouraging American style consumption in developing countries.⁴⁰ As Americans rode the post war boom of affluence to consume more meat and pork, these agencies and companies exported a growing share of the American wheat crop.⁴¹ Cargill and the USDA became pivotal in searching for new markets to sell this surplus. Cargill worked closely with the USDA to turn rice eaters in Asia to wheat eaters. They collectively began advertising campaigns in Japan, Taiwan, and Korea promoting

³⁸ *Celebrating Food for Peace, 1954-2004* (U.S. Agency for International Development, 2003), http://pdf.usaid.gov/pdf_docs/PDABZ818.pdf. Accessed Nov. 30, 2014.

³⁹ Morgan, *Merchants of Grain*, 35, 37–38.

⁴⁰ *Ibid.*, 144.

⁴¹ *Ibid.*

the consumption of biscuits and bread.⁴² At the same time, the forces of globalization meant the affluent in developing countries began to desire the wheat-heavy menus of American fast food companies like McDonalds and KFC. Supplying this new demand were the Big Five working in tandem with the American government to forge markets in developing regions. Cargill, in particular, became a multinational food corporation in this period and expanded into sugar, meat, and tapioca now that their wheat markets were growing more and more secure through federal government assistance in developing regions.⁴³

Working closely with USAID and the USDA, Cargill took an active role in formulating US farm and export policy between the 1950s and the 1970s. The growth of USDA advertising campaigns and USAID programs mean a great increase in government purchases of wheat surplus in 1970s and 1980s to meet program needs.⁴⁴ Many of these purchases were handed by special contracts handed to the Big Five to distribute American grain internationally. With similar cozy public-private relationships occurring in the home markets of the other Big Five, Louis Dreyfus, Bunge, Andre, Continental, Cargill sat at the center of a global system through which grain was distributed and processed in the second half of the twentieth century. By the 1970s and 1980s, Continental and Cargill handled half of all the grain exported from the United States thanks to their ability to build their own markets and ride government aid programs.⁴⁵

American wheat came to dominate the international market in the 1970s and 1980s. Cargill and USDA shaped a great increase of American wheat exports to Asia and the Middle East beginning in the 1970s. In the early 1970s, the United States sent large quantities of wheat to their main competitor, drought-stricken Soviet Russia. Russian exports dropped precipitously

⁴² Ibid., 145.

⁴³ Ibid., 31.

⁴⁴ David E. Cummins, *Corn Belt Grain Cooperatives Adjust to Challenges of 1980s, Poised for 1990s* (U.S. Department of Agriculture, Agricultural Cooperative Service, August 1993), 11, 18.

⁴⁵ Morgan, *Merchants of Grain*, 31.

and American wheat rushed into the Middle East. By 1975, Iran was buying so much American food from Cargill that ports of the Persian Gulf were clogged with grain ships obligated to wait for weeks before unloading their cargoes.⁴⁶ U.S. also began exporting large quantities of wheat in the 1970s to prop up Anwar Sadat’s regime in the face of economic stagnation in that country.⁴⁷ In this period, Egypt – cut off from their traditional source of wheat due to the construction of the Aswan High Dam - became dependent on imported supplies from the Black Sea, China, and North America.⁴⁸ As a result of governmental food programs and Big Five corporate policy American wheat exports exploded in the 1970s. Before 1945, the amount of grain on the international market rarely exceeded 30 million tons a year. By 1975 that number reached nearly 160 million tons. By the 1980s the United States produced over half of global wheat exports.⁴⁹

Getting East Asia and the Middle East hooked on American wheat exports worked. By the 1990s Cargill, Continental, USDA, and USAID exported fully half of the U.S wheat crop. Egypt and Japan were the destination of the majority of these exports, but a new market began to emerge as well. Following the North American Free Trade Agreement in 1994, American wheat exports doubled to Mexico in the late 1990s and 2000s.⁵⁰ By 2013-2104, the top five destinations for American wheat exports were Brazil, China, Sub-Saharan Africa, Mexico, and Japan.⁵¹ While Egypt had by 2013-2014 fallen to 21st in destination of American wheat exports,

⁴⁶ Ibid., 181–192.

⁴⁷ Ibid., 342.

⁴⁸ “U.S. and World Grain Exports, 1960-2012,” Food and Agriculture Data Center, *Earth Policy Institute*. http://www.earth-policy.org/data_center/C24. Accessed Nov. 26, 2014. Ibid., 38–39.

⁴⁹ Ibid., 339–346.

⁵⁰ Henrich Brunke, “Commodity Profile with an Emphasis on International Trade: Wheat,” *Agricultural Issues Center, University of California* (August, 2002), http://agmrc.org/media/cms/ccpwheat_47A4CABBA76E0.pdf. Accessed Nov. 26, 2014.

⁵¹ <http://www.ers.usda.gov/data-products/wheat-data.aspx#25297>. Accessed Nov. 21, 2014.

as recently as 2010 it was second.⁵² The Arab Spring began, in part, as a result of these shifting grain flows.

Between 1900 and 2014, American wheat transitioned from feeding industrialization in Europe to feeding development in Asia, Africa, and Latin America. This was a question of shifting flows rather than creating them. By 1890, the United States was the world’s largest producer of wheat. While much of that wheat fed the American domestic market, upwards of 40 percent of it in any given year would flow to Europe to offset growing food deficit in industrial centers. The structure of the international grain trade of the nineteenth century, of American wheat powering European industrialization, was forged and attained momentum due to a small community of trans-Atlantic grain merchants who, over the course of the nineteenth century, gradually stitched together the surplus of American wheat and demand in Great Britain. In doing so, these merchants encouraged overproduction on American farms. It is no coincidence that the industrialized farms of California and Dakota fed industrialization in Great Britain. Indeed, these farms resulted from a long tradition within the Anglo-American economy that believed, one day, American wheat would follow its divinely-inspired course and fill the stomachs of English laborers. In realizing that vision, the merchants of the Anglo-American grain trade helped create the world’s first industrial diet and food system and set the stage for the food politics of the twentieth century. America came to feed the world because it once fed England

⁵² Ibid.

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