

“NAILS AND SUNDRIE MEDICINES”

Town Planning and Public Health in the
Harmony Society, 1805-1840

JOHN WILLIAM LARNER, JR.

“THEY ARE FULL OF NEW WINE”

*And all who believed were together and held all things
in common, and would sell their possessions and goods and
distribute them among all according as anyone had need.**

THE great age of religious unrest and ferment which both preceded and followed the Reformation found expression in the eighteenth century in the emergence of a large number of Pietist sects. These sects developed most frequently in those regions where Lutheranism and Catholicism battled for religious supremacy. Lack of doctrinal unanimity in the borderland of organized religion extending from Moravia to the North Sea encouraged speculation and experimentation.¹ The primary desire of the Pietists was simply to study the Bible and to follow its teachings. In order to achieve this end they usually congregated in small groups in the homes of the members and, adopting the pattern of the early Christians, established common treasuries. In those areas where Lutheranism was the established church, attempts were made to curtail the meetings of the Separatists as early as 1707 by imposing a punishment of three

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This article and a second one which will appear in the next issue of the WESTERN PENNSYLVANIA HISTORICAL MAGAZINE constitute the major part of the thesis Mr. Lerner submitted to the University of Pittsburgh in the course of his Master's work. The next article will deal with personal hygiene and medical practice among the Harmonists during the same period, 1805-1840.—Ed.

*Acts 2:13, 44-45 (New Testament, Douay-Challoner-Rheims, rev., 1941).

1 Arthur E. Bestor, *Backwoods Utopias* (Philadelphia: University of Pennsylvania Press, 1950), 20.

months imprisonment on members who attended religious gatherings.²

In the latter years of the eighteenth century a group of Separatists in the village of Iptingen in Württemberg met in the home of a vinedresser, George Johann Rapp. Rapp through his mysticism and magnetic expression was by popular consent the leader of the congregation. As the authorities became aware of this group and the reasons for their gathering together, diverse and devious persecutions by petty officials became the everyday plight of the Iptingen separatists. After experiencing more intolerance and hostility than they could endure Rapp and his followers decided to flee from Württemberg to the United States where they hoped that they might express freely their religious persuasion.

Rapp and a pilot group disposed of their property in 1803 and took passage for Baltimore, whence they conducted investigative journeys to sites which held prospects of becoming satisfactory communities. It was decided that the settlement would be made on a 5000 acre tract of land bordering the Connoquenessing Creek in Butler County, Pennsylvania. The land was sold to the Rappites by one Dettmar Basse who had at that time already established the village which was to become present-day Zelienople. Basse had grandiose ambitions for his land, hoping that Rapp's followers would clear the area, develop it, and draw prosperity to Zelienople; however, events did not bring fulfillment to Basse's dreams, for the Württemberg settlers soon built their own town.

Under the capable direction of a practical-minded young genius, Frederick Reichert, more than five hundred of the Iptingen Separatists made the voyage to Philadelphia and Baltimore in 1804. In the autumn of that year they made the tiresome and treacherous journey over the Alleghenies to their land on the Connoquenessing. The Rappites named their settlement Harmony (German, *Harmonie*), keeping in mind a characteristic which they desired to be a summation of their beliefs and a physical attribute of their settlement. It was in Harmony, Pennsylvania, on February 15, 1805, that the Articles of Agreement were formulated and signed, thereby formally establishing the Harmony Society.³

2 Chr. Kolb, *Württembergische Vierteljahrsschrift für Landgeschichte*, 1900, 75; 1901, 208. Cited in John Archibald Bole, *The Harmony Society* (Philadelphia: Americana Germanica Press, 1904), 5.

3 John Archibald Bole, *The Harmony Society* (Philadelphia: Americana Germanica Press, 1904), 7-9.

The Society, due to lack of credit with the Pittsburgh merchants during the first few years at Harmony, experienced serious problems in the acquisition of food and supplies. The credit difficulties were overcome, and the Society soon reached the high level of prosperity which was to remain with it for half a century. By 1814 the decision had been made that the Harmony Society should move to a new settlement. A number of reasons have been suggested to explain why the Harmonists decided to sell out and build anew. Harmony was located twelve miles from the Ohio River, the nearest navigable stream. This location impeded the full achievement of their commercial potential because of the expense involved in the overland haul to the Ohio. The culture of grapes and the raising of Merino sheep had been their chief activities while living in Württemberg, but the more severe climate of Harmony had placed limitations upon these enterprises, making it desirable to seek a location to the south. Other reasons given for the move were that by 1814 Harmony was too near the main stream of the civilized world with its temptations, that there was too much idle time for the members since the major clearing and construction work of Harmony had been completed, and that by buying new land George Rapp could have the deed placed under his own name.

At any rate, the Harmony Society did move. Early in 1814 George Rapp and a small party secured 30,000 acres on the Wabash River seventy miles above its juncture with the Ohio. For the most part, the land was located in Posey County, Indiana, and was purchased from the United States Land Office for two dollars an acre. Frederick (Reichert) Rapp (adopted by George Rapp at Harmony, Pennsylvania) remained behind in Pennsylvania to dispose of the Society's property and buildings. A Mennonite named Ziegler purchased Harmony for \$100,000 which, according to Frederick Rapp's estimate, gave the Society an \$8000 profit. In view of the ten years of frontier labor by some five hundred people, the profit was none too great.

Very soon upon establishing themselves at Harmony, Indiana, it was discovered that the "fever and ague" played havoc with the inhabitants of the region. The Society was in a transition from an agricultural economy to one constituted mostly of manufacturing, thus making proximity to markets a feature much to be desired. Indiana was too far removed from the established markets of the day,

and the Wabash River was not navigable at all seasons of the year. A specie scarcity in Indiana further hindered the conduct of extensive commerce in the immediate neighborhood of Harmony.

By 1824 the Harmony Society was ready to move a third time. As had been the practice George Rapp and a party of ninety went ahead in the summer of 1824 to a previously selected site of 3000 acres along the Ohio River, eighteen miles northwest of Pittsburgh. In the spring of 1824 Frederick Rapp had made arrangements with Richard Flower to advertise the Indiana property in England. A buyer soon emerged in the person of Robert Owen. Owen visited Harmony, Indiana, in January of 1825 and agreed to buy the lands and buildings for \$150,000. An additional \$40,000 was paid for the rolling stock, live stock, and products of the factories which had remained behind when the Harmonists departed in the summer of 1825. It is interesting to note that the Society had bought and paid for the new land in Pennsylvania before they were assured that the Indiana property would be sold.

The name selected for the new location of the Harmony Society reveals the completed transition to manufacturing. The town was named Economy (German, *Okonomie*), meaning the science and practice of economics. The Society continued to sustain itself at Economy until its dissolution in 1905, one hundred years (almost to the day) after the signing of the Articles of Agreement in Harmony. The years at Economy saw large investments, not always wise ones, made by the Society in outside commercial ventures: coal lands in Beaver County, oil lands in Venango and Forest Counties, the Pittsburgh and Lake Erie Railroad, a number of manufacturing establishments, and several sizeable real estate enterprises.

From time to time throughout its history the Society was involved in litigation, usually through would-be heirs of former members trying to claim some portion of the vast sum reputed to be in the possession of the trustees. All of these cases were met successfully, even though one of the cases was taken as far as the United States Supreme Court.

Due to the agricultural skills of its members and to the number of proficient craftsmen in its ranks, the Harmony Society was able to enjoy a high degree of self-sufficiency. It entered such realms of commercial activity as lumbering, brick making, the manufacturing of cotton and woollen goods, the first profitable silk industry in the

United States, distilling, brewing, and the making of many types of wine and cider. For the immediate benefit of its own members and close neighbors, the Society maintained a hatter, a cooper, a turner, a carpenter, several flour mills and granaries, a saddler, a soap maker, a shoemaker, a tailor, a blacksmith and all of the other key tradesmen of the nineteenth century town.

Agents were contracted in such major cities as Pittsburgh, St. Louis, New Orleans, Philadelphia, and Baltimore to market the products of the Society. The Society's trade-mark, "The Golden Rose of Harmony," was accepted as a symbol denoting a product of unusual quality. One need not read far into the orders received by the trustees for the Society's manufactured goods to realize that its products were highly desired items in many quarters.

The multitudinous and highly successful forays into commerce and manufacturing made by the Harmony Society throughout its history — and particularly while it was located in Indiana and Economy, Pennsylvania — on its face seem to be almost incompatible with its Pietistic origins. The Harmonists were millenarians and also advocates of celibacy. The millennium aspect of their religious thought supplies us with a link between their spiritual and commercial activities. Rapp taught that although the Lord would appear within their generation, He might require all men to journey to the Holy Land before the blessings of the millennium were to be enjoyed: therefore, enough wealth was to be accumulated by the members of the Society so that each of them would be able to make the trip. Celibacy was an outgrowth of a religious revival in 1807. It is claimed that the celibate state was advocated by the younger members of the Society against the advice of Rapp and the other older people; but when a majority voted for celibacy all persons acquiesced and consented to live as brother and sister, hence Rudyard Kipling's phrase, "the brotherhood of perpetual separation." Another view concerning the adoption of celibacy states that due to the hardships of the first several years it was deemed wise to spare women the hardship of pregnancy and to save rations. After 1807 Rapp strongly advocated the practice of celibacy, but there seems to be sufficient evidence in many travel accounts to show that marriage and Society membership were compatible, even though such an arrangement was severely frowned upon.

No precise statements listing the tenets of the Harmonist re-

ligion are to be found. Perhaps the only items that even begin to approach this description are three books published by the Society, each of which deserves separate and intensive scholarly treatment: *Harmonisches Gesangbuch*, the hymns of the Society; *Feurige Kohlen*, a collection of religious essays written by the members and edited by George Rapp; and *Thoughts on the Destiny of Man*. All of these works were printed between 1820 and 1826, serving the reader with insight into the spiritual thought of the Society. These works reflect thought and philosophy, not dogma. Honesty, efficiency, economy, and harmony founded upon a base of hard work seem to be the substance of their contents.

One of the basic reasons for the dissolution of the Society in 1905 was that it had diminished to two members, due largely to the practice of celibacy and to a refusal to take an evangelical tack in their recruitment policy. Membership in the Society could be attained only by allowing all of one's possessions to become part of the common property, by undergoing a lengthy probationary period, by renouncing one's wife or husband, by learning the German language, and by making a public confession of all past misdeeds to the Society assembled. This process tended to discourage membership by adoption. Many times children were indentured to the Society to be educated and to learn a trade. Such children, upon completing the terms of the indenture, were extended an invitation to join the Society.

The Articles of Agreement adopted in 1805 provided that all funds and properties of the members were to be placed in common ownership according to the tradition of the earliest Christians. Many times in the history of this nation's settlement colonial enterprises were forced of necessity to adopt a communitarian policy, but the policy was dropped as soon as the various settlements were out of their "starving times." Communitarianism (a polite word for communism) was not a passing phase with the Harmony Society; rather it became the core of their economic practice.

In time George Rapp became Father Rapp to the members. He was dynamic and forceful, but had the good sense to realize that one man could not run the whole show. He skilfully utilized the artistic, business, and commercial skills of Frederick (Reichert) Rapp and strengthened the bonds between them by making Frederick his adopted son. Although there was a division of labor within the leadership of the Society, it presented a unified front to the members.

When decisions of major import were to be made, amendments added to the Articles, or trustees selected, it was done by the vote of all the members. Father Rapp continued to lead the Harmony Society by popular mandate from its earliest days until his own death in 1847.

Members could easily withdraw from the Society. If one elected to do so, he was permitted to withdraw the contribution which he had made at the time when he had entered. If he had contributed nothing, a certain sum was given to him so that he would have some means to make his way in the outside world upon leaving the Society.

In the summer of 1832 a colorful figure arrived in Economy announcing that he was a messenger of the Lord heralding the second coming. He called himself the Count de Leon and had with him a party of forty. Actually he was simply Bernhard Müller, a German adventurer; however, he was taken at face value and granted all the courtesies extended to noteworthy guests. Very soon the Count had made his way through the town rallying around him all people who had petty grievances against the Society and others who were intrigued by his courtly bearing and glib speech. Many flocked to him because of his declaration that celibacy was unnatural and unwelcome in the Kingdom of the Lord. The upshot was that he led two hundred and fifty members from the Society to a site down the river and on the opposite bank from Economy. The Society paid these people \$105,000, but they made several attempts to gain additional money. The Count's followers eventually became aware of his fraudulent nature, and he was forced to leave.

When Frederick Rapp died in 1834 the Society lost its commercial mastermind. After his death the manufacturing and financial interests of the Harmony Society were maintained at a precarious *status quo*. The period following the Civil War saw a sharp decline in membership, extensive hiring of outside non-member labor to carry out the affairs of the Society, and dangerous investments of Society funds.

The "Golden Age" of the Harmony Society probably covers the period from its formation until the Count de Leon insurrection and the death of Frederick Rapp. It was through this period of years that the Society experienced its heights of agricultural, commercial, and spiritual expression.

The Harmony Society is a strange but somehow brilliant composite for historical dissection. The foregoing discussion of necessity

has been quite brief. It serves only to introduce the topic at hand. What factors contributed to the cohesive force that existed within the membership of this remarkable group? The travel accounts state with a unanimous voice that the Harmonists were as naive as little children. They spoke only German, did as they were told, and had no communications with the world at large. It is certainly true that the Harmonists, as with all ethnic groups, found familiarity and security within their mother tongue. The structure of their Society did not require the average member to have any type of outside association. Each of their towns supported a United States post office giving the Harmonists, if they were so inclined, the opportunity to communicate or to receive communications. Language is only one aspect of the total picture of the cohesive quality of the Society. There are a number of other factors—religious sympathy, employment security, minimum wage guarantee, and old age security to name only a few possibilities.⁴

The Harmonists enjoyed an admirably high standard of health for their time. A standard of health such as theirs implies a comparably high standard of living. Here also one may discover a factor which injected a cohesive force into the Society. The following discussion seeks to examine the Harmony Society at its height, the period between 1805 and 1840, in order to ascertain what manner of provisions were made for the day to day needs of the Harmonist. How did the Brotherhood secure the loyalty of the Brother?

"A HEALTHY AIR"

The town is methodically laid out in a situation well chosen in all respects; the houses are good and clean, and have, each one, a nice garden well stocked with all vegetables and tastily ornamented with flowers.⁵

One cannot properly speak of "public health" with respect to

4 The definitive history of the Harmony Society lies in a virgin state in the document room of the Great House at Old Economy. All that has been written is by way of rumor or memoir. Works which pretend to be authoritative will be found upon investigation to have their roots in one of two books, Aaron Williams, *The Harmony Society at Economy, Pennsylvania* (Pittsburgh, 1866) which bears the approval of Trustees Jacob Hentici and Jonathan Lenz, or John Archibald Bole, *The Harmony Society, op.cit.*, a pseudo-scholarly production with extensive quotations from letters, but without a footnote to indicate the location of the letters. The material used in the "Introduction" is taken exclusively from these two accounts.

5 Description of Harmony, Indiana, from Thomas Hulme, "A Journal Made During a Tour in the Western Countries of North America," *Early Western Travels, 1748-1846*, ed. Reuben Gold Thwaites, 32 vols. (Cleveland: Arthur Clark Co., 1904), X, 53.

the early years of the nineteenth century, since most measures which might be cited as examples of preventive medicine were but responses to disease. Public interest in matters of health was only roused as a by-product of the panic which prevailed when a population was swept by an epidemic. Adherents to the contagion thesis of disease predominated throughout the eighteenth century, and it was only through a lack of cures to combat the yellow fever and cholera epidemics of the late eighteenth and early nineteenth centuries that popular attention was shifted to possible preventive techniques. However, quarantine, the practice of the contagion school, co-existed with the clean-up and drain-off methods of the new preventive medicine. The prevailing thought was that by one means or another the great epidemic diseases might be diminished if not altogether banished.

By the close of the eighteenth century Germany alone of the European nations seemed to be meeting with anything that may be described as wide success in the realm of public health. A rural economy characterized the Fatherland until the second half of the nineteenth century, thus preserving it from the ugly urban blemishes which were imposed upon other European countries through the birth pangs of the Industrial Revolution. Having viewed the experience of England, France, and, at a later date, the United States, the paternalistic German governments set administrative wheels to rolling in an endeavor not only to establish preventive medicine but also to regulate personal hygiene right down to the rules for courtship.⁶ This was the foundation and the frame of reference from which the Harmony Society visualized, planned, and constructed three American communities.

Article four of the Articles of Agreement obligated "George Rapp and his associates" to provide the "subscribers jointly and severally with all the necessities of life . . . not only during their healthful days, but also when one or more of them become sick or otherwise unfit for labor . . ."⁷ The pledge seems to have been taken seriously from the first days of planning of Harmony, Pennsylvania, to disbanding of the Society a century later.

The sites for proposed settlement were selected with special care and foresight with respect to health conditions. Investigative

⁶ Richard Harrison Shryock, *The Development of Modern Medicine* (Philadelphia: University of Pennsylvania Press, 1936), 94-95, 99, 231.

⁷ John Archibald Bole, *op.cit.*, 7-9.

journeys were made in each instance. Since the Harmonists were good *Bauernvolk*, the quality of the soil was a factor of major consequence to them, and in each of their locations they enjoyed "lands rich as a dung-hill."⁸

In Harmony, Pennsylvania, the town occupied a gentle hillock circled from the northeast through the north and the west to the southwest by the Connoquenessing Creek and surrounded on the remaining sides by higher ground. A portion of the town occupied a part of the shelf area to the northeast side of the creek from the main settlement. As pleasant as the topography seems to the visitor of today, the Harmonists must have had some difficulty when the spring floods of the Connoquenessing created lingering pools. John Melish tells us of drainage projects undertaken in the area along the creek, indicating that flooding was a problem at Harmony.⁹

Their experience with these spring floods in Pennsylvania was not in vain, because during the first spring in Indiana the Wabash brought even greater danger. It threatened outright inundation of the Society's lands which resulted in the construction of earthworks.¹⁰ One can scarcely criticize the Harmonists for choosing land that could be affected by seasonal floods, since this has always been the price of rich alluvial soil. Fortunately it was within the power of the Society to minimize the effects of floods. The village of Harmony, Indiana, was itself safe from high water. According to Adlaid Welby, an English traveler in the vicinity during 1819 and 1820, the site was "obviously well chosen on a good soil, rather elevated, and at sufficient distance from low grounds near the river for the advantage of a healthy air: . . ." ¹¹ Although safe from immediate dangers of the Wabash in the spring, the village seems to have retained a fair amount of surface water. Puddles and a general lack of drainage are the standard complaints of visitors to Harmony, and no doubt those very same pools of water nurtured the malaria which plagued the Society for the duration of its stay in Indiana.

Undoubtedly the finest location of the three with respect to natural environment was Economy, Pennsylvania. Here the Harmony Society occupied a wide shelf of land drained by the Ohio River which flowed along the shelf to the west. The Big Sewickley

⁸ Thomas Hulme, *op.cit.*, X, 53.

⁹ John Melish, *Travels in the United States*, 2 vols. (Philadelphia, 1812), II, 71.

¹⁰ William Owen, "Diary," *Indiana Historical Society Publications*, IV, No. 1, 72.

¹¹ Adlaid Welby, "A Visit to North America and the English Settlements in Illinois," *Early Western Travels*, XII, 262.

Creek flowed along the eastern border of the town parallel to the Ohio and at the northern limit of Economy ran an oblique course to a point where the two streams converged. Across the Big Sewickley Creek and determining the eastern boundary of the shelf land were a series of hills and hollows typical of the western Pennsylvania river country. It was in those hollows that a number of small runs form to give rise to the Big Sewickley Creek. The elevation of the shelf was enough to avoid the spring floods on the Ohio River of the nineteenth century, at least prior to the time of the injudicious cutting of timber in the watershed regions of the Allegheny and the Monongahela. The major disadvantage of the location of Economy was not discovered until it was much too late. Solid bed-rock was eighty-five feet beneath the surface of Economy. The area had been a great plateau in the geologic past, but during the melting of the last glacier a deposit of sand and silt gathered forming the shelf upon which the Harmony Society constructed its town. In spite of the heavy stone block foundations beneath the buildings, a belly and sway effect was noticed in the larger of the structures during the Civil War period. A system of turnbuckles was utilized at that time to draw the buildings back into their proper form.¹² Having rather unsophisticated notions of geo-physics and seismology the Harmonists were in no position in 1824 to anticipate problems of this nature.

A study of the maps of Harmony, Pennsylvania; Harmony, Indiana; and Economy, Pennsylvania (Figures 1, 2, and 3) reveals three fairly well planned villages. Potentially noxious items such as stables, breweries, soap-makers' shops, distilleries, dyers' shops, and pig-sties were kindly placed on the perimeter of the towns. One is inclined, however, to question the judgment of the persons who placed the slaughter-house of Harmony, Indiana, almost directly on the public square. They knew better because it had been located on the northeastern side of the Connoquenessing Creek away from the main body of the town in Harmony, Pennsylvania. The situation must have disturbed somebody's olfactory sensitivities because the slaughter-house was located to the extreme rear of Economy near the Big Sewickley Creek.

12 Interview with Dr. Lawrence Thurman, Curator of Old Economy.

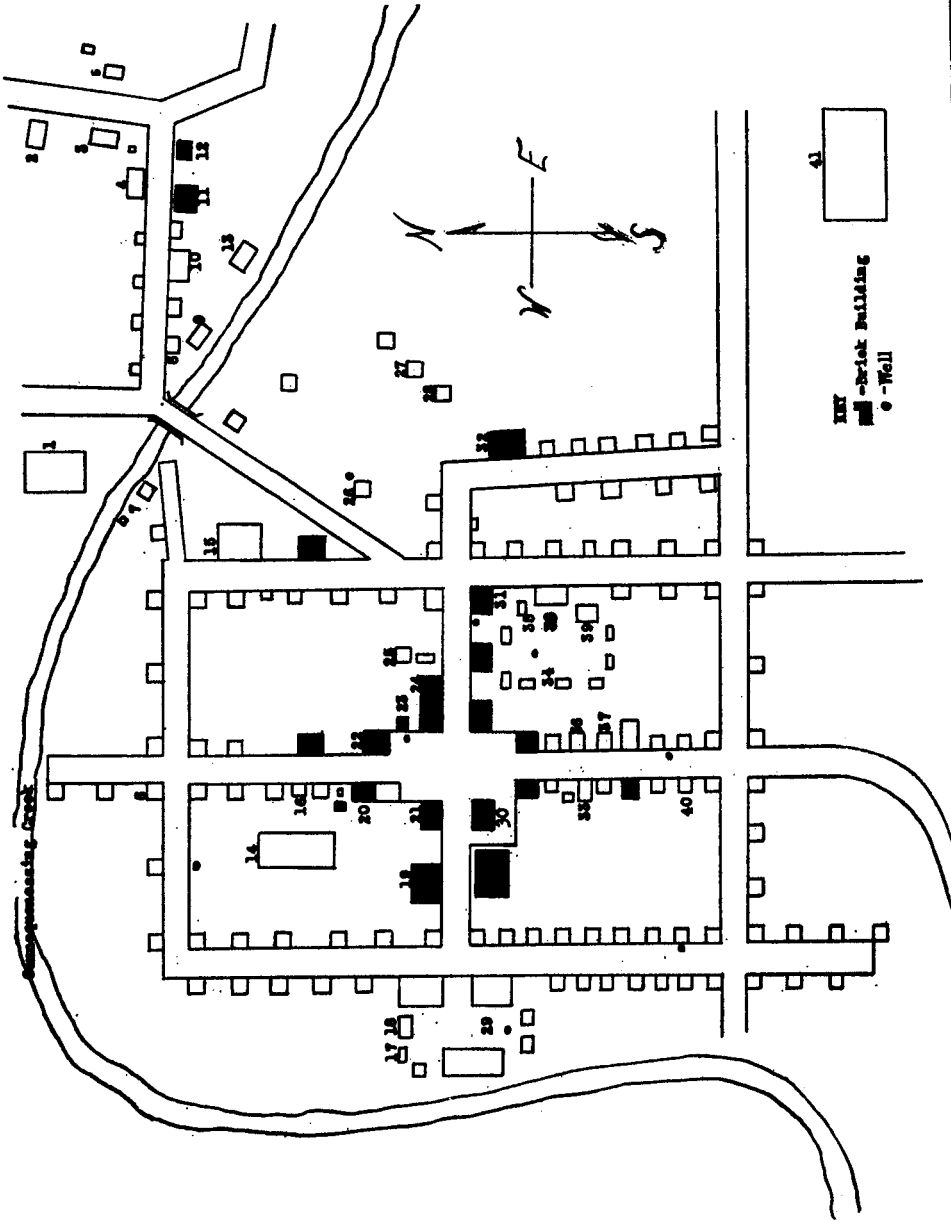


FIGURE 1. MAP OF HARMONY, PENNSYLVANIA*

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|------------------------------|--------------------------------------|
| 1. Doctor's Garden | 22. Frederick Rapp's Residence |
| 2. Sheep Stable | 23. Community Kitchen |
| 3. Hay House | 24. Hotel |
| 4. Cider Press | 25. Stable |
| 5. Sheep Stable | 26. Hatmaker's Shop |
| 6. School | 27. Rope-maker's Shop |
| 7. Soapmaker | 28. Cooper's Shop |
| 8. Wine Press | 29. Barns |
| 9. Old Distillery | 30. Shoemaker, Tailor, and Warehouse |
| 10. Bark House | 31. Machine Shop |
| 11. Slaughter House | 32. Distillery |
| 12. Dyer's Shop | 33. Blacksmith's Shop |
| 13. Tannery | 34. Small Barns |
| 14. Granary | 35. Hay House |
| 15. Barn | 36. Wagon Shop |
| 16. Carpenter's Shop | 37. Infirmary and Apothecary Shop |
| 17. LIME Storage | 38. Barn |
| 18. Stable | 39. Stable |
| 19. Weaver's Shop and School | 40. Cabinetmaker's Shop |
| 20. George Rapp's Residence | 41. Grave Yard |
| 21. Store | |

*W. Weingartner. "So liegt die Stadt Harmonie in Butler Counte in Jahre 1815," sketched from memory at Economy, Pennsylvania in 1833. Harmony Society Manuscripts, Old Economy, Ambridge, Pennsylvania. The map is on display in the Music Hall.

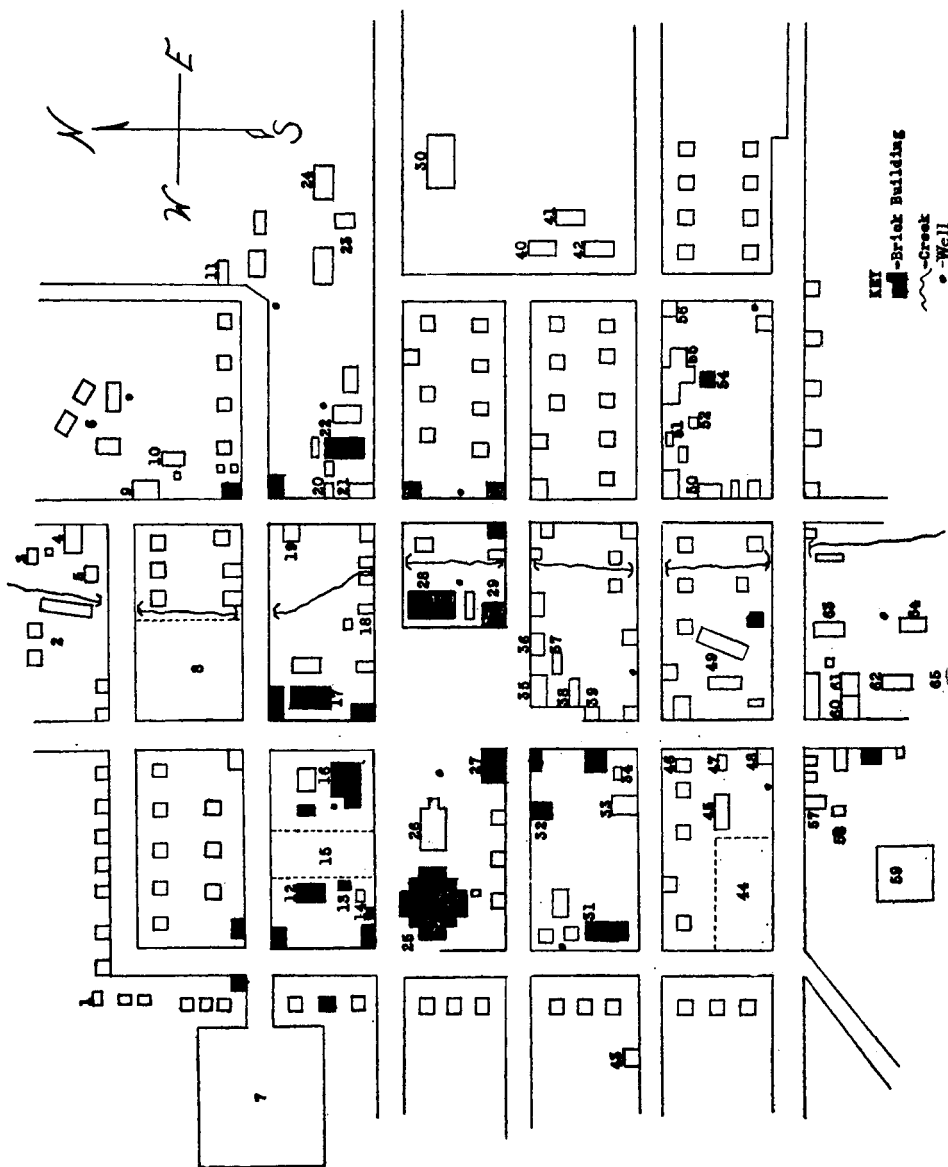


FIGURE 2. MAP OF HARMONY, INDIANA*

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|----------------------------------|-----------------------|----------------------------|
| 1. Pottery Ovens | 23. Barns | 45. Stable |
| 2. Corn Yard | 24. Hay Shed | 46. Hatmaker's Shop |
| 3. Malt House | 25. Church | 47. Hatmaker's Shop |
| 4. Brewery | 26. Old Church | 48. Wash House |
| 5. Wash House | 27. Hotel and Tavern | 49. Corn Yard |
| 6. Pig Sties | 28. Bruderhaus No. 3 | 50. Granary |
| 7. Grave Yard | 29. Shoemaker's Shop | 51. Weaver's Shop |
| 8. Orchard | 30. Cotton Gin | 52. Steam House |
| 9. Distillery | 31. Bruderhaus No. 1 | 53. Lime Storage |
| 10. Corn Cribs | 32. School | 54. Dyer's Shop |
| 11. Stables | 33. Blacksmith's Shop | 55. Grist Mill |
| 12. Granary and Fort | 34. Wagon Shop | 56. Wash House |
| 13. Greenhouse | 35. Store | 57. Soapmaker's Shop |
| 14. Wine and Cider Press | 36. Tailor's Shop | 58. Tannery |
| 15. Garden | 37. Slaughter House | 59. Nursery (horticulture) |
| 16. George Rapp's Residence | 38. Apothecary | 60. Stable |
| 17. Bruderhaus No. 2 (Dormitory) | 39. Hospital | 61. Barn |
| 18. Saddler's Shop | 40. Machinery Barn | 62. Corn Yard |
| 19. Carpenter's Shop | 41. Food House | 63. Sheep Stable |
| 20. Cooper's Shop | 42. Granary | 64. Sheep Stable |
| 21. Carpenter's Shop | 43. Rope-maker's Shop | 65. Brick Yard |
| 22. Bruderhaus No. 4 | 44. Garden | |

*A combination of two sketches from memory. One is by W. Weingartner in 1833, and the other is by Jonathan Lenz in 1848. Both maps were made at Economy, Pennsylvania. Harmony Society Manuscripts, Old Economy, Ambridge, Pennsylvania. The map by Weingartner is on display in the Music Hall while the map by Lenz is in the map tray of the vault room.

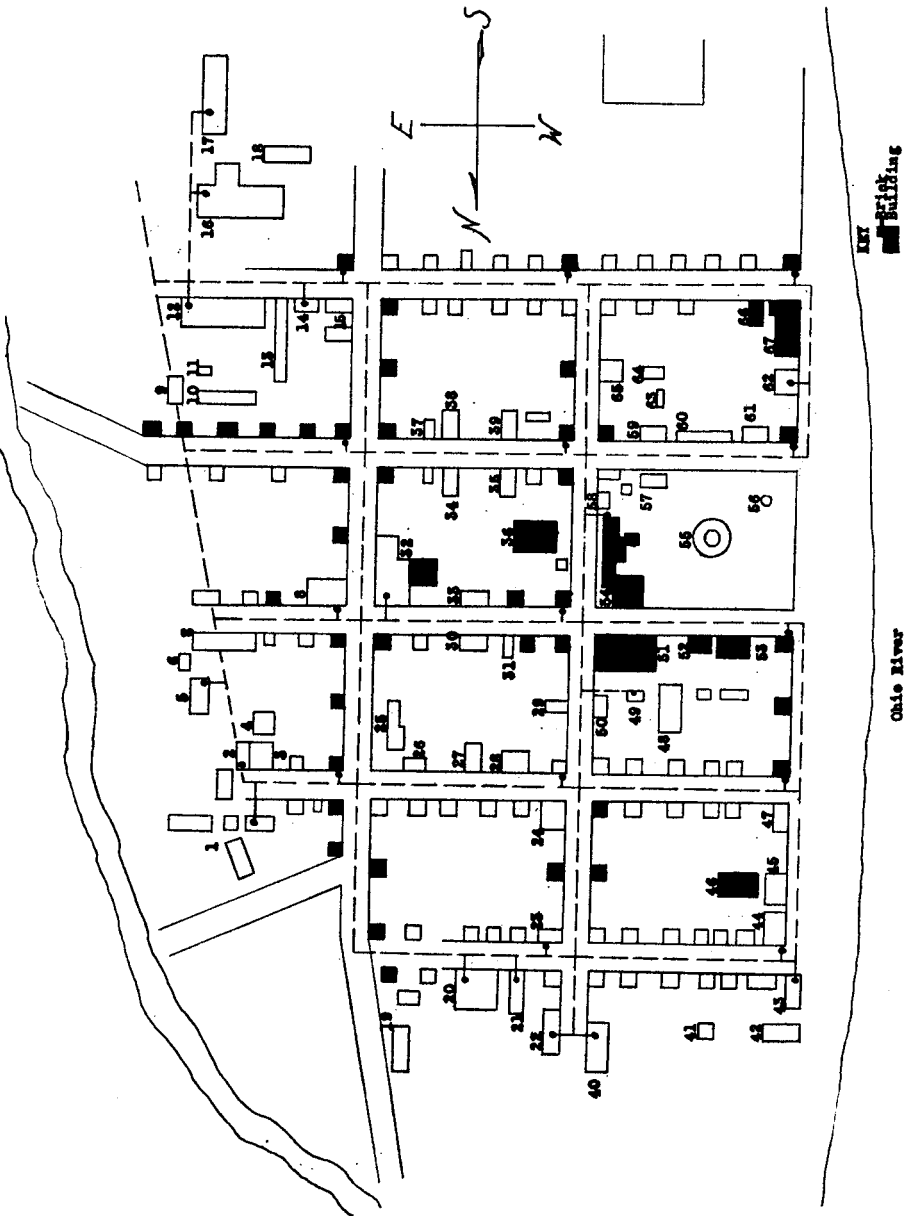


FIGURE 3. MAP OF ECONOMY, PENNSYLVANIA*

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|-----------------------|-----------------------|-----------------------------------|
| 1. Hogs | 24. School | 47. Brewery |
| 2. Wash House | 25. Blacksmith's Shop | 48. Granary |
| 3. Distillery | 26. Wagon Shop | 49. Community Kitchen |
| 4. Older House | 27. Dormitory | 50. Cabinetmaker's Shop |
| 5. Soapmaker's Shop | 28. Old Church | 51. Music Hall |
| 6. Slaughter House | 29. Hatter's Shop | 52. Tailor's and Shoemaker's Shop |
| 7. Silk Factory | 30. Dormitory | 53. Store and Apothecary |
| 8. Tavern Stable | 31. Hospital | 54. The Great House, Residence of |
| 9. Hay House | 32. Hotel and Tavern | George and Frederick Rapp |
| 10. Ox Stable | 33. Dormitory | 55. Garden Pool |
| 11. Dray Horse Stable | 34. Dormitory | 56. Meditation Grotto |
| 12. Stable | 35. Dormitory | 57. Bakery |
| 13. Wagon Shed | 36. Church | 58. Greenhouse |
| 14. Calf Stable | 37. Saddler's Shop | 59. Wheelwright's Shop |
| 15. Horse Stables | 38. Dormitory | 60. Drying House (Woolen Mill) |
| 16. Barn | 39. Dormitory | 61. Wool Storage |
| 17. Sheep Stable | 40. Granary | 62. Dyer's Shop |
| 18. Straw Shed | 41. Potter's Shop | 63. Paint Shop |
| 19. Hay House | 42. Bark House | 64. Weaver's Shop |
| 20. Barn | 43. Tannery | 65. Old Wine Press |
| 21. Stable | 44. Granary | 66. Wool Storage |
| 22. Calf Stable | 45. Flour Mill | 67. Woolen Mill |
| 23. Cooper's Shop | 46. Cotton Mill | 68. Grave Yard |

*Commonwealth of Pennsylvania, Historical and Museum Commission, Coordination map compiled as a guide to restoration at Old Economy. Harmony Society Manuscripts, Old Economy, Ambridge, Pennsylvania. Map tray in the vault room.

The tradition of the public square dominated the plans of Harmony in Pennsylvania and Indiana, but at Economy the tradition yielded to a formal public garden with a reflecting pool, band stand, and meditation chapel. Shops and public buildings in Harmony, Pennsylvania, were grouped either around the public square or in the area along the creek to the northeast of the square. The commercial activities of Harmony, Indiana, were more highly dispersed throughout the town than was the case in Pennsylvania; however, a number of blocks were reserved as residential areas. At Economy no one block was entirely residential. Some degree of commercial or public activity was located within each one. This fact is another indication of the increased role of manufacturing in the life of the Society. The Harmonists more than likely viewed the large cotton, woolen, and silk factories not as urban blights, but as symbols of prosperity which resulted from their industry and economy.

The persons who produced the maps of the first two settlements of the Society were artists, not draftsmen. A number of poetic liberties were taken. Dimensions were not included or even intimated, and a primitive type of perspective was used to show the sides of a building in what was intended to be only a top view. One cannot be too critical of these maps because a fair number of years intervened between the time the Society left a given site and the time when a map was made of it. At any rate, several obvious conclusions can be drawn even though the maps do not contain a mass of technical detail.

The first of these conclusions is that the Harmonists gave attention to a regular street pattern. Straight streets and ninety-degree intersections predominate in all three of their towns. The second conclusion is that the streets seem to be quite wide when compared with the size of the buildings. Judging from available pictures, the width of the streets was enlarged as the Society moved from one settlement to the next. In Harmony, Pennsylvania, all but a very few buildings fronted directly on the street; but at Harmony, Indiana, most dwelling units were set back from the streets. For simplicity of drawing and reproduction, the map of Economy indicates that all buildings were placed at the edge of the streets. This was not the true arrangement. The street *area* of Economy was sixty feet wide, with the actual street taking only a twenty-five to thirty foot wide portion in the middle. The streets of Economy were flanked by ten foot wide grass areas which, in turn, were further flanked

by five foot wide brick sidewalks. Hence all of the buildings at Economy were set back roughly fifteen feet from the actual streets. The third and final conclusion is best expressed by what modern architects call "low density planning." A generous amount of space was included between buildings. They were not clumped together closely. Not only was an atmosphere of airiness and light preserved in their towns, but also it was possible by virtue of this type of plan to prevent the spread of fire. The area between the buildings served in much the same manner as the "fire lanes" cleared by forest rangers when they are fighting fires.

The Harmony Society seems to have been able to set up functioning communities within short periods of time. The person writing on Harmony Township in R. C. Brown's *History of Butler County* feels that by contemporary standards the Harmonists did very well for themselves in clearing 150 acres of land and in constructing fifty log cabins, a grist mill, a barn, a machine shop, and a church—all within the term of their first year.¹³ At Harmony, Indiana, over two hundred buildings were erected between June of 1814 and the end of 1818.¹⁴ Several reasons help account for their amazing progress.

Among the first provisions made at a new site were saw mills and brick-kilns. When the Society moved to Economy, arrangements had been made in advance to have large logs cut along the banks of the Clarion River and floated down the Clarion, the Allegheny, and the Ohio to the area of the new settlement. The pilot crew which arrived in 1824 set up a saw mill and prepared the timber for construction purposes. Seven dormitories capable of housing a total of over 250 people were built from this lumber.¹⁵ The next step was the establishment of a brick-kiln. By the summer of 1825 a large four-story brick woolen mill had been completed. It should be noted in passing that the Harmonists were able to get their villages off to a quick start through utilizing immediately the available clay and timber supplies.

Bernhard Karl, the Duke of Saxe-Weimar Eisenach, gave testimony to the forethought and ingenuity of the Harmonists in an account written shortly after a visit to Economy in 1826. The Duke

13 R. C. Brown, ed., *History of Butler County, Pennsylvania* (R. C. Brown and Co., 1895), 410.

14 John Archibald Bole, *op.cit.*, 77-78.

15 Interview with Dr. Lawrence Thurman.

noticed that the people had been living in temporary dwellings located in the rear of the lots. This arrangement allowed enough room at the front of the lots for the permanent brick houses. As the brick buildings were completed the temporary units served as utility buildings.¹⁶ This sort of procedure prevented the inefficiency and waste which would have resulted from razing sub-standard dwellings and replacing them with permanent structures.

Another factor which contributed to speedy construction in the Harmonist villages was similarity of design. Timbers, planking, and lathing were mass-produced at the saw mills according to standard patterns. In this way the saw blades were not constantly being re-set to cut a variety of widths and thicknesses. Time was also saved that would otherwise have been wasted fitting timbers, only to discover that they did not fit as planned and needed to be re-measured and re-cut.¹⁷

It was certainly fortunate for the Society that it could produce its towns with speed and efficiency. It was thus able to safeguard the general health of the members by providing adequate shelter in the face of the rigorous demands of the frontier environment.

Not only did the Harmonists erect their buildings rapidly, but they also built them well. Even today their dwellings are still considered desirable as residences. The standardization of construction meant that a building could be perfected until it was as tight as a battleship, and the Harmony Society buildings were just that!

Basements were dug with horse-drawn shovels. One course of extra large stones served as a footer for the foundation walls. Large stones were placed at points where upright support timbers would be erected. These latter not only had the effect of providing a substantial base for the timbers, but it also kept them out of the ground and free from rot. The walls were well laid, and thick flagstones were placed tightly over the earth floors. The basements had windows to aid in the reduction of moisture.

Mortise-and-tenon joints were used in connecting all timbers. These joints were secured with pegs made from baked green wood. The idea was that as the timbers began to dry they would also shrink, but the baked pegs would absorb moisture and expand, thus creating

16 Bernhard Karl, Duke of Saxe-Weimar Eisenach, *Travels Through North America, 1825-1826*, 2 vols. (Philadelphia: Carey, Lea, and Carey, 1828), II, 162.

17 Interview with Dr. Lawrence Thurman.

a very snug joint. The timber framework of the Harmony Society buildings was quite secure.

The spaces between the vertical framework were filled with bricks and mortar. The Harmonists made mortar from lime and sand. Interior as well as exterior veneer faces of brick were laid, a type of construction which created two dead spaces for insulation. Hickory lathing was attached to the interior walls. This lathing held approximately a one and one-half inch thickness of mud and straw plaster. If the building were to be finished with a frame veneer, the outside layer of brick was omitted and clapboard took its place. The interiors of frame buildings were finished in the same fashion as were the brick.

No sub-flooring was laid in the Harmonist structures. Six inches of mud and straw was placed between the floors for insulation. The floors themselves were made of tongue-and-groove white pine.

The roofs were made of shingles with sheathing underneath, while the chimneys always emerged from the roofs at the ridge lines. The problems involved in flashings were eased in this way, thereby reducing the possibility of leaks. It was the practice to use lead for flashing, but the Harmony Society found lead to be too expensive. They devised their own type of flashing by splicing shingles to make a compact fit between the roof and the chimney.¹⁸

On the whole, the Harmonists allowed a more than adequate margin of safety in the construction of their buildings. Sturdy materials and quality workmanship characterize their structures from the common dwelling to the beautiful cruciform church of Harmony, Indiana, and the magnificent Music Hall of Economy. It is doubtful if Frederick Rapp, the Society's architect and city planner, ever had a course in "the strength of materials," but the design of the Music Hall is proof that he was mindful of public safety. This building is typical of his work. The secret behind the superior buildings of the Harmony Society does not lie in originality of principle or of design, but rather it is to be found in the realm of extraordinary craftsmanship.

Sixteen persons were housed in a typical dwelling. Eight men occupied the second floor while eight women lived downstairs. Pacifism was another aspect of the Harmonist belief. It was thought that if a disturbance should come during the night, the occupants of the first floor would be the first to face the situation. And who

¹⁸ *Ibid.*

in that age of romanticism, delicacy, and sentimentality would venture to do harm to a woman? By this arrangement the Society hoped to avoid physical conflict with would-be marauders.

It was a common feature for the windows of the Society's buildings to be placed exactly opposite each other, thus providing ample ventilation. In the summer the Harmonists could not tolerate a warm and stuffy room. William Hebert during a visit to Harmony, Indiana, in 1823 wrote that a heavy brick cruciform church was projected so the members could escape the unbearable heat and humidity which crowded conditions and a hot sun produced in the frame church.¹⁹ On the other hand, the Harmonist dwellings were often overheated in the winter. Donald McDonald noted in his diary that the stoves used in the Indiana settlement kept the homes "too warm and close." He felt that this situation was responsible for the "pale and unhealthy" appearance of the people.²⁰

The uniqueness and skill of the Harmonists are shown in yet another area. The Society used steam engines in their mills and factories, and the exhausted steam from these engines was channeled to radiators. In this fashion the mills and factories were kept warm, and, in addition, a number of barns, stables, and shops also enjoyed steam heat.

Over and above having well built and comfortably maintained buildings, the Harmony Society attended to the health and well-being of its members through several agencies of public protection. John Melish described in detail the system used to set up a night watch for Harmony, Pennsylvania. According to his accounts, the duty rotated among the adult male membership with two men on guard each night.²¹ At Economy the church tower was built with a ramp around the base of the clock so that lookouts could view the entire village from its heights. In Indiana where the Indian menace constituted a threat, the Harmony Society was forced to provide more than a night watch. The largest of the granaries had thick walls of stone and each window of this granary was masked with an iron grate. This was their fort in the event of attack — the only fort or prison ever built by the Society.

19 William Hebert, "A Visit to the Colony of Harmony in Indiana, 1825" *Indiana As Seen by Early Travelers*, ed. Harlow Lindley (Indianapolis: Indiana Historical Commission, 1916), 335.

20 Donald McDonald, "The Diaries, 1824-1826," *Indiana Historical Society Publications*, ed. Caroline Dale Snedeker, XIV, No. 2, 247.

21 John Melish, *op.cit.*, II, 73.

One of the first measures of public protection undertaken by the Harmonists was the purchase of a fire engine, which was acquired from Pat Lyon of Philadelphia in 1804. Later this eighteen-man-power pumper accompanied the Society to Indiana, and served the community of New Harmony until 1879.²² Another fire engine was purchased at Economy. Fire fighting was expedited in the Harmonist villages by virtue of their spacious and regular plans. Furthermore, within the mills and factories a large barrel of water was always located on each floor in case of fire.²³

A number of facilities which were generally considered of private concern in that age were, by the very nature of the Harmony Society, public problems. Where a backyard well or cistern would have been the water supply for a dwelling unit in the average town, the Harmonist settlements were equipped with a series of wells and pumps along the streets. In addition to the wells indicated on the maps, springs are often mentioned in travel accounts. Perhaps those areas which seem to have been at remote distances from the public pumps were served by these springs.

At Economy a full-fledged water system was constructed. Water was impounded in reservoirs located in the hills to the east of the town. Log pipes (logs with lengthwise bores) conducted the water beneath the ground to various points in Economy. The map of Economy indicates the probable routes taken by the water lines. Because it is based upon only the few scraps that remain of an early map, this sketch of the water system is accurate only within one block in any given direction of Great House Square. The travel accounts state that many of the houses, most of the shops, and all of the barns and stables were supplied with running water. Impressive as it was, the water system of Economy was in no sense an original contribution since it was based largely on existing systems. Frederick Rapp on his many trips to Philadelphia had observed an identical system that had been operating since 1800. A degree of original thought, however, is shown by the fact that Frederick designed and had in readiness a pump and filter that could have drawn water from the Ohio River in the event of difficulties within the main system.²⁴

The Society maintained public ice houses and all dwellings were

22 Nora C. Fretageot, *Historic New Harmony* (New Harmony, Indiana, 1923), 32.

23 Bernhard Karl, Duke of Saxe-Weimar Eisenach, *op.cit.*, II, 164.

24 Aaron Williams, *op.cit.*, 65.

equipped with ice chests for cold storage. The ice house at Economy was often used as a place to keep extra silkworm cocoons. By keeping the cocoons cold, the full maturation of the worm was staved off until additional worms were needed.²⁵

No attempts were made in any of the Harmony Society settlements to devise water-closets or sewage systems. A "family shed" was located behind each house. Beneath the shed was a brick vault with a raw earth floor. The Harmonists threw slaked lime into these pits at frequent intervals. The lime hastened decomposition and minimized the odor and the flies. In consequence, the privy lantern and the night pot were integral parts of daily life in the Harmony Society.²⁶

The Society had its own soap-maker, and soft lye soap was used for all domestic purposes. At Harmony, Indiana, and at Economy there were public wash houses, although the wash house at Economy was actually an elaborate steam laundry. The Society's 1831 cash book indicates that forty dollars were spent for patents to cover a "washing mashin."²⁷ Evidently some sort of effort had been made to develop a mass production laundry, possibly something on the order of today's "laundramat."

Europe experienced a revival of public bath houses in the early years of the Renaissance. However, widespread outbreaks of leprosy and venereal disease soon led bathing to fall into disrepute. It was not until the middle of the nineteenth century that public confidence was restored, and then people objected to the use of public bath houses on moral grounds.²⁸ One or both of these reasons could explain why the Harmonist villages had no bath houses. Bathing was a matter of hot water on the stove, a big oak tub on the floor, and lots of good soft lye soap. With this quaint picture in mind we will turn, in the next installment, to the topic of personal hygiene among the members of the Harmony Society.

²⁵ Interview with Dr. Lawrence Thurman.

²⁶ *Ibid.*

²⁷ "Cash Book—Money received and Expended, 1828-1847" (CA-5), Harmony Society Manuscripts, Old Economy, Ambridge, Pennsylvania. See entry under June 8, 1831.

²⁸ Richard Harrison Shryock, *op.cit.*, 78-79.