

*Philosophy Put to Use:
Voluntary Associations for
Propagating the
Enlightenment in Philadelphia
1727-1776*

IN THE latter part of 1760, Benjamin Franklin put a question, now famous, to Polly Stevenson: "*What signifies Philosophy that does not apply to some Use?*" Throughout the eighteenth century no belief was more tenaciously held by philosophers and men of capacity and public spirit generally, whether on the continent of Europe, in the British Isles, or in the English colonies in America. David Hume and other enlightened Scots gave this idea the central place in their commonsense thinking; and in *Candide* (1759), Voltaire had his Venetian nobleman say disparagingly of an eighty-one-volume set of the proceedings of a learned society that it would have had some value "if a single one of the authors of all that rubbish had invented even the art of making pins; but in all those books there is nothing but vain systems and not a single useful thing."¹

On New Year's Day, 1768, in the room of the Union Library Company on Chestnut Street, Charles Thomson exhorted his fellow

¹ "It seems, then, that nature has pointed out a mixed kind of life as most suitable to [the] human race, and secretly admonished them to allow none of these biasses to *draw* too much, so as to incapacitate them for other occupations and entertainments. Indulge your passions for science, says she, but let your science be human, and such as may have a direct reference to action and society. . . . Be a philosopher; but amidst all your philosophy be still a man." David Hume, "Inquiry Concerning Human Understanding," *Essays and Treatises Concerning Human Understanding* (Edinburgh, 1800), II, 7; I, 288-289, 294-295; Leonard W. Labaree, ed., *The Papers of Benjamin Franklin* (New Haven, 1959-), IX, 251, italics mine; Jean François Marie Arouet de Voltaire, *Candide* (New York, 1929), 92-93.

members of the American Society held at Philadelphia for Promoting Useful Knowledge to make a fateful decision. "Knowledge is of little Use," he told them, "when confined to mere Speculation; But when speculative Truths are reduced to Practice, when Theories grounded upon Experiments, are applied to common Purposes of Life; and when, by these, Agriculture is improved, Trade enlarged, and the Arts of Living made more easy and comfortable, and, of Course, the Increase and Happiness of Mankind promoted; Knowledge then becomes really useful." One could search a long time before uncovering a better statement of the ideals and objectives of the philosophers of the Enlightenment as they came to be understood and carried out in America.²

II

Let us begin, as the colonial Philadelphians did, in Western Europe, in the British Isles in particular. In England and her colonies, these years embraced an age of freedom quite as much as an age of faith, and many men believed that the cause of mankind could be served in secular and humanitarian, as well as in spiritual ways—no one cried *Écrassez l'infâme*, even about the Church of England. The destructive and nostalgic attitudes so conspicuous among the French found no acceptance in the Old British Empire. Englishmen, Scots, and Americans were optimists, confident that progress was a fact and that, by putting philosophy to use, they could achieve widespread happiness.

We perceive at once that the corpus of ideas, theories, programs, and schemes that constituted the Enlightenment in Europe and England was never exported to the colonies whole and intact; nor did its votaries ever intend that it should be so transmitted. What was dispatched westward was deftly and unobtrusively selected with the greatest care to represent and buttress a point of view, which was all the more influential because, for the most part, the men who held it did so unconsciously.

Searching questions occur to us now: by whom were the enlightened ideas and programs chosen, and how did they make the

² *Pennsylvania Chronicle*, Mar. 7, 1768.

selection? What auxiliary ideas and programs were sent off at the same time? How and when did they cross the ocean? And of particular concern to us is whether the Enlightenment was being exported in any organized or institutional forms, or was the transit to America merely a series of random occurrences or the chance work of a few individuals?

Answers to all of these queries cannot be given here, but it is possible to sketch some of the conditions that governed the selection and transmission of certain features of the Enlightenment across the Atlantic. In fact, a realization of the potency of the all-pervading effect of these situations and influences is prerequisite to our understanding of the course of the Enlightenment in America. That this has been either ignored or not recognized in the histories is probably because, at the time, it was so self-evident.

It must be remembered that nearly every colonist's view of England and the rest of Europe and, conversely, the outlook that most Englishmen had on America were images filtered through, as it were, dissenters' spectacles, the lenses of which had been ground in the British Isles. Why this is so is quite clear: communications were almost entirely carried on by English merchants, the majority of whom were dissenters. These merchants owned and freighted most of the ships that transported people, books, news, letters, ideas, and sentiments to colonial seaports, and especially, after 1720, to Philadelphia; they also controlled most of the news coming in from their counterparts in the New World. The volume and influence of the trans-Atlantic correspondence has never been assessed, but we do know that it was of prime importance in the struggle over the attempt to create an Anglican Episcopate in America and in several other instances.

The merchants of London, Bristol, and Glasgow were not only Protestant but radically so, and therefore zealously anti-Roman Catholic; they were also overwhelmingly nonconformist and completely out of sympathy with the Established Church; and not a few of them had experienced religious persecution. It was only natural therefore that they became closely allied with the ministers and spiritual leaders of the nonconformist sects. Although loyal Hanoverians to a man, they subscribed to many of the republican ideas of the Commonwealthmen of the seventeenth century. Denied

access to the universities and public office because they were not Anglicans, the lay and clerical members of the several denominations found outlets for their talents and physical energies in the industrial, educational, humanitarian, and scientific activities that contributed so notably to the brilliance of the Enlightenment in Great Britain.

The signal achievement of the middle-class Protestant dissenters was their amazing success in putting philosophy to use by forming and employing voluntary associations of every imaginable kind to mobilize the many like-minded people of ability for the attainment of desirable ends. This was a phenomenon that originated in the seventeenth century—notably with the Royal Society of London—and it became a pronounced tendency among Englishmen and Scotsmen. Unable to attain their goals through Parliament or the Church of England, the dissenters gave the voluntary association its most extensive, varied, and successful development.

Dissent itself had given rise to the largest and most powerful private organizations and institutions: the nonconformist Presbyterian, Independent, and Baptist churches, which, by 1702, had loosely united as the Body of the Three Denominations. Thirty years later, prominent laymen formed the Protestant Dissenting Deputies to seek repeal of the Test and Corporation Acts and look after the “Civil Affairs” of the nonconformists.³

Far surpassing these dissenting bodies in their impact on the American colonies and dwarfing the Anglican Society for the Propagation of the Gospel in Foreign Parts and the Society for Promoting Christian Knowledge, was the older and far-flung Society of Friends. The skill displayed by George Fox in organizing his Quaker followers for proselytizing and insuring their solidarity in the face of all detractors has often been commented upon. His genius in foreseeing the possibilities of using yearly, quarterly, monthly, weekly, and special meetings to foster trade and commerce among Friends, and also for humanitarian enterprises, not merely among the widely scattered Quakers on both sides of the Atlantic but for any human beings needing assistance, has been understressed. Here was a

³ On the issue of bishops for the colonies, see Carl Bridenbaugh, *Mitre and Sceptre: Transatlantic Faiths, Ideas, Personalities, and Politics, 1690-1776* (New York, 1962, 1967), 28-53, 83-115.

mighty voluntary association that, in addition to ministering to the religious, business, educational, and social needs of the membership, contributed to the Enlightenment one of its best-known symbols—the Good Quaker. In accounting for the remarkable success of this institution, primary importance must be given to the fact that its transoceanic strongholds were in London and Philadelphia, and that many branch offices had been set up in Britain and the colonies.

The great majority of Englishmen who traded with America and of those who corresponded with the provincials upon religious or cultural matters were either members of one of the Three Denominations or of the Society of Friends. They lived and had their being in an atmosphere of dissent and knowingly screened, if they did not dictate, the ideas and programs that traversed the ocean in both directions.

When colonials, even those who were communicants of the Established Church, voyaged to the British Isles, the society in which they mingled was far more often composed of dissenters and unbelievers than of Anglicans. Consequently they acquired most of their impressions of the mother country, along with selected elements of the Enlightenment, in a nonconformist environment. From the English dissenters also, they learned how to apply the principle of association, and not a few of them returned to America inspired and determined to apply organization to the promotion of useful knowledge.

III

Benjamin Franklin made his first visit to London when he was in his late teens; there this alert, impressionable, and highly intelligent young man widened his horizon in countless ways through observations and discussions—we are staggered as we read of what he learned of life in England and of his associations and meetings with people of high and low degree. Ultimately, however, after eighteen months in the metropolis, and now twenty years old, he sailed back to Philadelphia in July 1726 because, as he always contended, “Pensilvania is my Darling.”⁴

⁴ *Franklin Papers*, VI, 217; Leonard W. Labaree, ed., *The Autobiography of Benjamin Franklin* (New Haven, 1964), 105, 208.

Franklin's accounts of his early life reveal that his mind was ever brimming over with projects for self-improvement and human betterment. No device for carrying out useful and worthwhile adjuncts to civilized living was equal to the *club*. As a lad of fourteen Franklin had possessed and read with profit the classic English treatment on voluntary associations, Daniel Defoe's *An Essay upon Projects* (1697), and he had drawn heavily upon that work of the sturdy dissenter for his "Silence Dogood" essays, which were printed in his brother's *New-England Courant*. When he was seventy-two, he recalled that Cotton Mather's *Essays to do Good* (1710) had influenced him greatly, but there can be no doubt that his London experience had contributed most to his desire for improvement of himself and his fellow man.

In the fall of 1727, a year after his return to Philadelphia, Franklin tells us that he "form'd most of my ingenious Acquaintance into a Club for mutual Improvement, which we call'd the Junto." (Shortly, a Marylander would define clubs as "consisting of Knots of Men rightly sorted.") The celebrated admissions questions that Franklin drew up for the Junto he had appropriated almost without change from the "Rules of a Society, which met once a week, for their Improvement of useful Knowledge and for the promoting of Truth and Christian Charity." He had come upon them in his copy of *A Collection of Several Pieces* by John Locke published at London in 1720. This, it appears, is how the magic, motivating phrase "promoting useful knowledge" was incorporated in to the Philadelphia vocabulary. Like some other famous phrases, this was a legacy from the great Mr. Locke.⁵

The very fact that the youthful printer was able to assemble a group of ten talented and serious craftsmen and tradesmen to form "the best School of Philosophy, Morals and Politics that then existed in the Province" indicates that by 1730 Philadelphia was becoming "the outstanding, probably the first, example in the Western World of a culture resting on a broadly popular base." Its 11,500 inhabitants of several nationalities lived and worked together as one free and happy people, tolerant, self-governing,

⁵ *Franklin Autobiography*, 58n., 116-117; *Maryland Gazette*, Mar. 24, 1747; *A Collection of Several Pieces of Mr. John Locke Never before printed, or not extant in his Works* (London, 1720), 358-362.

prospering, full of hope, and persuaded by their own experiences and what they saw about them of the possibility of achieving a better future for humanity. Progress for them was not an idea, not a dream; it was a visible reality. Later in the century Saint-Just would declare in France that "Happiness is a new thing in the world," but in the English colonies it had long prevailed and nowhere as widely among people of all ranks as in the city on the Delaware.⁶

In order to facilitate finding information to answer questions raised at meetings, the members of the Junto agreed to pool their personal books, but very soon they found the collection inadequate. Drawing upon what he had learned about subscription book clubs in England, such as the one to which Philip Doddridge belonged at Kibworth in Leicestershire in 1725, Franklin proceeded to set on foot his "first Project of a public Nature" when, on July 1, 1731, he and several cronies of the Junto "erected a common Library."⁷

This was a significant step in the cultural history of American society. It signaled the emergence of a great colonial leader, an American *philosophe* who has rightly been designated the finest flower of the Enlightenment. In addition, the occasion marked the beginning of the most successful application of the principal of voluntary organization in America during the half-century before independence. Of this act, the subscribers were well aware, and they emphasized it when they adopted the motto: *Communiter Bona Profundere Deum Est* ("To pour forth benefits for the Common Good is divine").⁸

Through the good offices of Joseph Breintnall in 1731, the officers of the Library Company formed a memorable relationship with Peter Collinson, rich Quaker merchant of London, collector of exotic plants, Fellow of the Royal Society, and a correspondent of many of the leading scientists of continental Europe. Until his

⁶ *Franklin Autobiography*, 118; Carl and Jessica Bridenbaugh, *Rebels and Gentlemen: Philadelphia in the Age of Franklin* (New York, 1942, 1962), x.

⁷ John Doddridge Humphreys, ed., *The Correspondence and Diary of Philip Doddridge* (London, 1829-1831), II, 57; Paul Kaufman, "English Book Clubs and Their Role in Social History," *Libri*, XIV, 4-6, 21; *Franklin Autobiography*, 130.

⁸ This free translation of the difficult Latin of the motto is by Edwin Wolf, 2nd, "*At the Instance of Benjamin Franklin*": *A Brief History of the Library Company of Philadelphia, 1731-1976* (Philadelphia, 1976), 2.

death in 1768, Collinson advised the Library Company about acquisitions and personally handled its purchases from the book-sellers of London. When *A Catalogue of Books Belonging to the Library Company of Philadelphia* came from Franklin's press in 1741, the 375 titles listed represented the principal interests of the Enlightenment, particularly natural and speculative philosophy and standard works of history and literature. By 1770 readers could choose from 2,033 books, most of them in English.⁹

From time to time nonmembers were permitted the free use of the books. About 1730 Joseph Breintnall had introduced John Bartram by letter to Peter Collinson as "a very proper person" to procure American botanical specimens for him; and the Londoner soon countered by urging that Bartram be made an honorary member of the Library Company. This was done in 1743. In 1774 and throughout the War for Independence, the delegates to the Continental Congress were accorded borrowing privileges, as were the members of the Constitutional Convention in 1787. With its fine collections located in Carpenters' Hall, this institution richly deserved to be better known, in Edwin Wolf's happy phrase, as "the Library of the Revolution."¹⁰

The usefulness of the Library Company led to the founding of other subscription libraries in both the city and reaches of Philadelphia. The proliferation of such organizations was largely accomplished by Quakers. In 1742 the Junior Library Company of Philadelphia was established. Twenty-seven craftsmen and tradesmen, most of them Friends, organized the Union Library Company of Philadelphia in 1747. This group initially housed its books in a room on Second Street. Its catalogue of 1754 lists 317 titles. Two

⁹ Stephen Bloore, "Joseph Breintnall, First Secretary of the Library Company," *The Pennsylvania Magazine of History and Biography* (PMHB), LIX (1924), 48; N. G. Brett-James, *Life of Peter Collinson* (London, 1925), 52, 62, 125; William Darlington, ed., *Memorials of John Bartram and Humphry Marshall* (Philadelphia, 1849), 124; "The First Books Imported by America's First Great Library, 1732," PMHB, XXX (1906), 300-308; Wolf, *Library Company*, 3 (facsimile); *The Charter, Laws, and Catalogue of the Library Company of Philadelphia* (Philadelphia, 1770).

¹⁰ Bloore, "Joseph Breintnall," 56; Darlington, *Memorials*, 60, 162; A Book of Minutes, containing an Account of the Proceedings of the Directors of the Library Company of Philadelphia, Beginning November 8, 1731, I, 31, Library Company; Wolf, *Library Company*, 12-13.

more libraries were established in 1757: the Amicable and the Association. At this time, as many as 400 Philadelphians, predominantly middle class, the majority of them Quakers, subscribed to and frequented the four libraries. During the next ten years the last three consolidated and were, in 1769, incorporated in to the Library Company. Between Trenton and Darby and as far westward as Lancaster, at least ten other subscription libraries were founded before the end of the colonial period.¹¹

Writing in 1774 about the collections brought together under the aegis of the Library Company, the Reverend Jacob Duché observed: "To this library I have free access by favour of my friend the merchant, who is one of the company. You would be astonished . . . at the general taste for books, which prevails among all orders and ranks of people in this city. The librarian assured me, that for one person of distinction and fortune, there were twenty tradesmen that frequented this library." And again he wrote: "Literary accomplishments here meet with deserved applause. But such is the prevailing taste for books of every kind, that almost every man is a reader. . . ." In putting philosophy to use through its books, the Library Company of Philadelphia was probably the most successful institution of its kind in the known world.¹²

In their eagerness to improve "the Minds of Men," certain bold spirits of the Library Company proposed to go well beyond the forming of a subscription library confined to the printed word. They aspired to render "useful Sciences more cheap and easy of access," for not only the members but for others who were devotees of natural philosophy. The success of the Library Company of Philadelphia with extracurricular activities was due in large part to the fact that its leaders maintained important connections throughout the trans-Atlantic groups of dissenters, including the Society of Friends, and they also had deep interests in natural philosophy. But the combining of a subscription library, a museum, and a laboratory in one institution, and the opening of it to the

¹¹ Edwin Wolf, 2nd, *A Check-List of the Books in the Library Company of Philadelphia in and supplementary to Wing's Short-Title Catalogue, 1641-1700* (Philadelphia, 1959), iv; Carl Bridenbaugh, "The Press and the Book in Eighteenth Century Philadelphia," *PMHB*, LXV (1941), 17-24.

¹² Jacob Duché, *Observations on a Variety of Subjects* (Philadelphia, 1774), II, 29-30.

public at large for reading, writing, listening, viewing, and experimenting without charge was *the American thing*.¹³

The credit for initiating and promoting the scientific activities of the institution must go to Joseph Breintnall, the oldest and sole merchant member of the Junto. Before 1730 he had made contributions, later deemed worthy of publication in the *Philosophical Transactions of the Royal Society*. As the first secretary of the Library Company, he began to correspond regularly with Friend Peter Collinson about book purchases and also about his own scientific investigations, and he also served as a link between James Logan, Quaker bookman and virtuoso, but *no joiner*, and the Library Company. He encouraged the botanical work of John Bartram, and it was he who procured introductions through the London merchant of such Anglican medical members as Thomas and Phineas Bond to M. Jussieu of the Jardin des Plantes at Paris and Johann Friedrich Gronovius in Leiden. In his capacity as secretary of the Library Company, he wrote the letter welcoming John and Thomas Penn to their province, May 11, 1733, and soliciting proprietary "Countenance and Protection" of the infant organization, which already closely resembled the academies so much the vogue in the cities of Europe. In acknowledging receipt of the secretary's paper on the aurora borealis, July 11, 1738, Peter Collinson intimated that he considered Joseph Breintnall the *principal founder* of the Library Company: "All thy observations and schemes relating to it, are an instance of thy zeal for promoting the good of mankind, and deserves the greatest commendation from all that are well-wishers to so noble a design." Breintnall helped guide the institution until his death in 1746.¹⁴

During the decade of the thirties, Benjamin Franklin's interests centered primarily in books, the promotion of self-improvement, and getting ahead in the printing business. Sometime after 1740, awakened by his Quaker colleague and business associate Joseph Breintnall, the printer learned the ABC's of natural philosophy and won admission to the "natural history circle" presided over by Peter

¹³ Library Company, Minutes, I, 28.

¹⁴ Bloore, "Joseph Breintnall," 42-56; Library Company, Minutes, I, 27-28; Brett-James, *Peter Collinson*, 124; Darlington, *Memorials*, 61, 112n., 175, 316-317.

Collinson, whose friendship would prove of such vital importance for his later career.

The arrival in April 1738 of an air pump and "other curious instruments of great Use in the Study of Natural Knowledge," a present from John Penn, prompted the directors to make two far-reaching decisions. The first was to order a local cabinetmaker to fabricate a handsome "cabinet" with a glass front. The instruments, in their beautiful case, were displayed to a better advantage when the institution's collections were moved in April 1740 to two rooms on the second floor of the recently completed west wing of the State House. A little over a month later, the directors permitted the use of the air pump and the "outer room" for a course of philosophical and experimental lectures by Isaac Greenwood, formerly professor of mathematics at Harvard College.¹⁵

The acquisition of more apparatus in 1741 and 1745, the issuing of the first printed catalogue of books in 1741, and the chartering of the library in 1742 encouraged more frequent use of the "outer room" for lectures and as a public museum. Esquimaux instruments and utensils brought back from the Arctic voyage of the *Argo*, financed by Maryland, Philadelphia, and Boston merchants, were presented to the museum by the North West Company in 1753 and 1754—probably at the instance of Benjamin Franklin. Matthew Clarkson, mapmaker, surveyor, and later clerk of the Philadelphia Contributionship, bargained shrewdly and successfully in 1761 for a free life membership in exchange for the donation of a cabinet of fossils that had been collected by the late Quaker merchant Samuel Hazard.¹⁶

In Robert Aitken's freshly-launched *Pennsylvania Magazine* of February 1775, Tom Paine singled out for praise "the cabinet of Fossils" at the Library Company, together with "several species of earth, clay, sand, &c., with some account of each, and where brought

¹⁵ *Pennsylvania Gazette*, May 4, 1738; *Franklin Papers*, II, 207, 210. For two photographs of the cabinet as it now appears at the Library Company, see Wolf, *Library Company*, 6, 7, 54, where it is singled out as "the earliest example of American-made Palladian architectural furniture." Library Company, Minutes, I, 102; *Franklin Autobiography*, 117, 290.

¹⁶ *Franklin Papers*, II, 312; Library Company, Minutes, I, 114, 118-119, 193, 197; *Catalogue of Books of the Library Company of Philadelphia* (Philadelphia, 1764), 24-26; *Catalogue of the Library Company* (1770), 5.

from." These curiosities, he insisted, were valuable not alone because they entertained the scientist but also because they revealed the hidden parts of nature to the potter, the glassmaker, and allied artisans. Mining ought to be developed, said he prophetically, for the bowels of America have as yet been "only slightly enquired into," and he went on to describe a set of "Borers" or drills to be used in sounding the earth. Here, indeed, was a concrete proposal to put philosophy to use, the objective of the Enlightenment, and it was suggested by a visit of this newcomer to view the "cabinet" at the Library Company."¹⁷

The first Philadelphian to propose gathering some of the "most ingenious and curious men" of the English colonies into an "academy or society" for the "study of natural secrets, arts, and syances," and to "communicate . . . discoveries freely" was John Bartram. He seems to have been inspired by the Royal Society of London, about which he had read in the *Philosophical Transactions*, and letters from correspondents in England. Early in 1739 he broached the matter in a letter to Peter Collinson, who replied on July 10 that considering the "infancy of your colony," the plan was not then feasible.¹⁸

John Bartram did not give up his scheme, however, he merely bided his time. When he first met Cadwallader Colden in 1742, it is not unlikely that he brought up the project. If so, he would have learned that about the year 1728 the New Yorker had urged Dr. William Douglass to found "a Virtuoso Society" at Boston, and possibly, too, that Paul Dudley, F.R.S., had been requested in 1737 to form a branch of the Royal Society in that town. The internationally-known botanist and the locally-prominent printer had come to know each other well by 1742 when Franklin revealed his nascent interest in science by supporting, in the *Pennsylvania Gazette*, the creation of a travel fund for his friend Bartram. The

¹⁷ *Pennsylvania Magazine, or American Monthly Museum*, I, February, 1775, pp. 53-57. For a careful study of "Franklin's Scientific Institution," that differs in emphasis and other respects from the present account, see Dorothy Grimm in *Pennsylvania History*, XXIII (1956), 437-462.

¹⁸ John Bartram to Peter Collinson, 1739, fragments in Bartram Papers, Historical Society of Pennsylvania (HSP), I, 38; III, 9, printed by Francis D. West in *Pennsylvania History*, XXIII (1956), 463-466; Darlington, *Memorials*, 132.

botanist's dream of an academy appealed to Franklin, who wrote out "our Proposals" and published them May 14, 1743, in a broadside entitled *A Proposal for Promoting Useful Knowledge among the British Plantations in America*.¹⁹

The American Philosophical Society was organized in 1744 by Franklin, Bartram, and Dr. Thomas Bond with great hopes and enthusiastic encouragement from both sides of the Atlantic. By 1745, however, it was languishing, and John Bartram wrote disconsolately to Colden on April 17: "most of our members in Philadelphia embraces other amusements that bears a greater sway in their minds." Two years later, the organization had ceased to exist.²⁰

The end of this learned body by 1746 has been attributed with considerable reason to the outbreak of the war with France and the failure of some local members to give over their pursuit of wealth and the spending of it in luxurious living and display. In addition, there seems to be an even weightier explanation: the objectives set forth in "our Proposals" appealed chiefly to the devotees of natural history, but, as Collinson pointed out to Bartram in 1739, the Philadelphia members of the Library Company were not merely well equipped with apparatus but they had been providing the space, the proper conditions, and the leadership expected of an academy. Further, it is more than probable that after 1742 advanced age or illness kept Joseph Breintnall away from his good work, which would explain why so prominent a natural philosopher was not listed among the members of the short-lived American Philosophical Society. After Breintnall's death in April 1746, Benjamin Franklin succeeded his friend as secretary of the Library Company; henceforth, for the first time, he corresponded with Collinson and received from him regularly "the earliest Accounts of every new European Improvement in Agriculture and the Arts, and every Philosophical Discovery." The present writer is convinced that the quick shift of interest away from natural history to experi-

¹⁹ *Letters and Papers of Cadwallader Colden*, in New-York Historical Society, *Collections* (1918-), I, 272; II, 146, 208, 211, 247, 280; Darlington, *Memorials*, 142; Raymond P. Stearns, *Science in the British Colonies of America* (Urbana, 1970), 487; *Pennsylvania Gazette*, Mar. 10, 17, 1742; *Pennsylvania History*, XXIII (1956), 464-466; *Franklin Papers*, II, 380-383.

²⁰ John Bartram to Cadwallader Colden, Apr. 7, 1745, Boston Public Library. Italics mine.

mental science (or physics) at this time by the secretary and his associates was because those "*other amusements*," of which John Bartram complained, bore "a greater sway in their minds." In any event, the compelling desire to have an intercolonial philosophical society vanished as the group became totally absorbed in learning about the new electrical fire.²¹

Benjamin Franklin, along with certain members and several fellow workers, made the Library Company the unquestioned scientific and organizational center of America between May 1744 and June 1757, when the secretary departed for England. There was no institution to compare with it at home or abroad. The "outer room" at the State House became the scene of intense activity as these Philadelphians turned it into a workshop or kind of laboratory for philosophical and practical experimenting. Dr. Archibald Spencer introduced these eager men to the latest scientific fad by performing (albeit somewhat imperfectly Franklin later thought) some electrical experiments during a course of lectures, which were twice given at the State House between May and July 1744.²²

The most pronounced impetus for undertaking the "Philadelphia Experiments," however, came from overseas when Peter Collinson, in the second half of 1745, sent to the Library Company a copy of *The London Magazine* containing an account of recent German electrical discoveries, together with a "Glass Tube" and directions for using it. Franklin was fascinated as he read the article, and soon three other shareholders in the Library—Thomas Hopkinson, Philip Syng, and Lewis Evans—and the exceptionally perceptive Baptist minister, Ebenezer Kinnersley, were devoting most of their leisure time to devising and constructing the instruments and equipment

²¹ Peter Collinson had written to John Bartram in 1739 about the latter's proposal to found a philosophical academy in Philadelphia: "Your Library Company I take to be an essay towards such a Society." Darlington, *Memorials*, 132, 330; *Colden Papers*, III, 31, 34, 69, 143, 160, 330; Bartram to Colden, Apr. 7, 1745, Boston Public Library.

²² All nine of the Philadelphia members of the ill-fated American Philosophical Society on Apr. 5, 1744, also belonged to the Library Company. *Franklin Papers*, II, 406, 451n.; *Pennsylvania Gazette*, Apr. 26, May 3, July 26, 1744; Carl Bridenbaugh, ed., *Gentleman's Progress: The Itinerarium of Dr. Alexander Hamilton, 1744* (Chapel Hill, 1948), 189; *Franklin Autobiography*, 196; *Maryland Gazette*, Jan. 17, 1760; J. A. Leo Lemay, "Franklin's 'Dr. Spence,'" *Maryland Historical Magazine*, LIX (1959), 199-216.

needed for performing the experiments, which they proceeded to carry on from 1746 to 1749; the gift to the library of a complete, new electrical apparatus by the Proprietors in 1747 greatly aided them in their undertaking.²³

The results of this work, which Benjamin Franklin dutifully reported to Collinson in a series of epoch-making letters, reveal among other things that the astounding success was achieved by an organized or group effort of members of the Library Company made in the "outer room." Its theorist and chief experimenter informed the London philosopher on March 28, 1747, that "he was never before engaged in any study that so totally engrossed my attention and my time as this has lately done"; and again, "If there is no other Use discoverd of Electricity . . . it may *help to make a vain Man humble*." In a later letter, dated April 29, 1749, he admitted to Collinson that the members of his group were still "Chagrin'd a little that We have hitherto been able to discover Nothing in this Way of Use to Mankind." After 1756, however, he was able to put philosophy to use with his lightning rod.²⁴

At London in 1751, Edward Cave published, with a preface by the eminent and influential Friend, Dr. John Fothergill, *Experiments and Observations on Electricity, Made at Philadelphia in America, By Mr. Benjamin Franklin, and Communicated in several Letters to Mr. P. Collinson of London F.R.S.* By initiating this project, Peter Collinson introduced both the City of Philadelphia and its leading citizen to the enlightened public, and within a few years both place and man had become famous throughout the Western World.

At the same time the news was being spread up and down the American colonies. Samuel Dömjen, a Transylvanian who had studied at Oxford and whom Franklin had instructed in the performing of electrical experiments, set out on a profitable lecture tour to Maryland, Virginia, North Carolina, and Charleston in 1748; later he went on to Havana and Jamaica. Two members of the library coterie, Ebenezer Kinnersley, in 1749 and 1753, and

²³ "An Historical Account of the Wonderful Discoveries Made in Germany &c. Concerning Electricity," *The Gentleman's Magazine*, XV, 193-197; *Franklin Papers*, III, 118, 156; IV, 9; XVII, 65-66.

²⁴ *Franklin Papers*, III, 118-119, 171, 364-365.

Lewis Evans in 1751, further popularized the electrical discoveries from Boston to South Carolina and in the West Indies.²⁵

The excitement generated in Europe and America by the "Philadelphia Experiments" ought no longer to be permitted to obscure other philosophical undertakings at the Library Company during this same period or the numerous practical benefits to colonial society that originated in the "outer room." We do not contend that the directors carried out a set program, but we do insist that given the excellent collection of books, the use of the room, the apparatus and cabinet in it, the opportunity thus afforded for men with ideas to meet and try them out experimentally with like-minded persons, the ready access to the Philadelphia press, and the organizing talents and potentials for leadership in the membership, the Library Company actually did meet all of the requirements of a learned academy. Furthermore, the guiding spirits in many of the enterprises were Quakers, the conspicuous exception being Benjamin Franklin.

When the principal activities at the Library Company are merely listed, they are still impressive. Of prime importance were the contributions of the members to the geography and cartography of America. In 1741, Lewis Evans and Thomas Godfrey determined the meridian of their city, and on *A General Map of the Middle British Colonies*, 1755, Evans made Philadelphia the first meridian of America because of its central position and also "because it far excels in the Progress of Letters, mechanic Arts, and the public Spirit of the Inhabitants." On maps of 1749, 1750, and 1752, as well as that of 1755, he incorporated much new data about the western country that he had gathered on a journey to Onondaga in 1743 in the company of John Bartram and Conrad Weiser, the Indian agent. Requests by many Englishmen to read Bartram's "plain yet sensible" journal of this trip impelled Collinson to arrange for its publication at London in 1751. A year later, the surveyor general of Pennsylvania, Nicholas Scull (one of the first shareholders), joined with George Heap in bringing out *A Map of Philadelphia and Parts Adjacent*, and in 1759 appeared Scull's

²⁵ *Ibid.*, IV, 480n., 481; Bridenbaugh, *Rebels and Gentlemen*, 327-328, 331-332, 355; Shippen Papers, I, 131, HSP.

Map of the Improved Part of Pennsylvania, which contained a more accurate delineation of the western settlements than that of Evans.²⁶

Benjamin Franklin, the printer-turned-philosopher, made an outstanding contribution to useful knowledge when, in 1744, he issued his account of the Pennsylvania fireplace, which he had devised in the winter of 1739/40. The final production of the stoves was truly a cooperative venture by members of the Library Company, for Robert Grace built the fireplaces at his Warwick Furnace in Chester County from drawings made by Lewis Evans, who also sold the stoves in the city and its environs. Franklin introduced Peter Kalm, the Swedish naturalist, to the library, and Lewis Evans prepared a very good map of the Middle Colonies in 1750 for that scientist's book of travels. The idea that American population doubled every two-and-a-half decades was being discussed all over the colonies during the forties, and it is difficult not to believe that Franklin brought up the subject with the directors and other members at the library, as well as in the Junto, before 1751 when he wrote *Observations on the Increase of Mankind, Peopling of Countries, etc.*, which was first published at Boston in 1755. The essay was a *tour de force* in the field of population studies; it also adumbrated the theory of the influence of the frontier in American development.²⁷

At mid-century, as Quaker ideals and humanitarian impulses were more and more being directed toward realities, members of the Library Company figured prominently in the founding of a new association of profound significance to the city and the colonies. The Anglican Dr. Thomas Bond first conceived the plan to erect a hospital for the sick and insane poor similar to those of London and Paris, but, because his scheme was "a novelty in America," he failed to get the necessary backing. Benjamin Franklin, a genius in

²⁶ Library Company, Minutes, I, 145; Whitfield J. Bell, Jr., ed., *A Journey from Pennsylvania to Onandaga in 1743 by John Bartram, Lewis Evans, and Conrad Weiser* (Barre, Mass., 1973); Lawrence H. Gipson, *Lewis Evans* (Philadelphia, 1939), especially the five maps at the end of the volume.

²⁷ *Pennsylvania Gazette*, Nov. 14, 1745; *Franklin Papers*, II, 419-446, and the diagrams of Lewis Evans facing pp. 432, 445; Adolph B. Benson, ed., *Peter Kalm's Travels in North America* (New York, 1964), I, 17, 25; II, 652-654; *Franklin Papers*, IV, 225-234; *PMHB*, XVII (1893), 273; [Benjamin Franklin], *Observations on the Increase of Mankind, Peopling of Countries, &c.*, printed with William Clarke, *Observations on the Late and Present Conduct of the French . . .* (Boston, 1755; reprinted at London, 1755).

political maneuvering, proposed to the Assembly that it should appropriate £2,000 if a like amount could be raised by voluntary contributions. Through the effective use of the press, over £2,750 was donated; the contributors immediately appointed managers to carry out the project. A fellow member of the Library Company, the master builder Samuel Rhoads, drew up the plans that provided the institution with the most modern type of hospital then known. Although Pennsylvanians of all faiths were among the 693 "Contributors" (1751-1776), Friends made up a large majority of them.²⁸

Back in 1749, Dr. Thomas Bond and a group of Anglicans joined with Benjamin Franklin, several Presbyterians, and two Quakers as trustees in founding an academy, which opened in 1751; in 1754 it became the nonsectarian College of Philadelphia. At this time the Society of Friends did not support higher education; its leading members rightly feared that the new institution would become a political pawn. Franklin saw to it that the "Mathematical School" of the Academy had the necessary scientific instruments and "a middling apparatus for experimental philosophy." The first master was a mathematician, Theophilus Grew, and the presence of Ebenezer Kinnersley, Francis Alison, and William Smith on the faculty meant that natural philosophy would be stressed at the College. In a short time, this institution, under Provost Smith's urging, began to displace the Library Company by offering lectures and providing space for experimenting with its apparatus. The opening of the Medical School in 1765 brought about increased emphasis on the biological aspects of science and a linking of the school to the Pennsylvania Hospital through Dr. Thomas Bond's clinical lectures in 1766.²⁹

In June 1757, Benjamin Franklin left Philadelphia for England, and before the outbreak of the War for Independence he was back in his "darling" Pennsylvania for only two years, 1762-1764. The

²⁸ "Some Account of the Pennsylvania Hospital, 1754," *Franklin Papers*, V, 283-330; Thomas G. Morton and Frank Woodbury, *The History of the Pennsylvania Hospital* (rev. ed., Philadelphia, 1897), 1-36, and appendixes; [Benjamin Franklin], *Continuation of the Account of the Pennsylvania Hospital* (Philadelphia, 1761), 42, 44, 62, 66, 71-77; Bridenbaugh, *Rebels and Gentlemen*, 199-200, 244-247, 274-275, 290-291.

²⁹ Du Simitière Scraps, 1752, No. 9, Library Company of Philadelphia, on deposit at HSP; *Maryland Gazette*, Mar. 21, 1754; Nov. 4, 1773; *Pennsylvania Gazette*, Nov. 24, 1743; Bridenbaugh, *Rebels and Gentlemen*, 57-63.

great work of organizing the citizenry for putting philosophy to use had been accomplished by this time; his co-workers carried on some remarkably successful activities right down to 1776. In like fashion, Franklin's Quaker associates had pretty well made their contributions to these same undertakings by using with great effect the overseas facilities and personnel of the marvelously organized Society of Friends. The alliance of meetinghouse and printing house—of the Friends and Franklin—had produced not only the Library Company of Philadelphia but a number of offshoots from it, voluntary associations of immeasurable benefit to the public. The Library Company had now, however, served its purpose as a laboratory and museum; after 1769 the responsibility for organized scientific work in Philadelphia was assumed by the new American Philosophical Society founded that year.³⁰

So well had the Philadelphians managed to put philosophy to use that their achievements were recognized and acclaimed in England and throughout the Western World. From Naples on May 18, 1776, Abbé Ferdinando Gagliani advised his friend Mme. d'Épinay, who was planning a change of residence in Paris: "The epoch has arrived of the total collapse of Europe, and of transmigration to America. Everything here turns into rottenness—religion, laws, arts, sciences—and everything hastens to renew itself in America. This is not a jest; . . . I have said it, announced it, preached it for more than twenty years, and I have constantly seen my prophecies come to pass. Therefore, do not buy your house in the Chaussée d'Antin; you must buy it in Philadelphia."³¹

Providence, R. I.

CARL BRIDENBAUGH

³⁰ For the period after June, 1757, see in general, Bridenbaugh, *Rebels and Gentlemen*.

³¹ Abbé Gagliani to Mme. d'Épinay, from Naples, May, 18 1776, in *Abbé Ferdinand Galiani [sic] Correspondence avec Mme. d'Épinay . . .*, Lucien Perey and Gaston Maugras, eds. (Paris, 1889), II, 443; *Franklin Papers*, XVII, 126.