

## THE QUAKER CONTRIBUTION TO HIGHER EDUCATION IN COLONIAL AMERICA

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THE sesquicentennial of Moravian College is a pleasant and timely reminder that the educational institutions founded by those who accepted William Penn's invitation to aid him in setting up his Holy Experiment have reached maturity. But maturity is, at least with human beings, too often a time when the dreams of youth are given up and there is a settling down to the routine acceptance of what is usual and conventional. I welcome this symposium which calls our attention to the colonial period when everything was fresh and growing in the new world, and educational aims were beginning to take freer form and new directions. But this backward look will, I trust, be only a preparation for a forward look. There is hardly an institution of higher learning in America today which is not re-examining its methods and objectives, and certainly one element in that examination must be a recovery of at least some of the hopes and ideals of those who first colonized this country and gave it the religious outlook which it has never quite lost. I congratulate Moravian College on its century and a half of achievement in preserving so many of the hopes of its founders.

My assignment in today's program is to review the Quaker part in colonial literacy and learning. I would like to begin with an anecdote from the year 1777.<sup>1</sup> Soon after the battle of Brandywine in the Revolutionary War a group of British officers, standing outside a wayside inn, criticized the inhabitants of this country as ignorant and boorish. The innkeeper, seeing James Gibbons,

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<sup>1</sup>Futhey and Cope, *History of Chester County, Pennsylvania* (Phila., 1881), 566.

a Quaker farmer, driving up the road, made a wager with the officers that the first farmer passing the house could speak more languages than all of them together. When James Gibbons stopped, as usual, to water his team, he was saluted in French by one of the British soldiers. He answered politely in the same language. Another officer asked him in Spanish if he were a Frenchman. He replied in Spanish that he had been born in Chester County, Pennsylvania, and had never been in France. A third officer aimed at him a quotation from Horace, the Roman poet, to which he replied with another quotation from the same poet. James Gibbons, by this time perceiving that he was on trial, then routed them all with a volley of Greek which none of them understood.

Although James Gibbons<sup>2</sup> was not an average Quaker farmer, this story raises a question. Why was he, and why were so many other Quakers, elaborately educated when the Quakers had no colleges of their own and did not, with few exceptions, attend the colleges of others. I have used a farmer as an illustration of an educated Quaker, although it might have been more natural to find examples of erudition among the cultivated Quaker merchants of Philadelphia.

Let us take for granted that the term "higher education" in the title of our symposium does not necessarily apply to the kind of training obtained through a scholarly routine at a conventional academic institution. I understand that the Moravians, like the Quakers, and unlike the Congregationalists and Anglicans, did not set up colleges on arriving in the new world. The Quaker delay in this respect can be ascribed to at least two causes—they did not have a professional ministry which required a specific type of college or university training and, like the Moravians and other pietistic sects, they emphasized feeling and will in religion, rather than specific knowledge. The Society of Friends had, it is true, a ministry which could be exercised by any lay person, man or woman, old or young, who felt an inward call from the Holy Spirit to speak in a meeting for worship. Those who frequently exercised this gift were called "recorded" or "recommended" ministers because the meetings to which they belonged had, in a recorded minute, acknowledged the fact that theirs was an acceptable gift.

<sup>2</sup> James Gibbons (1736-1823) lived on a farm near what is now Westtown, Pa. At his residence he opened a school for instruction in Latin, Greek, and French. Some distinguished persons were among his pupils.

The recognition of this gift bore no relation to the education of the recipient, though it was generally realized that intelligence, and especially knowledge of the Bible, made the minister a fitter instrument through which God could work. Higher education, as the Quakers interpreted the word "higher," meant education in the school of the Holy Spirit. Every other type of education was held in lower esteem. One of the early Quakers, John Roberts, was told by a sympathetic Anglican bishop, "John, I advise you to take care you don't offend against the higher powers." By this he meant officers of the government who were persecuting the Quakers. John Roberts replied, "I like thy counsel very well and intend to take it. But thou knowest God is the higher power, and you mortal men, however advanced in this world, are but the lower power."<sup>3</sup> In this sense the Quakers used the word "higher" in education, as well as in politics.

But the Quaker hesitation in respect to higher education, as that term is usually understood today, had a deeper root in the kind of religion exemplified by the Society of Friends, than simply the fact of dependence upon a lay ministry. Quakerism arose in the middle of the seventeenth century, near the end of the Puritan revolution in England, as a revival of the prophetic type of religion. The Quakers reiterated the ancient prophetic protests against external forms, whether creedal, ritualistic, or traditional, which had become routine and were no longer genuine outward expressions of inward spiritual states. The Quaker emphasis on feelings which condition the will, rather than on beliefs regarding doctrine and accounts of historical events, caused them to believe that the highest type of education resulted from an inward experience, rather than a training which could be externally imposed. We find many warnings in Quaker literature against what was called "airy notions." Genuine religion cannot be taught by man. It must be received through the gift of the Holy Spirit. In 1754 a Quaker doctor, author of several medical treatises, wrote in his diary regarding his fondness for study, "An evidence of greater propensity to the tree of knowledge than to the tree of life: but I trust this hath been amended."<sup>4</sup>

Higher education in the usual sense might lead to too much dependence on the intellect, and intellect, to use the Quaker words,

<sup>3</sup> *Memoirs of John Roberts* (Phila., 1852), 67.

<sup>4</sup> *A Spiritual Diary*, John Rutty, M.D., 1796, 15.

is "afloat on the surface." The Divine Source of truth, the Spring of eternal life, of which Jesus spoke to the woman of Samaria, is in the infinite depth of the soul. Not until spiritual life began to weaken and the way to the inner fountain had been largely lost did the Quakers, late in the nineteenth century, resort to Sunday Schools for help. To use the prophet Jeremiah's figure, they turned from the springs of living water and relied on cisterns.

But cisterns, as we know, have their own important function. We cannot do without them, especially in a time of drought. It is wrong to think that because of emphasis on the inward knowledge which comes from God alone, the Quakers were opposed to human learning. The insufficiency of head-knowledge did not mean that it was despised or considered harmful. It meant only that head-knowledge was secondary to heart-knowledge. The Quakers depended on the guidance of the Inward Light, but it is not often that an individual is absolutely sure of his guidance. His apprehension must be constantly checked and tested by the Scriptures and by the guidance which has been received by prophets, seers, and scholars in all ages. External secondary standards included also the recorded sayings of non-Christians, as well as Christians, for the Quakers believed that the Divine Light from God had shown, however dimly, in every human heart since the beginning of creation. We find Quaker scholars quoting from the Greek and Roman classics, and even from Mohammedan authors in defense of their beliefs.<sup>5</sup> The church fathers during the first three centuries of Christianity are frequently called to witness, as are the early reformers, Luther, Calvin and others whose message at the beginning was often congenial to the Friends. Later these very reformers were driven to harsh, authoritarian methods through fear that liberty of the Spirit would result in religious anarchy. Quakers were aware of reformers prior to the Reformation, the Moravians, for example. They also knew about the Anabaptists. From Germany some members of these groups fled to England and planted seeds there which later grew to nourish the Quaker movement.<sup>6</sup>

Nature, too, was studied by members of the Society of Friends

<sup>5</sup> For examples see Barclay, *Apology for the True Christian Divinity* (London, 1678), Prop. V and VI, Sec. XXVII.

<sup>6</sup> R. Barclay, *The Inner Life of the Religious Societies of the Commonwealth* (London, 1877), Chaps. II-IV.

in colonial America as an outward revelation of truth which could, like other revelations, bring man to a knowledge of the Creator. In spite of the absence of higher education in the sense in which we usually employ the term, there were scholars and scientists of distinction among the Quakers. It was no accident that Philadelphia, though it was the capital of the last colony to be founded, became the cultural center of colonial America. Three institutions contributed to this pre-eminence: the American Philosophical Society, the Library Company, and the Pennsylvania Hospital. Each was a pioneer in its field and the Quakers played a decisive part in each.

An extensive system of Quaker schools helped to lay the broad foundation of literacy which made American democracy possible. The Quakers were more widely distributed than any other religious group. They became for a time the strongest political influence in Rhode Island, New Jersey, Pennsylvania, Delaware, and North Carolina.<sup>7</sup> There were also many Friends meetings in New England, New York, Maryland, and Virginia. Only where the Quakers were particularly strong; that is, in Rhode Island, Delaware, and Pennsylvania, was there at no time an established church. Penn's state, a model of a religiously liberal government, was closer to the present practice of the United States of America than was the theocracy of New England or the aristocracy of Virginia.

When the Society of Friends arose in England during the time of Cromwell, a number of university men were among its original adherents, although the great majority were farmers, artisans, and tradesmen. William Penn and Robert Barclay had received university education in England and Scotland respectively, as well as theological training in Paris. They were the two chief defenders of the faith in the realm of scholarship. But there were also a number of others, some of whom had been clergymen, who,

<sup>7</sup> For this and other information regarding the influence of the Quakers see *The Quakers in the American Colonies* (London, 1923) by Rufus M. Jones, Isaac Sharpless, and Amelia Gummere. In Rhode Island the governorship of the colony was occupied by Quakers for thirty-six terms. Until 1701 the Quakers were the only organized religious group in the Carolinas, and John Archdale, a Quaker, was governor, 1694-97. In 1703 there was a Quaker majority in the North Carolina Assembly, but in 1710 they lost their political influence because all office holders were required to take an oath. The extent of Quaker political influence in Pennsylvania, New Jersey, and Delaware is better known and need not be noted here.

in order to earn a living in a lay society, became teachers and set up schools. Quaker children received from them training in Latin, Greek, and mathematics, as well as in practical arts. In Pennsylvania two of the leading university men were Thomas Lloyd,<sup>8</sup> leader of the Welsh Quakers, who was educated at Oxford and Francis Daniel Pastorius,<sup>9</sup> leader of the German Quakers and founder of Germantown, who was educated at Altorf, Strasburg, Basel, and Jena. These two men crossed the Atlantic Ocean on the same ship and conversed with each other in Latin, that being the only language which they had in common.<sup>10</sup> These and other early leaders set a standard of achievement to which others later aspired. But, though the Quakers founded no colleges in colonial times, the distribution of responsibility due to their democratic form of church government required an educated membership. If there were few Quakers of the highest educational attainment, there were even fewer who were poorly educated. This applied to women as well as men; the Quaker Schools educated both sexes.

Schoolhouses were built in the new world as early as meeting-houses. Sometimes the schoolhouses were built first, because meetings for worship could be held in homes. References to Friends schools occur in some meeting minutes of the seventeenth century. A hundred years later practically every meeting had its school. William Penn's Frame of Government provided for the education of children up to the age of twelve "and that then they be taught some useful trade or skill." This ideal proved too high and was given up, but the Friends schools educated the poor as well as the rich. The Quakers became a minority in Pennsylvania, but they were kept in power by the votes of the German immigrants who sympathized not only with their pacifism, but also with their educational ideals. The relation between schools and government remained close until 1756 when pressure from England, due to the French and Indian Wars, forced the Quakers to give up their control of the government.

The first Quaker schoolmaster in Philadelphia was engaged by

<sup>8</sup> Thomas Lloyd (1640-1694) of Dolabran in Montgomeryshire became president of the Provincial Council of Pennsylvania.

<sup>9</sup> Francis Daniel Pastorius (d. 1719) was schoolmaster of Friends' schools in Philadelphia and Germantown, 1698-1718.

<sup>10</sup> Sharpless, *Political Leaders of Pennsylvania* (New York, 1919), 69.

the Provincial Council in 1683.<sup>11</sup> In 1701 William Penn granted a charter to a more advanced school and the "Overseers of the Public Schools," as they were called, established four more. One of these was the Latin and Greek Grammar School or Classical School. Barclay's *Apology*, the chief exposition of Quaker principles, published in Latin 1676, was read by the pupils of this school. The New Testament was studied in both Latin and Greek. Under Robert Proud, the historian, the rules required that ordinary conversation at school be carried on in Latin.



ROBERT PROUD (1728-1813)  
*Master of the Friends Academy, 1761-  
1770, 1780-1790. Author of "The His-  
tory of Pennsylvania"*

At least three Philadelphia schoolmasters, Francis Daniel Pastorius, Anthony Benezet, and Charles Thompson, attained some eminence. It was Pastorius and the Friends of Germantown who issued the first protest against slavery in America. Benezet's books against slavery, as well as his writings on other subjects, had

<sup>11</sup> For this and further information regarding Quaker Schools in Pennsylvania see H. H. Brinton, *Quaker Education in Theory and Practice* (Pendle Hill, 1940, revised ed. 1949), and Thomas Woody, *Early Quaker Education in Pennsylvania* (New York, 1920).

considerable influence on both sides of the Atlantic. Charles Thompson became the secretary of the Continental Congress in 1775.

Not only the Greek and Latin languages, but mathematics of a somewhat advanced character was taught in the Classical School. In the Girls School, which was presided over for a time by Anthony Benezet, French was taught. The diaries of Sally Wister<sup>12</sup> and Elizabeth Drinker,<sup>13</sup> for example, which cover the period of the Revolutionary War, occasionally refer to French lessons.

In the better Quaker schools there is some evidence of what might be called higher education in the formal sense. If a Quaker schoolmaster was himself trained in any advanced subject, he offered instruction in it. The schools were not rigidly standardized. There were no college entrance requirements to regulate them, and each school could impart what it was in a position to offer, for example, surveying, navigation, conic sections, plane and spherical trigonometry, Christian evidences, astronomy, merchants' accounts, and natural philosophy, by which was meant physics, botany, and ornithology. Such subjects were, however, not so likely to be taught in the local meeting schools as in the private academies which began to appear toward the end of the eighteenth century. The academies later multiplied rapidly both east and west of the Allegheny Mountains.

In 1746, Philadelphia Yearly Meeting advised all its constituent meetings "to encourage and assist each other in the settlement and support of schools."<sup>14</sup> Later a Yearly Meeting educational committee was appointed to which definite annual reports were referred by all meetings. In 1750 there were forty Monthly Meeting schools in Pennsylvania and by the end of the century some seventy were listed, with about half as many more in New Jersey and a proportional number in Delaware and Maryland.<sup>15</sup> All of these fulfilled the standards of Philadelphia Yearly Meeting, which required the teachers to be of high moral quality and to have a substantial knowledge of the subjects taught. Other schools not listed were of lower grade. In New England, New York, Virginia, and the

<sup>12</sup> *Sally Wister's Journal*, Albert Cook Myers, ed. (Phila., 1902).

<sup>13</sup> *Extracts from the Journal of Elizabeth Drinker*, H. D. Biddle, ed. (Phila., 1889).

<sup>14</sup> Philadelphia Yearly Meeting Minutes, 1746, located at 302 Arch Street, Philadelphia.

<sup>15</sup> Woody, *Early Quaker Education in Pennsylvania*, 269.



Carolinas equal progress was made before the end of the century, in spite of the impoverishment of Friends as a result of the war.<sup>16</sup> Most of the Friends' schools were attended by the children of non-Quaker as well as Quaker families. Tuition was charged, but the children of poor Friends were taught free.

The education of Negroes and Indians was also an important responsibility. George Fox in 1671 had exhorted Friends to give thought to their education. This was later made the subject of an annual query addressed to all meetings in both the northern and southern colonies. Replies to this query indicated that the children of many Negroes, freed from slavery before the Revolution, were attending Friends schools. Anthony Benezet's special school for Negroes was set up in Philadelphia in 1770. The first Quaker Indian School was opened in 1796 and a number of others followed a few years later. When the public school system became general, most Quaker schools became public schools, though a few (about 38) remain Quaker schools to the present day and some became colleges.

Every Quaker school emphasized religion, not through formal instruction in the subject as such, but through a daily program which included Bible reading, reading of Quaker books, frequent attendance at meetings for worship, and the visits of Quaker ministers, often widely traveled men and women who described experiences in distant lands.

Higher education in the secular sense was for the most part a matter of individual concern. The ideal was life-long self-education. William Penn advised his children, "Have but few books, but let them be well chosen and well read, whether Religious or Civil Subjects—reading many books is but taking off the mind from Meditation. Reading yourselves and Nature in the Dealings and Conduct of Men is the truest human wisdom."<sup>17</sup>

But William Penn in his own voluminous writings discloses an acquaintance with a vast variety of learned works. As founder of Pennsylvania he was an important pace-setter. Extensive libraries including the scholarly books of the time in both classical and

<sup>16</sup> W. C. Dunlap, *Quaker Education in Baltimore and Virginia Yearly Meetings* (Phila., 1936), Zora Klain, *Educational Activities of New England Quakers* (Phila., 1928), Zora Klain, *Quaker Contributions to Education in North Carolina* (Phila., 1925), Thomas Woody, *Quaker Education in the Colony and State of New Jersey* (Phila., 1923).

<sup>17</sup> "Advice of William Penn to his Children," *Works* (London, 1771), 852.



*Friends Meeting House and Academy, Fourth and Chestnut Streets, Philadelphia, about 1789*  
*Friends Historical Library, Swarthmore*

scientific subjects were acquired by many Quakers in early Philadelphia.<sup>18</sup> Chief among them was James Logan, Penn's secretary and deputy, who bequeathed to the city of Philadelphia his 2,000 books including thirty versions of the Bible in twelve different languages. He also specialized in botany and agriculture and was interested in genetics. The Logan collection, added to by his son, remains intact and is housed in the Ridgway Library at Broad and Christian Streets. This was undoubtedly the greatest individual library in colonial America.

Isaac Norris built a special house to hold his books, a library which John Adams pronounced "very grand." John Dickinson gave to Dickinson College 1,500 books. Many of these probably belonged to the library of his father-in-law, Isaac Norris. We know from the diary of John Smith, a Philadelphia Quaker merchant, that he had read at least 250 books covering a wide range of subjects. Extensive libraries belonged to Dr. Lloyd Zachary, Francis Rawle, Anthony Benezet, and Robert Strettell. These and other private collections contained books on theology, philosophy, politics, law, science, mathematics, medicine, the practical arts, history, biography, travel, and literature. Individual Friends, particularly young tradesmen and merchants, were active in promoting library companies for their own self improvement; four were established between 1732 and 1757. Approximately half the shareholders were Friends. As early as 1686 the Quakers set up their own printing establishment and issued a succession of books, pamphlets, and epistles. By the end of the colonial period there were over thirty book stores in the thriving city of Philadelphia.

In rural districts libraries kept the farmers in touch with the kind of general learning which we are describing. Almost every Quaker meeting had a library. I have at home the printed catalog of the pre-revolutionary library close to Birmingham Meeting in Chester County, Pennsylvania, to which my ancestors belonged. The titles indicate a variety of subjects including the then current controversy concerning deism. On the whole the Quaker farmers were not interested in abstract speculation for its own sake, but only as it related to practical subjects, among which they included

<sup>18</sup> For this account of Quaker libraries in Philadelphia the author is indebted to Frederick B. Tolles, *Meeting House and Counting House* (Chapel Hill, 1948), chapters 7, 8, 9; and *Watson's Annals of Philadelphia*, Vol. III (Phila., 1900), 335-344.

religion. The standard of practicality admitted the most up-to-date books on natural philosophy or science.

A group of Quaker farmers and a few of their neighbors planning a library in Unionville, Chester County, Pa., a rural community near my home, sent out an appeal for subscriptions containing the following recommendation:

We solicit and pray all those who, having rising families or a disposition to be acquainted with religious and moral history, to aid and assist in the stimulation of this invaluable intention which will feed the mind with the food of instruction and animate the senses, from trifling amusements to matters of more sublimity and lasting enjoyment. . . . It will add energy to our states, harmonize our rude passions and promote innocent and social loquacity in arguments of weight and importance, teach men to be good husbands and fathers, women to be good wives and mothers and will pave the way to delectable tranquility, out vie all terrestrial things and calm our minds into peace and quiet.<sup>19</sup>

The influence of the Quakers on what we now think of as higher education can be seen particularly in the field of science. Almost every Quaker had a scientific hobby.<sup>20</sup> A few became scientists of note. There were three main reasons for this. Being excluded from the usual forms of recreation such as the theatre, music, art, and fiction, by their feeling that these were a waste of time and superfluous adornments, they turned to science in the belief that God's works in nature revealed something of the divine character and power. Thomas Lawſon, a Quaker schoolmaster and botanist introduced a scientific textbook which he wrote in Latin with these words: "His [God's] work within and his works without, even the least of plants, preaches forth the power and wisdom of the Creator and eyed in the sparke of eternity, humbles man."<sup>21</sup>

Penn remarks in his *Fruits of Solitude*: "An Eternal Wisdom, Power, Majesty and Goodness is very conspicuous to us through those sensible and passing forms: the World wearing the Mark of its Maker, whose Stamp is everywhere visible and the characters

<sup>19</sup> Futhey and Cope, *History of Chester County, Pennsylvania* (Phila., 1881), 310.

<sup>20</sup> H. H. Brinton, *Friends for 300 Years* (New York, 1952), 140, 149-151; *Bulletin of Friends Historical Association*, Vol. 34, 65; Vol. 37, 3, 63.

<sup>21</sup> Letter to Sir John Rodes in *Quaker Post-Bag* (London, 1910), 21.

very legible to the children of Wisdom.”<sup>22</sup> And he adds later: “It is pity that Books have not been composed for youth by some curious and careful Naturalists and also Mechanics in the Latin tongue to be used in Schools, that they might learn things with words.”<sup>23</sup> This wish of Penn was to be fulfilled in the Quaker schools which were the first to give science a recognized place in their curriculum.

A third reason for the Quaker interest in science was this: the religion of the Society of Friends was primarily based on immediate experience rather than on the authority of book, church, or tradition. Science, also, was based on experience, though of a different kind. Therefore, Quakerism and science were akin.

Science could teach moral lessons. Jessie Kersey, a Chester County potter and farmer now highly regarded for the artistic quality of his work, remarks in his Journal:

My attention was next arrested by reading a passage in Buffon's Natural History. The subject was the fluidity of matter, and its change under the different degrees of heat and cold. Soon, however, my thoughts passed the boundary of natural elements and entered into a comparison of these with spiritual realities. By heat it appears that matter is rendered fluid and is consequently less subject to the laws of attraction. By cold it is made dense and brought back again to the earth. So by the warming influence of the love of God, the soul is expanded and drawn out of the government of earthly attraction. By the chilling influence of the world's friendship, it is contracted and brought back to the earth.<sup>24</sup>

George Fox, in 1668, helped to establish the first two Quaker schools to teach “whatsoever things were civil and useful in the creation.”<sup>25</sup> This practical note in Quaker education was never lost. Fox and Penn planned a “garden schoolhouse” near London with all kinds of plants for botanical study. Persecution prevented the completion of this plan, but Fox donated the plot of land assigned him by William Penn in Philadelphia for a similar use. Unfortunately, it was never used for this progressive purpose. Penn wrote to his wife Gulielma regarding the education of their

<sup>22</sup> Penn, *Works* (London, 1771), 224.

<sup>23</sup> *Ibid.*, 724.

<sup>24</sup> *Kersey's Narrative* (Phila., 1851), 67.

<sup>25</sup> *The Journal of George Fox*, J. L. Nickalls, ed. (Cambridge, 1952), 520.

children: "I recommend the useful part of mathematics, as building houses or ships, measuring, surveying, dialing, navigation, but agriculture is especially in my eye."<sup>26</sup>

Moses Brown, founder of the Friends Boarding School at Providence, Rhode Island, and one of the founders of Brown University, expressed in a letter of 1784 the practical ideal of Quaker education:

With respect to the education of our youth I would propose as the fruit of forty-one years of experience, after English grammar, arithmetic, mensuration, the use of the scale and compasses—a short plain set of merchants' accounts—a general knowledge of Geography, the Mechanic Powers, the elements of Astronomy, the use of the Microscope for discovering the minutest parts of creation, with which a knowledge of the magnitude of the heavenly bodies would enlarge their ideas: such parts of history as would convey a right idea of the corruption of the human heart, the true nature of the effects of War, the advantage of Virtue.<sup>27</sup>

Westtown Boarding School was established in 1799. In its curriculum special emphasis was laid on mathematics. Four of the early masters wrote textbooks on this subject.<sup>28</sup>

The announcement for New Garden Boarding School in North Carolina expresses the following educational ideal:

A knowledge of the principles and uses of created things has a tendency to expand the view, enlarge the mind and raise the affections to the great Creator: besides an acquaintance with the nature and uses of rocks, earths, minerals, etc., may, it is believed, be of material advantage both to the mechanic and the agriculturalist.<sup>29</sup>

These three Boarding Schools in Pennsylvania, Rhode Island, and North Carolina were established on the pattern of Ackworth School in England soon after the colonial period. Their educational objectives were the culmination of plans and tendencies which existed earlier.

<sup>26</sup> Penn, *Works* (London, 1771), xxx.

<sup>27</sup> Zora Klain, *Educational Activities of New England Quakers* (Phila., 1928), 10.

<sup>28</sup> Enoch Lewis, John Gummere, Benjamin Hallowell, Samuel Alsop.

<sup>29</sup> Gilbert, *Guilford, A Quaker College*, 1937, 31.

Jonathan Dymond's *Essays on Morality* (1829) was used as a textbook in Quaker boarding schools throughout the 19th century. This was undoubtedly an influence on the educational theories of the many teachers prepared in these schools. Dymond emphasizes the study of nature from a religious, as well as practical standpoint. "It is," he says, "of less consequence to a man to know what Horace wrote or to be able to criticize the Greek anthology, than to know by what laws the Deity regulates the operations of nature and by what means those operations are made subservient to the purposes of life."<sup>30</sup>

This was revolutionary doctrine in a day when the education of a gentleman was confined largely to Latin, Greek, and mathematics. The useful arts were in those days taught only to apprentices in the practical trades.

The achievements of several Quaker botanists of the colonial period belong well within the limits of higher education. The best known were John Bartram (1699-1777), his son William Bartram (1739-1823), and Humphrey Marshall (1722-1801). All three were widely known for their publications. Thomas Story, Penn's Master of the Rolls and Keeper of the Great Seal, an eloquent minister, was not only a botanist, but anticipated later scientific knowledge by showing that the presence of fossils indicated that the generally accepted six days of creation were long periods of time.<sup>31</sup> Thomas Gilpin (1727-1778), a Quaker zoologist, made careful observations of insects and fish.

Of the American Philosophical Society, the scientific organization founded by Benjamin Franklin in 1743, more than half the founders were Quakers. It was due to the financial support and active interest of Quaker businessmen quite as much as to the efforts of Franklin himself that Philadelphia had the first American scientific society. Quaker doctors should also be listed among the learned. Barred by religious tests from attending Oxford and Cambridge, they went instead to Edinburgh and Leyden. Dr. Thomas Cadwalader (1707-1779) gave the first formal course in medical science in the American colonies.<sup>32</sup>

<sup>30</sup> Jonathan Dymond, *Essays on Morality* (New York, 1834), 199.

<sup>31</sup> Thomas Story's Letter to James Logan, 1738, quoted in R. M. Jones, *Children of the Light* (London, 1909).

<sup>32</sup> For information regarding Quaker doctors the writer is largely indebted to F. B. Tolles, *Meeting House and Counting House* (Chapel Hill, 1948), 222-229.

Dr. John Morgan founded the first medical school in the colonies and Dr. John Jones wrote the first American textbook on surgery. Dr. Thomas Bond, who enlisted the support of Franklin and the financial aid of the Quaker merchants, was mainly instrumental in establishing the Pennsylvania Hospital. This was the first general hospital in the American colonies. Its board of managers was made up largely of Friends and the institution remained in Quaker hands until long after the Revolution. Though the Quaker majority in the legislature refused to vote money for military purposes, the Quakers were generous in support of philanthropic causes.

As science, because of its empirical and practical character, was congenial to the Quaker type of religion with its emphasis on experience and simplicity, autobiography rather than abstract and theoretical discussion was the typical Quaker form of writing. The Quaker journals dealt with experience rather than theories. What the writer held to be truth was set forth with plain-spoken accuracy. While these journals cannot generally be classed as a high form of literature, they should not be omitted from a discussion of "higher education" for they were used in schools and homes to instruct young Quakers in the way of truth by example rather than by precept. The Journal of John Woolman, the New Jersey tailor, is, because of its matter and style, an English classic. There were many other journals of equal importance though not of equal beauty. Of perhaps a hundred published journals written at least in part during the colonial period mention should be made of those by Job Scott, William Savery, Joseph Hoag, David Ferris, Rebecca Jones, Elizabeth Collins, Elizabeth Ashbridge, John Churchman, Richard Jordan, Jessie Kersey, and Hugh Judge. These writings portray a degree of education high in the school of the Holy Spirit.

One thing more should be mentioned. It is of first importance. For the consistent and concerned Quaker the Bible was the main source of education in the highest sense of the word. No modern course in a theological seminary could give a student a more thorough knowledge of the contents of the Bible than was possessed by many Friends who spent a period of quiet retirement each day, reading the Bible and meditating in silence on its contents. Such persons exhibited a degree of wisdom and refinement of manners that was not exceeded by university graduates.



This paper is hardly more than an enumeration of items which can perhaps be called contributions toward "higher education." The characteristic Quaker contribution was in the field of practical and scientific subjects. Equalitarian ideas precluded any education which tended to create a special class either of cultured gentlemen or religious specialists. But, paradoxically, it was the later growth of science and technology with its excessive concern with the outward, which left little room for a religion of the Quaker type primarily concerned for the inward. This has undoubtedly been one cause of the decline of Quakerism in the 19th century. It may be that the time has now come for a renewal of the cultivation of those inward feelings and attitudes of will which are given first place in every Quaker statement of educational objectives. Without the right inward motives our science has neither purpose nor direction. A multitude of voices are reminding us of the enormous danger we face because our technological creations can be used for destruction as well as construction. All religions have emphasized, in varying degrees, the importance of a rightly ordered heart and will. The founder of Christianity laid supreme emphasis on the motive rather than the act. If life on this planet is to continue, the contribution of all religious groups to lower as well as higher education in the twentieth century must re-affirm this central doctrine of our Christian religion by finding ways to educate not only the intellect, but also the feelings and the will.