William Maclure's Boatload of Knowledge: Science and Education into the Midwest

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The Philadelphia Academy of Natural Sciences never forgave its second president, William Maclure, or his utopian associate, Robert Owen.¹ Maclure and Owen both came to America from Scotland. Both were wealthy: the first from merchandising, the second from textile manufacturing. Both were philanthropists interested in educational reform. Both had turned to science: Maclure to the natural sciences of geology and mineralogy, Owen to the social sciences of character formation and community building. Together, these two men led the exodus of several of the academy's most fertile minds and Philadelphia's leading progressive educators, mostly on a single "Boatload of Knowledge" in the winter of 1825-1826. The scientists and educators were drawn by the lure of an ideal intellectual environment being created at New Harmony on the Indiana frontier. The icy Ohio River from Pittsburgh, Pennsylvania, on December 8, 1825, to Mt. Vernon, Indiana, on January 23, 1826, became the stage for their adventures and misadventures. And, despite the unforgiving attitude of the academy, their migration and the concentration of their talents farther west than any college in the country produced far-reaching scientific, cultural, social, and economic benefits for the Midwest and the entire nation.

Members of the academy were colleagues of William Maclure and among the earliest American advocates of his and Robert Owen's educational and social reforms. In 1796 Maclure had taken up residence in Philadelphia and become a United States citizen. By 1800 he forsook his lucrative business career to devote his energies to geology and innovative methods for teaching children.² He rejected "the

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²Maclure's life and work are best summarized in John S. Doskey, ed., *The European Journals of William Maclure* (Philadelphia, 1988), xv-xlviii and Josephine Mirabella Elliott, ed., *Partnership for Posterity: The Correspondence of William Maclure and Marie Duclos Fretageot*, 1820–1833 (Indianapolis, 1994), xv-xxiv, 1-20.

absurdity of my own classical education, [which] launched [me] into the world as ignorant as a pig of anything useful." And he asserted that "I had been long in the habit of considering education one of the greatest abuses our species were guilty of, and of course one of the reforms the most beneficial to humanity." Maclure's radical social philosophy divided populations into nonproductive and productive classes, the governors and the governed. He argued that knowledge held exclusively by the governing class accounted for the concentration of power and property in the hands of the few. Likewise, knowledge made available to the masses would become the engine for their liberation and the equalization of power and property. Therefore, Maclure sought to open young minds through local schools available to the general public.

While developing these ideas, Maclure discovered the progressive institute of Johann Heinrich Pestalozzi (1746-1827) at Yverdon, Switzerland, in 1805. Pestalozzi believed in learning by doing. learning tailored to individual maturation levels, learning by concrete experiences. Maclure visited Pestalozzi's school at least six times. He was so taken by the new methods that he financed such a school in Philadelphia, bringing the skilled Pestalozzian teacher Joseph Neef from Paris for this purpose. Pestalozzian education in this country can be dated to Neef's instruction and the publication in 1808 of his Sketch of a Plan and Method of Education. On his way down the Ohio River on the "Boatload of Knowledge" in January, 1826, Maclure stopped at Joseph Neef's home near Louisville to invite him to join the Pestalozzian faculty going to New Harmony. On March 20, the famous teacher and his equally gifted wife, Eloisa Buss Neef, arrived to take positions of leadership at the infant and higher schools of the experimental village.6

In the meantime, Maclure established himself as the "father of American geology" and became influential in scientific circles. The geological map of the United States that he presented with a lecture at the American Philosophical Society in 1809 represented a breakthrough in the field. Published the same year, it made his reputation and laid the groundwork for his contact and correspondence with the scientific leaders of his day. Soon after the Academy of Natural

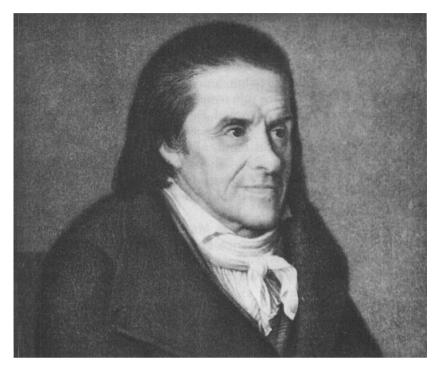
³William Maclure to Benjamin Silliman, October 19, 1822, in George P. Fisher, *Life of Benjamin Silliman* (2 vols., New York, 1866), II, 41.

William Maclure, Opinions on Various Subjects, Dedicated to the Industrious Producers (3 vols., New Harmony, 1831–1838) and Arthur Bestor, Backwoods Utopias: The Sectarian and Owenite Phases of Communitarian Socialism in America, 1663–1829 (1950; reprint, Philadelphia, 1970), 146-48, 151-52.

⁵Gerald Gutek, Joseph Neef: The Americanization of Pestalozzianism (University, Ala., 1978) and Bestor, Backwoods Utopias, 147.

⁶Bestor, Backwoods Utopias, 159.

William Maclure, "Observations on the Geology of the United States, Explanatory of a Geological Map," *Transactions of the American Philosophical Society*, VI (1809), 411-28.



JOHANN HEINRICH PESTALOZZI

Historic New Harmony, New Harmony, Indiana.

Sciences of Philadelphia was founded in 1812, he was elected to membership. In this way he became better acquainted with the academy's first president, the Dutch geologist, mineralogist, zoologist, and chemist, Dr. Gerard Troost, a man whose position Maclure filled from 1817 until his death in 1840. In 1816 Maclure brought the noted naturalist, artist, and teacher Charles-Alexandre Lesueur (1778–1846), to be curator of the academy. The two met in Paris in 1815 after the Frenchman had discovered many new zoological species as part of a Napoleonic scientific expedition to Australia. Maclure convinced Lesueur to accompany him on a geological expedition through the West Indies and parts of the United States before Lesueur began the curatorial duties that would occupy him for seven years at the academy. In an age of generalists Lesueur would distinguish himself in the fields of paleontology, archaeology, ichthyology, and zoology.

Maclure also formed a lifelong friendship with the academy's librarian, the brilliant if shy and self-effacing entomologist and conchologist Thomas Say (1789–1834).8 He sponsored Say's collecting

^{*}H. B. Weiss and G. M. Ziegler, *Thomas Say: Early American Naturalist* (New York, 1931) and Patricia Tyson Stroud, *Thomas Say: New World Naturalist* (Philadelphia, 1992).

expeditions to Georgia and Florida. Evidence from these and other expeditions in the Rocky Mountains and along the Mississippi and Minnesota rivers and the publication of his *American Entomology* gained Say recognition as the "father of American descriptive entomology." After 1817 Maclure took Say on his own expeditions, where Maclure conducted research that yielded the information for his second geological paper before the American Philosophical Society. In 1821 Say became the curator of the American Philosophical Society and the next year a professor of natural history at the University of Pennsylvania.

If William Maclure's scientific interests and educational efforts had gathered the academy around his leadership, the more expansive and visionary dreams of Robert Owen inspired him to lead several of its distinguished members to the Indiana wilderness on a "Boatload of Knowledge." For more than a decade before they descended the Ohio, Robert Owen had been formulating his utopian ideas and using his company milltown of New Lanark, Scotland, as a lab-

This paper was reprinted with a revised map in William Maclure, "Observations on the Geology of the United States, Explanatory of a Geological Map," Transactions of the American Philosophical Society, n.s., I (1818), 1-91.



JOHANN HEINRICH PESTALOZZI GREETS THE CHILDREN AT STANS, SWITZERLAND

oratory for his social experiments. ¹⁰ His objective was to discover and implement means to create a New Moral World. This would be a world of enlightenment and prosperity leading to human happiness, which Owen defined as mental, physical, and moral health enjoyed in a rational way of life. It would displace the Old Immoral World of ignorance, superstition, selfishness, and suffering intensified by the first wave of the Industrial Revolution.

Educators and scientists were crucial to Owen's plan because education, science, technology, and communal living were the methods he chose to achieve the New Moral World. Underpinning his utopian theory was the proposition that individual character is an automatic consequence of the quality of physical, social, and intellectual surroundings. By 1813 he asserted that "any general character, from the best to the worst, from the most ignorant to the most enlightened, may be given to any community, even to the world at large, by the application of proper means; which means are to a great extent at the command and under the control of those who have influence in the affairs of men."11 He came to feel that it was possible to discover the laws governing human nature and to have a practical science of society.12 After 1816 he gained an international reputation trying to improve the character of the children and workers of New Lanark through an Infant School for ages two to five and an Institution for the Formation of Character. Maclure himself examined these facilities as Owen's guest when the two first met in 1824.

Owen added communal living and the abolition of private property to his reform thought in the years just before his first visit to the United States and the Philadelphia Academy in 1824–1825. From the Shakers and the Harmony Society, two American millennial sects awaiting the Kingdom of God on earth, he had learned how effectively communal organization can serve as a survival technique in the formative stage of movements. To accomplish his secular utopia, Owen proposed that democratic, socialistic "communities of equality" aver-

¹⁰Owen's use of New Lanark as a testing ground for his ideas of social reform is described in Bestor, Backwoods Utopias, 62-69, 72, 140-43; Ian Donnachie and George Hewitt, Historic New Lanark: The Dale and Owen Industrial Community since 1785 (Edinburgh, 1993), 97-107; John F. C. Harrison, Quest for the New Moral World: Robert Owen and the Owenites in Britain and America (New York, 1969), 37, 41, 49-50, 63, 68, 75-76, 135; Donald E. Pitzer, "The New Moral World of Robert Owen and New Harmony," in America's Communal Utopias, ed. Donald E. Pitzer (Chapel Hill, N.C., 1997), 91-96; and Anne Taylor, Visions of Harmony: A Study in Nineteenth-Century Millenarianism (New York, 1987), 65-66.

[&]quot;Robert Owen, A New View of Society, First Essay (1813), in The Life of Robert Owen Written My Himself with selections from his writings & correspondence (2 vols., London, 1857). I, 265.

¹²Robert Owen, The Book of the New Moral World, containing the Rational System of Society (London, 1833–1844) has this as the theme throughout. See also Robert Owen and Robert Dale Owen, eds., The Crisis (London, 1833), title page; Harrison, Quest for the New Moral World, 159; and Pitzer, America's Communal Utopias, 92, 100.

¹³Pitzer, America's Communal Utopias, 103, 111.

aging 1,200 persons each should be created worldwide. The idea of using communes as social units to reform the whole earth was not, in fact, peculiar to Owen. His contemporary, Charles Fourier, whose writings were read in their original French and discussed aboard the "Boatload of Knowledge," predicted that exactly 2,985,984 joint-stock industrial villages called "phalanxes" would come to revolutionize the human condition. Owen differed from Fourier and other non-sectarian communitarian and utopian dreamers, however, in that he had the wealth to actually begin the process he advocated.

Owen's trip to America in November, 1824, was intended to do just that. He used his fame as a businessman and social reformer to propagandize his new social system among the cultural and political elite of New York, Philadelphia, and Washington, D.C. And he risked about half his fortune to purchase the town of New Harmony, Indiana, and its surrounding 20,000 acres for an original price of \$135,000, which was later negotiated downward to \$125,000. Some 900 German-American separatists of the Harmony Society of George Rapp had built the village between 1814 and 1824, when they moved to Economy, Pennsylvania. Their communal town already had gained a reputation as "that wonder of the West" because of its 180 buildings, 2,000 acres of cleared farmland, a school, churches, orchestra, band, library, and mills. It marketed its strong beer, woolens, and other products to twenty-two states and ten foreign countries.

Owen's model community experiment, initiated in New Harmony on the Wabash in 1825, attracted Maclure as an educational and financial partner. Only later did he, his educational and scientific colleagues, and the other New Harmony residents discover that Owen never adequately understood or adopted the secrets that made the three Harmonist and nineteen Shaker communities thrive. In fact, Owen's own faith in mental freedom and his insatiable urge to travel and speak on behalf of his social system militated against his adoption of the unquestioning commitment of members and the daily authoritarian administration that insured Harmonist and Shaker solidarity and economic success. This basic defect helps explain the

¹⁴Josephine Mirabella Elliott, ed., *To Holland and To New Harmony: Robert Dale Owen's Travel Journal, 1825–1826* (Indiana Historical Society Publications, Vol. XXIII, no. 4; Indianapolis, 1969), 240-49, 255, 286.

¹⁵See Carl J. Guarneri, The Utopian Alternative: Fourierism in Nineteenth-Century America (Ithaca, N. Y., 1991).

¹⁶Bestor, Backwoods Utopias, 102-103, 180.

¹⁷See Karl J. R. Arndt, George Rapp's Harmony Society, 1785–1847 (Rutherford, N. J., 1965); Karl J. R. Arndt, ed., A Documentary History of the Indiana Decade of the Harmony Society, 1814–1824, (2 vols., Indianapolis, 1975–1978); Karl J. R. Arndt, ed., Harmony on the Wabash in Transition: Transitions to George Rapp's Divine Economy on the Ohio, and Robert Owen's New Moral World at New Harmony on the Wabash, A Documentary History (Worcester, Mass., 1982); Karl J. R. Arndt, "George Rapp's Harmony Society," in Pitzer, ed., America's Communal Utopias, 57-87; and Donald E. Pitzer and Josephine M. Elliott, "New Harmony's First Utopians, 1814–1824," Indiana Magazine of History, LXXV (September, 1979), 225-300.

monumental debates at New Harmony and the eventual dissolution of the communal aspect of Maclure's and the other scholars' involvement with Owen by 1827. Owen and Maclure painfully witnessed the self-destruction of the first attempt to create a non-sectarian, socialistic commune in America. Nevertheless, New Harmony's groundbreaking scientific and educational work persisted, making the town a focus of national attention for more than a decade thereafter. 18

The introduction and popularization of Robert Owen's ideas in America were closely linked to Philadelphia, to members of the academy, and to Maclure's French Pestalozzian protégé, Marie Duclos Fretageot (1783-1833).19 The outlines of Owen's social philosophy expressed in his A New View of Society (1813) probably made their American debut in the city's Jeffersonian newspaper, Aurora, in 1817. Soon there was an Owenite society in Philadelphia. Gerard Troost and John Speakman of the academy were members by the fall of 1823.20 Fretageot seems to have introduced the academy scientists to the educational and communal dimensions of Owenism. She also played a crucial role in convincing her patron William Maclure to combine his resources and scientific and educational enterprises with those of his fellow philanthropist. When she came from Paris to organize a Pestalozzian school in Philadelphia in 1821, she brought a recently published account of Owen's educational theories. She lent the account to the young medical doctor, William Price, whose father was superintendent of the Friend's Boarding School at West-Town. Dr. Price was so enamored with Owen's teaching philosophy that he visited his experimental schools in New Lanark, Scotland, in 1824. A year later he took his wife, Hannah Fisher Price, and their three children to New Harmony aboard the "Boatload of Knowledge."21

The academy's John Speakman, at one time in the pharmaceutical business with Thomas Say, was so inspired by Fretageot's Owenite propaganda that he headed an unsuccessful project to establish a "community of equality" in 1823–1824. After meeting with Owen on his visits to the academy after November, 1824, he saw that Owen's addresses in the Hall of the United States Congress of February 25 and March 7, 1825, were printed in a Philadelphia edition. As if further proof of his Owenite conversion was needed, Speakman preceded the "Boatload" to New Harmony in the fall of 1825.²²

¹⁸Bestor, Backwoods Utopias, 200, 201.

¹⁹Bestor, Backwoods Utopias, 154; Josephine Mirabella Elliott, "Madame Marie Fretageot: Communitarian Educator," Communal Societies: Journal of the National Historic Communal Societies Association, IV (1984), 174.

²⁰Troost was so excited by Owen's reform ideas that he moved to New Harmony in 1825 ahead of the "Boatload of Knowledge."

²¹Elliott, "Madame Marie Fretageot," 174; Bestor, Backwoods Utopias, 154.

²²Bestor, *Backwoods Utopias*, 100, 108-110, 112n, 154-55, 202, 213.

And what of Fretageot? Owen made her an even more ardent believer when he visited her Philadelphia school in person on November 21, 1824, during his first trip to America. "I took his hands," she confessed by letter to Maclure who was in Europe, "saying; there is the man I desired so much to converse with! And you are, said he, the woman that I wish to see. We are old acquaintances and in the mean time he gave me a kiss of friendship that I returned heart[i]ly."23 It was simple for Owen to convince the schoolmistress that her students would learn best in the ideal environment that he was preparing in New Harmony. "We must, says he," she wrote further to Maclure, "work all at once on a spot where the difficulties are almost removed. Then it is only so that we are able to show what are the effects of a good education." "He observed," wrote Fretageot, "that I would devote 30 years of my life where I now am without being able to co[u]nterbalance the evils which surround my pupils."24 Fretageot, Maclure, and the head of his Paris boys' school, William S. Phiquepal (1779–1855), whom he had brought to Philadelphia in 1824, would be counted among the distinguished passengers on the "Boatload of Knowledge" when the keelboat left the dock at Pittsburgh on a freezing Thursday, December 8, 1825.

Robert Owen himself gave the "Boatload of Knowledge" its historic name. On January 12, 1826, the keelboat bearing his entourage still drifted slowly down the Ohio. Owen, however, who left the boat in Pennsylvania after its second day to travel overland, had already arrived in New Harmony and was making his first speech to its citizens. He boldly proclaimed that those about to arrive represented "more learning than ever was before contained in a boat," not "Latin & Greek & other languages but real substantial knowledge." Thus even before the group of noted scientists, teachers, artists, musicians, and reformers could make landfall, they became known in the utopian village as the "Boatload of Knowledge."

For at least once Owen did not exaggerate.²⁷ Those who sailed on the historic voyage of the *Philanthropist* make a truly impressive group. The list printed in an appendix here was arrived at by comparing the four widely disparate passenger lists made by individu-

²³Arthur E. Bestor, Jr., ed., Education and Reform at New Harmony: Correspondence of William Maclure and Marie Duclos Fretageot, 1820–1833 (Indiana Historical Society Publications, Vol. XV, no. 3; Indianapolis, 1948), 311-12.

²⁴Ibid., 314.

²⁵As reported by William Pelham to his son, New Harmony, January 13, 1826, in *Indiana As Seen by Early Travelers: A Collection of Reprints from Books of Travel, Letters and Diaries Prior to 1830*, ed. Harlow Lindley (*Indiana Historical Society Collections*, Vol. III; Indianapolis, 1916), 405.

²⁶Mrs. Thomas (Sarah) Pears to Mrs. Benjamin Bakewell, New Harmony, March 10, 1826, in *New Harmony, An Adventure in Happiness: Papers of Thomas and Sarah Pears*, ed. Thomas C. Pears, Jr. (*Indiana Historical Society Publications*, Vol. XI, no. 1; Indianapolis, 1933), 71.

²⁷Bestor, Backwoods Utopias, 133.

als aboard—naturalist Charles-Alexandre Lesueur; Owen's son Robert Dale Owen, who made a record in his journal; Owen's convert Donald Macdonald; and a young student, Victor Colin Duclos, who attempted to recall his fellow Boatloaders later as an old man—and by squaring their accounts with known events.²⁸

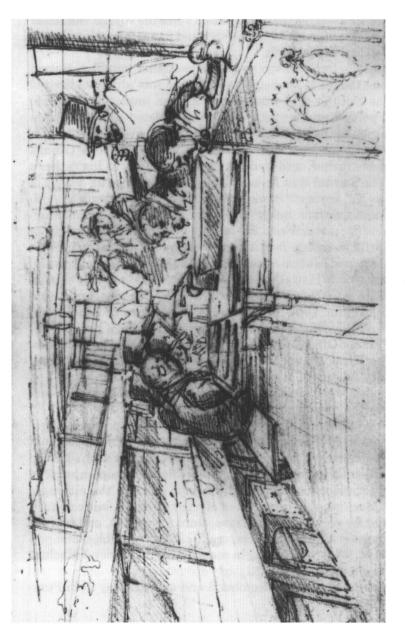
William Maclure and Robert Owen were aboard as organizers of the excursion. Representing science were naturalists Thomas Say, who was elected captain of the keelboat partway downstream, and Charles-Alexandre Lesueur, who drew 127 of his 1,200 invaluable sketches of the American scene while making the month-and-a-half journey. His ink images convey the setting and spirit of the adventure and document the primeval Ohio Valley. The scope of his sketches includes the *Philantropist* itself (accurately portraying the French spelling of "philantropist" used by Lesueur on the keelboat to honor Maclure), its passengers, landscapes such as Blennerhassett Island, and a score of towns including Pittsburgh, Harmonist Economy, Steubenville, Wheeling, Parkersburg, Gallipolis, Cincinnati, and Mt. Vernon.²⁹ Lesueur had three young people in his care: Victor Dupalais, his sister Virginia who became an art teacher and composer of music in New Harmony, and Cecilia Noël.

The Pestalozzian educators aboard were Marie Duclos Fretageot and William S. Phiquepal. Fretageot was accompanied by her three students, the Sistare sisters Lucy, Frances, and Sara. Lucy married Thomas Say in 1827 and helped color the beautiful and precise ink and watercolor sketches of shells in his American Conchology, which was published on the New Harmony press in 1830. Phiquepal had in his care several boys from his Philadelphia school, mostly French children including Alexis d'Arusmont, Amedie Dufour, Charles Falgue, Fretageot's nephews Peter L. and Victor Colin Duclos, and her son, Achilles. Much later Victor, at age seventy-five, made the list of passengers alluded to earlier of those whom he thought he remembered on the "Boatload" with him, but it is quite inaccurate.30 Achilles Fretageot made Cecilia Noël his first wife and aided Maclure in creating the Workingmen's Institute in New Harmony in 1838. Dr. William Price, the physician, was aboard with his wife, Hannah Fisher Price, their three children, and Mrs. Price's sister-in-law, Mrs. Helen Fisher, from Russia. Mrs. Fisher's husband had died recently, and Robert Owen found in her a traveling companion. A twentynine-year-old carpenter, John Beal, was aboard with his wife and

²⁸The four lists are printed in Elliott, To Holland and To New Harmony, 265-67.

²⁹Lesueur's 127 drawings are listed in R. W. G. Vail, *The American Sketchbooks of Charles-Alexandre Lesueur, 1816–1837* (Worcester, Mass., 1938), 31-41, and are preserved in the Muséum d'Histoire Naturelle in Le Havre, France. Fourteen are shown in Elliott, *To Holland and To New Harmony*, 240-64.

³⁰Lindley, Indiana As Seen by Early Travelers, 537; Elliott, To Holland and To New Harmony, 266-67.



INTERIOR OF THE KEELBOAT PHILANTHROPIST SKETCH BY CHARLES-ALEXANDRE LESUEUR

American Philosophical Society, Philadelphia, Pennsylvania; Courtesy of Historic New Harmony, New Harmony, Indiana. daughter Caroline. John taught his trade in Maclure's industrial school in New Harmony. The house he built of English vernacular wattle and daub construction in 1829 may still be visited in his adopted town. Lesueur was not the only artist to make the voyage. Balthazar Abernasser (Obernesser) from Switzerland came to teach painting in the New Harmony schools.

Among the forty passengers were two other notables. Robert Dale Owen (1801–1877) at age twenty-four was already showing signs of the abilities that would make him an important figure in American politics and reform. 31 He had completed a Pestalozziantype education at the school of Philipp Emmanuel von Fellenberg in Bern, Switzerland, had been superintendent of the New Lanark schools of his father, and had managed the mills in his father's absence. The journal that he kept is indispensable for its details of the "Boatload's" voyage. 32 Stedman Whitwell was an English architect and social reformer. Robert Owen had commissioned him to construct and bring to America a six-foot-square architectural model of the ideal million-square foot Agricultural and Manufacturing Villages of Unity and Mutual Co-operation he proposed be built worldwide. Owen and Whitwell had shown this model proudly during November, 1825, in New York at Rembrandt Peale's museum as well as in Philadelphia. Only days before the "Boatload of Knowledge" embarked. Whitwell and Macdonald opened the model at the United States Patent Office in Washington, D.C., displayed it in an anteroom of the White House, and described it personally to President John Quincy Adams.33

The Ohio River and its primeval shores held surprises and delights for the unsuspecting urbanites aboard the eighty-five-by fourteen-foot keelboat with its six long oars, sternsweep, and gouger. The keelboat itself was an unwelcome substitute for the steamboat on which Maclure and Owen intended to escort their sophisticated friends to New Harmony. The river simply had not cooperated. The water level was too low. It took three days to outfit the alternate craft that Maclure purchased. Each of the keelboat's four compartments, front for crew, second for men, third for women, and rear for children, were given tiered bunks, crude chairs and tables, and potbellied stoves. With "everything in considerable confusion," Maclure and Owen escorted their learned party aboard these humble quarters at 2 p.m. on that freezing December 8 and drifted away from Pitts-

³¹Richard W. Leopold, Robert Dale Owen: A Biography (Cambridge, Mass., 1940).

³²Printed in Elliott, To Holland and To New Harmony, 237-64.

³³ Bestor, Backwoods Utopias, 129.

³⁴Elliott, To Holland and To New Harmony, 237. On the voyage of the Philanthropist, see also William E. Wilson, "The Boatload of Knowledge: The Journey of Robert Owen's Disciples by Keelboat from Pittsburgh to New Harmony in the Winter of 1825–1826," South Atlantic Quarterly, LXXIV (Winter, 1975), 104-17.

burgh into history.³⁵ The optimistic flag flying proudly atop signalled their dreamed-of destination, "Harmony," on one side and their gratitude to Maclure, "Philantropist" (in Lesueur's French spelling), on the other.³⁶

During the first several days the women aboard protested the hardships. Robert Dale Owen, who himself adapted well to the primitive conditions of outdoor life and welcomed such circumstances as a fitting preparation for all who were bound for backwoods New Harmony, noted the feminine discontent. In sections of his journal written in the relative secrecy of German rather than his usual English, he observed that "Some of the ladies of our party appear already quite impatient and dissatisfied the more so since they almost cannot do anything for themselves." Soon "they complained publicly about their unhappy lot," and one young lady, Sarah Turner, actually wept at breakfast. At one time Robert Dale "feared they might turn back and that would be a pity." However, the ladies later actually enjoyed the outdoor environment, especially frolicking on the ice-covered Ohio near Beaver, Pennsylvania. And some even helped row.

But things got worse before they got better. The "Boatload of Knowledge" drifted seven miles the first day and nine the second before running aground "either on account of a strong sidewind or of the awkwardness of our pilot."38 The intervening evening had given Robert Dale his first chance to see the interior of log cabins, which he found "pretty comfortable." Say and Price had accompanied him to an island in search of milk, which they found in "good supply." Although title to property on the island was in doubt, in one cabin the men "found a negro family, jovial merry people, with whom we had a deal of fun." Being aground on Merriman's riffle, a narrow rapid. was not fun, however. It was a hazard from which they could not free themselves. At least the keelboat crew, and possibly some of the male passengers, could not loosen the boat even by getting into the freezing water several times, one man suffering stomach cramps for his trouble. Fortunately, the ever neighborly Harmonists were building their new village of Economy (now Ambridge) on the Pennsylvania side just seven miles downstream from the stranded *Philanthropist*. The elder Owen had purchased their Indiana town and visited them at Economy just a year before. Now, with Maclure, Phiquepal, and Lesueur, he left the keelboat to seek Father Rapp's assistance. After sunset the six strong Harmonist men whom Rapp dispatched freed the boat in an hour of hard labor.

³⁵All quotations and details regarding the keelboat trip from Pittsburgh to New Harmony are from Robert Dale Owen's journal as printed in Elliott, *To Holland and To New Harmony*, 237-64, unless otherwise indicated.

³⁸See Lesueur's sketches in Elliott, *To Holland and To New Harmony*, 256, 261. ³⁷Elliott, *To Holland and To New Harmony*, 239, 241-43.

³⁸ Ibid., 239.

Robert Dale Owen described the rescuers as knowing "admirably how to act in concert, to be steady, retired, cautious and industrious, but not to possess superior intelligence or liberality of sentiment."³⁹ Although prejudicial, his assessment did suggest Harmonist qualities that were critical to the strong communal organization of their Harmony Society. As the Boatloaders visited their "very flourishing" new town of Economy the next day, they witnessed the fruits of such commitment. And even though they were not aware of it yet, the Harmonist qualities were significantly reversed among many who would settle as unscreened citizens in Owenite New Harmony. This factor alone would help explain why the Owen-Maclure community would never enjoy the unanimity of purpose or the economic success of those of the Harmonists.

The Owen-Maclure entourage was entertained in grand style by George Rapp, his adopted son and expert business manager, Frederick, and his gracious and musically talented granddaughter, Gertrude. They drank tasty, aged wine made from New Harmony wild grapes. One can only imagine the excitement that pioneering zoologists such as Charles-Alexandre Lesueur and Thomas Say must have felt as the group beheld the Harmonist deer park, a fenced area containing deer and two elk, one of the earliest zoos in the country. Animals from this pen and many other specimens that the Harmony Society had been collecting and preserving were put on display in their large Feast Hall in 1826. Much of this collection for which the Harmonists charged admission can still be viewed. It is thought to be the nation's oldest natural history museum housed in its original building.⁴⁰

Robert Owen's decision to return to Pittsburgh from Economy to obtain deeds for New Harmony property eliminated him from further travel on the "Boatload of Knowledge" and participation in its most exciting adventures. These occurred mostly from December 11, 1825, to January 9, 1826, twenty-eight days during which the keelboat was stuck in the ice at Safe Harbor station only fifteen miles below Economy and eight miles above Beaver, Pennsylvania. Safe Harbor must have seemed a misnomer to the marooned party. The first full day there two of Phiquepal's boys fell through the ice in the middle of the river. Nobody was near enough to help them, but they could swim and got out on their own. Later, Dr. Price "fell into the river through the ice up to his neck, but got out without other inconvenience than a good wetting." Worse was the accident that befell Phiquepal, who had gone hunting with Lesueur. The teacher fell getting over a fence and hit his head on a log. He lay for days, feverish and sometimes deliri-

 $^{^{39}}Ibid.$

[&]quot;Raymond V. Shepherd, Jr., director of Old Economy Village, interview with author, July 20 and 21, 1987.

[&]quot;Elliott, To Holland and To New Harmony, 257.

ous, and once was bled by Dr. Price. Because of a personality that often was disagreeable, some might say Phiquepal never fully recovered, but he was well enough to travel when the thaw finally came. Before that, a few had abandoned ship. Mrs. Fisher left on December 16 with a man who had arrived from Yellow Springs, Ohio, where a handful of Owen followers were at work forming a short-lived community. She met Robert Owen along the way and traveled on to New Harmony with him. Maclure contracted a cold and chose to leave the boat with Fretageot, spending December 23 to 31 in Beaver. After a brief return, these two left the keelboat again on January 5 and headed for Steubenville, Ohio, and Wheeling, West Virginia, where they rejoined their companions on January 10.

Others enjoyed their wintery sanctuary at Safe Harbor. For Lesueur there were endless opportunities for sketching not only specimens, but also people, including the family in the cabin where he was caring for the injured Phiquepal. Robert Dale Owen was awed by the untouched beauty. "The appearance of the woods is wild and magnificent in the extreme," he wrote, "immense trees lying across one another, and everything, apparently, in a perfect state of nature. 42 He, Lesueur, and Price thrilled to the hunting of wild game. With the rifle he had purchased in Pittsburgh, Robert Dale shot at partridges, woodpeckers, woodcocks, doves, pigeons, pheasants, squirrels, and deer, but not very effectively. He noted that "the people seem civil and obliging, though they were rather scandalized at our hunting on Sunday."43 He testified that "The friendlyness of the inhabitants here is very remarkable. Whenever you pass by their doors you are asked to walk in and welcomed with unfeigned pleasure."44 One such local settler, John Rice, taught him the finer points of riflery and caring for his firearm. He also had him shoot at targets, but with little improvement of his aim. When he and John walked through the deep snow to a shooting match six miles from the keelboat, John won a turkey and a pair of braces, Robert Dale only a handkerchief. Maybe that is why he felt that "the persons present seemed to me in low spirits, without any appearance of mirth or fun."45

Recreation aboard the icebound "Boatload of Knowledge" took the forms of games of cards and Whist, reading, and lively conversation. Reading centered on Charles Fourier's utopian writings read aloud by Fretageot in their original French and silently by Robert Dale Owen. Both women and men entered the discussions on topics ranging from costumes to Fourierism, the young Owen sharing the Frenchman's basic principles but finding his methods impractical. Robert Dale's conversations with Maclure did not bring him closer to his father's

⁴²Ibid., 242.

 $^{^{43}}Ibid.$

⁴⁴ Ibid., 251.

⁴⁵ Ibid., 250, 251.

partner whom he thought "at times to act somewhat stubbornly and vehemently" and "looks at everything in a much too suspicious manner and manages thereby at times to make difficulties for himself." But he came to hold the thought and advice of Fretageot, with whom he discussed everything from his personal life to mathematics, in the highest regard. He concluded that "Mme F[retageot] is an excellent woman in every respect."

On Christmas Day, with hopes for a thaw dashed when the promising rain stopped in the early afternoon, Thomas Say and Robert Dale Owen spent most of the uncelebrated holiday talking with Phiquepal. First they discussed the meaning of words. Then they explored the types of articles that they should plan for the New Harmony Gazette. The usually quiet Say "related various anecdotes of Indians, showing their perfect composure in cases of danger or of sudden alarm or of extreme pain, the tenacity with which they nourish revenge etc." This induced Robert Dale to muse, "I believe the evils of the savage and of the civilized state are nearly balanced—They have many excellent qualities, which we most irrationally neglect to cultivate, but they fail to attain much of which we are in possession." 48

Donald Macdonald first joined the "Boatload" at Safe Harbor along with Virginia Dupalais and Stedman Whitwell on January 7. The next evening, Robert Dale disagreed with Macdonald in a friendly debate about workers and production. The young philosopher stated his case in his journal:

It appears to me the greatest mistake to suppose it rational to make men mere producing machines and to treat them as such, and to estimate their happiness by the quantity of their productions. We must be careful, too, not to forget that happiness is the object of our pursuit; and that we succeed, not in proportion to the extent of our surplus productions, but in proportion to the measure of happiness which the members of the society enjoy.⁴⁹

A protracted conversation on religion and politics with a Methodist clergyman in Beaver prompted Robert Dale to comment that

He reasoned with qt [quite] good temper and some talent, but has the most incorrect ideas. It is extremely difficult by abstract reasoning to convince even of the plainest truths one, whose mind has been for years trained by ingenious and self believed sophistry to support irrational ideas. The vagueness of the terms generally used greatly increases this difficulty; for instance "free agent" "liberty of choice" "mere machine" "responsible being" etc. 50

The courageous captives of Safe Harbor made several compromises with comfort and suffered one more scare before being freed by the thawing Ohio. Resolving to do manual labor as needed and to

⁴⁶Ibid., 247, 249.

⁴⁷Ibid., 247.

[&]quot;Ibid., 251, 252.

⁴⁹Ibid., 257.

⁵⁰ Ibid., 253.

eat but two meals each day at 10 a.m. and 5 p.m. to reduce food preparation, they relieved eight of their eleven hired crew members. They appointed Thomas Say as captain and found that he "goes about it competently and handles the crew in the most clever manner." But none of the passengers was prepared for "a noise resembling peals of thunder" that awakened them in the stillness of night. They "immediately sprung from their beds and secured most of the baggage on shore." None would forget the lesson that this is a normal sound of ice breaking up. "Putting their trunks all on board again" with "infinite amusement" they began to realize that this disturbance was a very good sign for those anxious to drift with the current once again.

Lesueur sketched the momentous event on January 8, as passengers and crew labored together to cut a 150-yard pathway in the ice for the *Philanthropist* to pass out to the open channel. Pushing off the next day, they began the tranquil remainder of their trip, almost uneventful by comparison. Rowing with the long oars became routine for the men, and sometimes the women took a turn. They were in Steubenville by 5 p.m. Here it became apparent that the prospect for a fine education in the proposed New Harmony schools had reached the ears of notable figures in the Midwest. Benjamin Tappan, the antislavery leader and former Ohio circuit judge, put James Frazer aboard. James, one of Tappan's three stepchildren by his second wife, the widow Betsey Lord Frazer, looked to benefit from the educational resources represented by the "Boatload of Knowledge." 53

Leaving Steubenville and drifting with the current all night. the Philanthropist arrived at Wheeling and was reboarded by Maclure and Fretageot. Making as many as ninety-five miles in one twentyfour-hour period, the keelboat bore its human cargo to Marietta. Ohio, and Maysville, Kentucky. The only emergency had come when one of the boys, probably Victor Duclos, had to be rescued after falling into the river while dipping a mug for water. A few lighthearted passengers sang and danced on the deck of the keelboat until late one night. On January 15, Robert Dale Owen recorded a temperature of twenty-two degrees Fahrenheit. Stedman Whitwell may have given him this information since Whitwell would keep the earliest daily record of weather conditions in New Harmony during the 1820s and have them printed in its Gazette. Whitwell also invented a system for naming any place on earth by assigning letters to its longitude and latitude. Since this would have meant renaming New Harmony Inba Veinul, Pittsburgh Otfu Veitoup, and Paris Oput Tedou, it is understandable that his efficient, scientific method was never adopted.

⁵¹ Ibid., 247.

⁶² Ibid., 253.

⁶⁸Benjamin Tappan to Benjamin Tappan, Jr., Reel 3, Tappan Papers (Library of Congress, Washington, D. C.).

One group of English farmers at New Harmony, however, did use the Whitwell name *Feiba Peveli* for their subdivision, and a sign with these unusual words still graces the entrance to a descendant's farm.

Cincinnati, which Robert Dale Owen called "by far the most regular and chearful [sic] look[in]g town we have seen in the west."54 offered the Boatloaders the last intellectual adventure of their vovage. They arrived on January 16, amid ice flows that prevented them from rowing, a week after Robert Owen had left the town for New Harmony. On January 17 some toured the museum of natural history, which Robert Dale Owen described as "small; but apparently well arranged."55 That evening they attended a lecture by John Cleves Symmes, nephew of the founder of the Queen City. A proponent of the theory of concentric spheres, he expounded his ideas that the earth is hollow and possibly habitable inside. He contended that an opening near the North Pole permits the moon to force air into and out of the interior. The dark complexion of the Eskimos was due, he said, to the hot air being expelled from the earth. Symmes, who died in 1829, was trying to secure funds from learned societies to mount an expedition to test his hypotheses. 56 "His theory appears plausible, and the great collection of facts which he brings to bear upon it evinces his industry and I think considerable talent and penetration," wrote Robert Dale Owen after hearing the lecture. In a more generous mood with Symmes than with the Methodist clergyman, he added, "The matter appears to me worthy of investigation, as the subject of an expedition."57

Two uneventful days of floating while Owen's son read the Apocrypha landed the "Boatload of Knowledge" in Louisville on January 19. There they accidentally found Joseph Neef, the first Pestalozzian teacher Maclure had brought to Philadelphia. The aging educator, who had operated several schools in Kentucky and elsewhere, promised to join the optimistic band in New Harmony. Later Neef and his wife, Eloisa, became leaders in the progressive schools of the Owenite village.

Three days rowing in daylight and drifting in darkness from Louisville brought the *Philanthropist* past the thrilling Falls of the Ohio to Mt. Vernon, Indiana, only fifteen miles overland from New Harmony. It was Monday morning, January 23, forty-seven days since the Boatloaders had departed from Pittsburgh. Most must have welcomed the thought of leaving the river for a wagon ride to the utopian village the next day. But the impatient Robert Dale Owen rode there immediately by horseback, arriving in time to hear part of his father's evening lecture to his admiring disciples. Some of the women

⁵⁴Elliott, To Holland and To New Harmony, 262.

⁵⁵Ibid.

⁵⁶R. Carlyle Buley, The Old Northwest: Pioneer Period, 1815–1840 (2 vols., Bloomington, Ind., 1950), II, 594.

⁵⁷Elliott, To Holland and To New Harmony, 262.

and children stayed aboard Maclure's keelboat with Lesueur and Say to make the complete voyage, going further down the Ohio and up the Wabash to New Harmony.⁵⁸ On January 24, Lesueur made the last of his 127 sketches of the trip and titled it "Débâcle àt Mount Vernon" ("Breaking up of the ice at Mount Vernon").

In the same speech in which Robert Owen gave the famous name to the "Boatload of Knowledge," he also announced that the voyagers included "some of the ablest instructors of youth that c[oul]d be found in the U. S. or perhaps in the world." This statement was taken by those already settled in his fledgling utopia on the Wabash as a promise that "In [New] Harmony there will be the best Library & the best School in the United States." Measured by the libraries, schools, research, and publications that the "Boatloaders" produced in the decades ahead, few could question that the promise was kept. Scientific, cultural, social, and economic benefits were realized not only by New Harmony, but also by the Midwest and the nation at large.

Robert Owen put William Maclure in charge of the educational program that was to reform human character and lead to utopia. When Maclure was away, Fretageot and Thomas Say were in charge. There would be an Infant School, a Higher School, a School of Industry, and adult learning through lectures, libraries, and museums. The Infant School was created to duplicate Owen's New Lanark school for children ages two to five. Therefore, New Harmony had one of the earliest schools for infants in the United States. To separate children from unwanted negative parental influence, it operated as a boarding school in the spacious Community House No. 2 built by the Harmonists. It acquainted more than 100 children with communal sharing, humanitarian principles, and intellectual curiosity by the Pestalozzian methods of Marie Duclos Fretageot and Eloisa Buss Neef.⁶¹

After Infant School, children attended the Higher School to age twelve, modeled after the New Lanark Institute for the Formation of Character. Joseph Neef was principal, aided by his son, Victor, and daughter, Louisa. For as many as 200 students, they conducted classes in mechanics, mathematics, science, art, music, gymnastics,

⁵⁸Donald Macdonald, The Diaries of Donald Macdonald, 1824–1826 (Indiana Historical Society Publications, Vol. XIV; Indianapolis, 1942), 334, 337; H. F. Raup, ed., and Milton Haber, trans., The Travels of the Naturalist Charles A. Lesueur in North America, 1815–1837 (Kent, Ohio, 1968), 34-40.

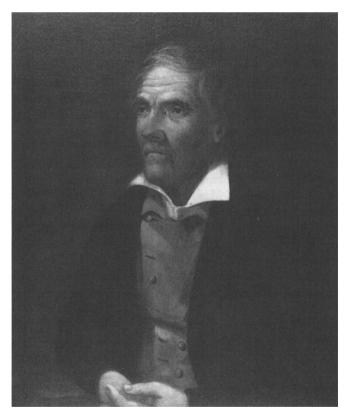
⁵⁹William Pelham to his son, New Harmony, January 13, 1826, in Lindley, *Indiana As Seen by Early Travelers*, 405.

⁶⁰William Pelham to his son, New Harmony, February 9, 1826, in *ibid.*, 411. ⁶¹Donald F. Carmony and Josephine M. Elliott, "New Harmony, Indiana: Robert Owen's Seedbed for Utopia," *Indiana Magazine of History*, LXXVI (September, 1980), 184; Donald E. Pitzer, "Education in Utopia: The New Harmony Experience," in Timothy L. Smith and Donald E. Pitzer, *The History of Education in the Middle West* (Indianapolis, 1978), 91-92.

language, and writing. 62 Maclure fervently hoped that his own methods combined with Owen's and Pestalozzi's progressive approaches to instruction would make New Harmony the focal point of education in America. His advertisement for the New Harmony boarding schools in *Silliman's Journal* early in 1826 described innovative methods to be used in teaching mechanics, mathematics, science, writing, drawing, music, gymnastics, languages, and manual arts. In part, he wrote:

The children are to learn mechanism by machines or exact models of them, arithmetic by a machine called the arithmometer, geometry by a machine called the trignometer, by which the most useful propositions of Euclid are reduced to the comprehension of a child five or six years old

 $^{\rm 62}Carmony,$ "New Harmony, Indiana," 184; Pitzer, "The New Moral World of Robert Owen and New Harmony," 115.



JOSEPH NEEF
PORTRAIT BY DAVID DALE OWEN

New Harmony Workingmen's Institute, New Harmony, Indiana. Natural history in all its branches is learned by examining the objects in substance or accurate representations of them in designs or prints; anatomy by skeletons and wax figures; geography by globes and maps—most of the last of their own construction; hygiene, or the preservation of health, by their own experience and observation of the consequences of all natural functions.⁶³

In accord with this pedagogy, it is known that Neef and other teachers used machines, skeletons, and flowers in their lessons.⁶⁴

All of the scientists, including Maclure, gave instruction in the Higher School and public lectures in their specialties. Oliver Evans, Jr., son of the inventor of high pressure steam engines, taught mechanics. Robert Owen's son Richard arrived in 1828 and studied art privately with Charles-Alexandre Lesueur. He wrote that Lesueur "was a magnificent artist, good alike in drawing and coloring . . . when I was taking lessons from him, he showed me how to outline, for instance, the skeleton of the human figure, then to add the muscular system, then the clothing, drapery, etc." And he added, "We usually took views from nature."

Maclure's School of Industry, begun in 1826, pioneered the trade school concept in this country. Although the Rensselaer [Polytechnic| Institute opened two years before, its curriculum emphasized technology rather than trades. New Harmony's industrial school implemented Maclure's philosophy that every child should learn at least one useful trade. More than eighty students from the Higher School, mostly boys, spent part of each day learning an occupational skill as in modern "co-op" programs. Maclure intended that the sale of products from the school should relieve the community from the expense of educating its own boys and girls and should aid students who came from as far distant as Philadelphia and New York, such as Judge Tappan's stepson of Steubenville, to earn their \$100 annual fees. William Phiquepal taught printing. Boatloader John Beal taught carpentry along with skilled craftsmen in various trades. The boys learned shoemaking, hatmaking, joining, taxidermy, wheelwrighting, woodturning, blacksmithing, and agriculture, while the girls trained in cooking, sewing, housekeeping, dressmaking, and millinery as taught by the talented ladies of the town. But drawing, engraving, and printing became paramount in the curriculum. This was because of Maclure's conviction that the ideal educational system should link teaching to research and publication. Perhaps for the first time in America students at New Harmony studied with active research scholars and learned the printing trades that permitted them to pub-

⁶³Quoted in George B. Lockwood, *The New Harmony Movement* (New York, 1905), 237.

⁶⁴Pitzer, "Education in Utopia," 92.

⁶⁵Quoted in D. S. Jordan, "Charles Alexandre Lesueur," *Popular Science Monthly*, XLVI (February, 1895), 549-50.

lish the evidence their mentors collected at the frontiers of knowledge.⁶⁶

Before the School of Industry ended its programs in the 1840s. the pupils of Phiguepal, printer Cornelius Tiebout, and others printed landmark scientific works, sometimes including color illustrations. Thomas Say's Descriptions of New Species of North American Insects, and Observations on Some of the Species Already Described and Descriptions of Some New Terrestrial and Fluviatile Shells of North America were issued in the late 1820s and early 1830s. Between 1830 and 1838 Say's American Conchology, or Descriptions of the Shells of North America was published in seven sections, the last one four years after his death. The completed volume was so beautifully illustrated by Thomas and his wife, Lucy Sistare of the "Boatload," that it is a collectors' item. The first two-and-a-half parts of Charles-Alexandre Lesueur's American Ichthyology or, Natural History of the Fishes of North America with Coloured Figures from Drawings Executed from Nature were printed in 1827. These brief essays were the beginning of a projected monumental work he never completed. In 1832 Maclure used the press for both his Essay on the Formation of Rocks, or an Inquiry into the Probable Origin of Their Present Form and Structure and his Observations on the Geology of the West India Islands; from Barbados to Santa Cruz, Inclusive. Maclure also bought 1,300 copperplates representing the works of various authors, which were printed at New Harmony both for use in the schools and for sale. Among the books printed from these plates was the last major effort of the school press, a new edition of François André Michaux's three-volume The North American Silva; or, a Description of the Forest Trees of the United States, Canada, Nova Scotia.... During its existence the press also had been used to print the New Harmony Gazette and its successor The New Harmony and Nashoba Gazette, or The Free Enquirer until February, 1829, and, starting in 1828, Maclure's own periodical, The Disseminator of Useful Knowledge.67

The educational, social, and scientific concerns of Maclure's and Owen's New Harmony were carried effectively to the broader society by Robert Dale Owen. 88 New Harmony pointed the way toward free public education for both sexes half a century before it was generally effected in Indiana and the Midwest. As a political figure, Robert Dale was a driving force for getting tuition-free, tax-supported public education written into the second Indiana Constitution of 1851. He helped produce the School Law of 1852, which began this arti-

^{**}Lockwood, *The New Harmony Movement*, 243-44; Pitzer, "Education in Utopia," 93-94.

⁶⁷Bestor, *Backwoods Utopias*, 200; Carmony, "New Harmony, Indiana," 181-83. ⁶⁸In the standard work on Robert Dale Owen, Richard W. Leopold, *Robert Dale Owen: A Biography* (Cambridge, Mass., 1940), see pages 142-75, 205-35, 352-56.



"PHIQUEPAL AND HIS PUPPIES" LITHOGRAPH MADE BY JACQUES G. MILBERT IN PARIS, 1823

New Harmony Workingmen's Institute, New Harmony, Indiana.

cle's deliberate, if slow, implementation. He was also an apostle of the New Harmony antislavery position. He combined his efforts with Frances Wright, a brief New Harmony resident, the most radical feminist of her times, and one of the most energetic antislavery advocates ever. Robert Dale worked to free former slaves by the earnings of their own labor at Wright's communal settlement called Nashoba, near Memphis, Tennessee, Some believe that his letter of September 17, 1862, to President Abraham Lincoln helped convince the president to issue his Preliminary Emancipation Proclamation on September 22.69 Robert Dale Owen supported numerous liberal causes as coeditor of The Free Enquirer with Wright in New York City between 1829 and 1832. In 1830 he wrote an early volume on birth control titled Moral Physiology; or, a Brief and Plain Treatise on the Population Question. As a member of the United States House of Representatives, this passenger from the "Boatload of Knowledge" in 1846 actively guided the establishment of the Smithsonian Institution as a public educational facility.70

New Harmony became a center for science in America. Those on the "Boatload" and their colleagues from the Philadelphia Academy of Natural Sciences brought with them a scientific library unequalled beyond the Appalachians, if not in the nation. Eighty adults in communal New Harmony enrolled in free lectures on topics to be heard, if at all, only in major cities: Lesueur on zoology, art, and drawing; Say on natural history; Gerard Troost on mineralogy, chemistry, and

⁶⁹ New York Daily Tribune, October 23, 1862.

⁷⁰Leopold, Robert Dale Owen, 219-35.

mathematics; and Phiquepal on experimental farming. ⁷¹ Just as Constantine Rafinesque, the ichthyologist of the Midwest, had come to Harmonist New Harmony in 1819 to consult with Dr. Christopher Mueller, leading scientists made pilgrimages to Owenite New Harmony to consult its authorities, see the museum of their collected specimens, and, perchance, to participate in their work. Among those who sought out this scientific Mecca were Sir Charles Lyell, the eminent Scottish geologist; Leo Lesquereux, a fossil botanist; and Prussian Prince Alexander Philip Maximillian, a prodigious explorer who had in his expedition party Karl Bodmer, the now-famous artist, and a taxidermist named Dreidoppel. ⁷² Although solid evidence is lacking, it would not be surprising if ornithologist John James Audubon visited New Harmony from his home in nearby Henderson, Kentucky.

"Boatload of Knowledge" scientists and educators contributed to the opening of the Midwest through personal accomplishments and through their influence on the next generation of scholars. Beyond their private collecting and documenting, Say and Lesueur worked with visitors such as Prince Maximillian and his associates. In the winter of 1832 they collaborated with them in a study of the natural history of the New Harmony vicinity, which identified fifty-eight different trees and many shrubs. In June, 1834, Lesueur accompanied the prince as far as Vincennes, Indiana, on his expedition to Lake Erie, Niagara Falls, and Boston. The findings from this effort appeared in the prince's Reise Durch Nord Amerika [Journey Through North America (1838–1843) and in an English translation in 1843. Thomas Say made New Harmony the base for his research, lectures, and publications until his death in 1834. An obelisk marks his grave in the yard of the present Rapp-Maclure-Owen Home on the square in New Harmony. Say lived on this site. Part of his collection was sent east. The remainder burned in a fire that destroyed the original house in 1844. After Say's death, his friend and colleague Charles-Alexandre Lesueur returned to his native France in 1837. There, in 1845, Lesueur became the first curator of the Muséum d'Histoire Naturelle at Le Havre. which has preserved more than 1,200 of his historic American sketches. Gerard Troost of the "Boatload" became a professor of chemistry and mineralogy at Nashville University and was the state geologist of Tennessee from 1831 to 1839.73

Of educator Marie Duclos Fretageot historian Arthur Bestor has written: "New Harmony was Madame Fretageot's monument as truly as it was Rapp's or Owen's or Maclure's." She remained in New Harmony as a most stable element in the educational system until 1831, faithfully executing the instructions she received from Maclure,

⁷¹Lockwood, The New Harmony Movement, 242, 317.

⁷² Ibid., 314-21.

¹³Ibid., 75-79.

⁷⁴Bestor, Education and Reform, 406.

who had retreated to Mexico for his health's sake in 1828 and would remain until his death in 1840. The 480 letters that these two exchanged and are now preserved in the archives of the New Harmony Workingmen's Institute are essential to the historic record. Fretageot died in Mexico in 1833 while visiting the geologist she had grown to love. The other Pestalozzian teacher on the "Boatload," William Phiquepal, taught in the Industrial School, then left New Harmony and had a liaison with Frances Wright, which resulted in an unhappy union and the virtual end to both of their productive careers. The

William Maclure's legacy lived on through those he attracted to geology and those to whom his philanthropy brought libraries. Robert Owen's sons, David Dale and Richard, came to New Harmony in 1828 and fell under his spell. David Dale forsook a medical career to study the geology of the Midwest.77 He was commissioned to make the first geological survey of Indiana in 1837. While he was doing the field work and writing his report in 1837-1838, he was appointed geologist by the federal government. In this way New Harmony became the headquarters for geological surveys sponsored by the United States government from 1837 to 1856, decades before the United States Geological Survey was officially organized in 1876. On assignment to locate mineral deposits before government sale of public domain in the Northwest, David Dale led a massive operation to survey the present areas of Iowa, Wisconsin, Minnesota, and northern Illinois. The five-story Harmonist granary became a museum and laboratory for these specimens and Maclure's from Spain, Portugal, Italy, France, Mexico, and the West Indies.

This center for research in the natural sciences not only opened the Midwest to scientific investigation, but, as importantly, to industrial development. Maclure's New Harmony contributed the geologists who stimulated this process. David Dale became the state geologist for Kentucky from 1854 to 1857, for Arkansas from 1857 to 1859, and for Indiana from 1859 to his death in 1860. His younger brother, Richard, succeeded him in that post and became a professor of natural science at Indiana University from 1864 to 1879, when he was selected the first president of Purdue University. Edward T. Cox, a student in the Owen-Maclure schools of New Harmony, was Indiana state geologist from 1868 to 1880. Major Sidney Lyon was super-

⁷⁵Elliott, Partnership for Posterity, 16.

⁷⁶See Celia Morris Eckhardt, Fanny Wright: Rebel in America (Cambridge, Mass., 1984).

[&]quot;See William B. Hendrickson, David Dale Owen: Pioneer Geologist of the Middle West (Indiana Historical Collections, Vol. XXVII; Indianapolis, 1943).

⁷⁸John D. Barnhart and Donald F. Carmony, *Indiana: From Frontier to Industrial Commonwealth* (2 vols., New York, 1954), II, 269-76.

⁷⁸V. L. Albjerg, *Richard Owen: Scotland 1810, Indiana 1890* (Lafayette, Ind., 1946), 20-21, 24-91.

intendent of a Kentucky geodetic and topographical survey. Dr. J. G. Norwood did early geological surveying in Illinois, and Professor A. H. Worthen became that state's geologist from 1858 to 1888. The seven volumes of reports that Worthen published were once regarded as the most complete geological survey of any midwestern state.⁸⁰

The flag that signaled "Philantropist" to the boats and towns along the Ohio River from the "Boatload of Knowledge" accurately described the enlightened charity of William Maclure that he showed even while spending his final years in Mexico. His last philanthropic gesture to New Harmony, the Midwest, and the nation was also his last attempt to improve, through education, the standards, and therefore the power, of the laboring people in whom he placed great faith. By gifts of libraries to local workingmen's societies, he meant to insure that citizens who "earn their living in the sweat of their brows" would have access to knowledge and culture.81 With the assistance of Achilles E. Fretageot in New Harmony, who was but a lad of twelve when on the "Boatload" with his more renowned mother, Maclure effected the revival of the Workingmen's Institute on April 2, 1838. John Beal and Edward Cox were charter members. This organization had functioned while Maclure was in New Harmony in the 1820s, and now he promised it \$1,000 worth of books of its own choosing, to be housed in a wing of the old Harmonist brick church.82 This library, now the oldest existing one in Indiana, is housed in the New Harmony Workingmen's Institute. The letters, manuscripts, publications, artifacts, and specimens in the institute's archives and museum are vital links to the Owen-Maclure-Fretageot community and its famous educators and scientists.

Maclure's hope of personally returning to the United States to supervise the establishment of such mechanics' libraries was cut short by his death on March 27, 1840. He created two educational funds, however, to propel his dream into the future. One of these funds was in the Philadelphia Academy of Natural Sciences, of which he was still president. It was "to be applied to the diffusion of useful knowledge after my death, restricted solely to such as labor with their hands." The other fund was part of his will. It promised "the sum of five hundred dollars to any club or society of laborers who may establish in any part of the United States a reading- and lecture-room with a library of at least one hundred volumes." Ultimately, \$80,000 was distributed to establish 160 such libraries, 144

⁸⁰Lockwood, The New Harmony Movement, 319, 320.

⁸¹ Ibid., 322-28.

Thomas James De la Hunt, History of the New Harmony Working Men's Institute, New Harmony, Indiana (Evansville, Ind., 1927), 18.

⁸³Quoted in ibid.

⁸⁴Quoted in Lockwood, The New Harmony Movement, 325.

in Indiana and 16 in Illinois. Only three of Indiana's ninety-two counties did not receive one. Thus, William Maclure the geologist became America's first benefactor of libraries when public education was minimal and the public library concept was in its infancy. The nation would wait for the twentieth century to see his cultural philanthropy continued in the libraries of Andrew Carnegie.

No one would assert that Robert Owen, William Maclure, and their "Boatload of Knowledge" worked their intended revolution in human character or effected a utopia in New Harmony or around the globe. But no one can deny that their dreams and talents produced a social experiment that ennobled many lives and brought science and education to the Midwest.

APPENDIX

THE BOATLOAD OF KNOWLEDGE PASSENGER LIST (PITTSBURGH TO NEW HARMONY, DECEMBER 8, 1825–JANUARY 24, 1826)

Organizers: William Maclure-Scottish merchant, geologist, patron

of Pestalozzian schools and libraries

Robert Owen-cotton manufacturer and social reformer

of New Lanark, Scotland

Scientists: Thomas Say-American naturalist, entomologist,

conchologist, elected captain of the "Boatload of

Knowledge"

Charles-Alexandre Lesueur—French naturalist, zool-

ogist, ichthyologist, artist, teacher

Pestalozzian Educators and Their Students:

Madame Marie Louise Duclos Fretageot—French educator in William Maclure's schools in Paris before 1821 and in Philadelphia (1821–1825), then in New Harmony schools after 1826

William S. Phiquepal d'Arusmont—French educator in Maclure's boys' schools in Paris before 1823 and in Philadelphia (1824–1825), then in Maclure's School of Industry in New Harmony after 1826

Phiquepal's students including:

Alexis d'Arusmont

Peter L. Duclos

Victor Colin Duclos

Amedie Dufour

Charles Falque

Achille(s) Fretageot—son of Marie Duclos

Fretageot

Artists and Musicians:

Balthazar Abernasser (Obernesser)—Swiss artist, taught painting in New Harmony schools

Virginia Dupalais—ward and student of Lesueur, taught art and music later in New Harmony schools

Physician and Family:

Dr. William Price, his wife Hannah Fisher Price, and their three children

Other Notables:

Robert Dale Owen—eldest son of Robert Owen, kept journal of voyage, advocate of educational and social reform as an author of 1858 Indiana Constitution and as Indiana and U. S. legislator, helped create Smithsonian Institution

Stedman Whitwell—English architect, made six-footsquare model of Robert Owen's projected utopian city

Donald Macdonald—Scottish social reformer, associate of Robert Owen

John Beal, his wife, and daughter Caroline—John taught carpentry in Maclure's School of Industry in New Harmony

Mrs. Helen Fisher—Russian sister-in-law of Hannah Fisher Price

Charles Schmidt-Prussian servant of Robert Owen

Other Passengers:

Cecilia Noël—became first wife of Achille(s)
Fretageot

Victor Dupalais—brother of Virginia Dupalais William Herring

William McArthur (misspelled in Robert Dale Owen's journal as William McCarter)

James Frazer—stepson of Judge Benjamin Tappan who boarded at Steubenville, Ohio, January 9, 1826 Sarah Turner—a young woman

Several workmen enroute to New Harmony

Crew of as many as eleven