ESTEEM, REGARD, AND RESPECT FOR RATIONALITY: JOSEPH PRIESTLEY'S FEMALE CONNECTIONS

Kathleen L. Neeley, University of Kansas M. Andrea Bashore, Joseph Priestley House

Introduction

Throughout the 18th century, the watercolor portrait miniature was held in high esteem as a depiction of intimate human relationships. These 'limnings' (from the Latin luminare, meaning to give light) as they were known were commissioned and painted as documents of introduction between people, cherished personal mementoes, or memorials. This paper will 'limn' the lives of some of those females—students, acquaintances, friends and family—whom Joseph Priestley held in high regard and treated as rational beings, and illuminate their public and personal relationships.

In his letters, books, pamphlets, and memoirs, Joseph Priestley rarely mentioned his female family members, friends, and acquaintances. Nevertheless, if we carefully read Priestley's works and those of his associates, it is possible to compose brief views or sketches of some of these women often invisible in the written historical record.

Although Joseph Priestley is not known for his vocal advocacy of women's rights, his actions as a husband, father, friend, minister, teacher, and scientist, as described in these limnings, will illustrate his personal esteem, regard, and respect for the rationality of women.

Mary Swift Priestley, Mother

In 1732, Mary Swift married cloth dresser Jonas Priestley at Fieldhead in Birstall Parish near Leeds. Mary and

Jonas' union produced six children of whom Joseph Priestley, born in 1733, was the eldest. Joseph was sent as a young boy to live with his maternal grandfather and remained on the farm with him until his mother died, when he was six years old. Even though Joseph had spent such a short time in his mother's care, Mary Swift Priestley was remembered by her son who wrote about her in his *Memoirs* (1):

It is but little that I can recollect of my mother. I remember, however, that she was careful to teach me the Assembly's Catechism, and to give me the best instructions the little time that I was at home. Once in particular, when I was playing with a pin, she asked me where I got it: and on telling her that I found it at my uncle's, who lived very near to my father, and where I had been playing with my cousins, she made me carry it back again; no doubt to impress my mind, as it could not fail to do, with a clear idea of the distinction of property, and of the importance of attending to it.

Sarah Keighley, Aunt

Sarah Keighley's family connection to her nephew Joseph was strengthened when he came to live with Sarah and her husband, John, at their home, the Old Hall in Heckmondwike, in 1742. Sarah's husband was a man of considerable property who died shortly after Joseph's arrival (2). Having no children of her own, Sarah took complete care of her nephew. She saw to his liberal education and introduced him to the world of discussion and debate in the salon-style atmosphere of her

home (3), "the resort of all the dissenting ministers in the neighborhood without distinction." According to Priestley (4), "From this time she was truly a parent to me until her death in 1764."

It was Sarah's wish that Priestley study religion in the Calvinist tradition in accordance with her own principles and become a minister instead of continuing in the family tradition of cloth-making. Aunt Sarah promised Joseph that if he became a minister (5), "she would leave me independent of the profession." However, Joseph's professed heterodox Arian beliefs caused controversy within his first congregation at Needham Market and also affected his relationship with his family and Aunt Sarah. In his Memoirs, Priestley cited (6), "the ill offices of my orthodox relations ... as partly responsible for the failure of all remittances from my aunt." Priestley named no names of these 'orthodox relations,' though Schofield (7) cites letters from Timothy Priestley, Joseph's brother, to Sarah in which he revealed the degree to which Joseph's beliefs differed from their aunt's. Thus, Aunt Sarah's intimate connection with Joseph was broken.

When Sarah Keighley died, she cut her nephew off with "only a silver tankard as a token of her remembrance." Joseph Priestley apparently took no offence. He respectfully noted that he understood his aunt's decision to leave everything to her deformed niece who depended on Sarah for complete financial support (8).

Hannah Holdsworth Priestley, Stepmother

Jonas Priestley's second wife, Hannah Holdsworth, was connected to her stepson Joseph Priestley only for a short time. Priestley may have hardly known her since he had been sent off to live with his aunt Sarah. He described her as (9) "a woman of good sense, as well as of religion." By 1752 Hannah Priestley was dead.

Mary Wilkinson Priestley, Wife

Mary Wilkinson's life began in the south of Cumbria, England, not far from Morecambe Bay. Her father, Isaac Wilkinson, was a Presbyterian migratory ironworker. With his first wife, Isaac had two boys, John and Henry. He married again sometime before 1742, when his first daughter, Mary, was born. Siblings William, Margaret, and Sarah followed in short succession (10).

By 1753 a more independent and now 'gentleman' Isaac Wilkinson made enough money to become a part-

ner with his son, John, in an ironworks business at Bersham, Clwyd, North Wales. The region was dotted with iron furnaces, paper mills, lime pits and kilns, coal mines, and 'clinker' waste piles, but the family moved there and occupied a fine country house called "Plas Grono," near Wrexham, an area that was home to many Dissenters (11).

In 1756 Mary's brother William was sent to Joseph Priestley's school at Nantwich. Mary was about sixteen years old at the time, and she and her younger sisters may have been among Priestley's female students. Bessie Rayner Belloc described her great-grandfather's school and his educational philosophy toward women (12):

with a separate room for half a dozen young ladies. Priestley at all times gave his best mind to the teaching of girls, and shows by many incidental words that he held women in as high mental and moral estimation as men

When Priestley became tutor at Warrington Academy, William moved north and continued as one of Priestley's students. In this manner, the Wilkinsons maintained a connection with Joseph Priestley.

In 1762 Priestley moved into a new house at the Academy and sought ordination, as well as a connection with Mary Wilkinson. Evidently, his happy situation led Joseph to consider marriage, as is evident in this letter to John Sedden (13):

I am going to have a dearer, more important stake in this world than I have ever yet had in it. I can sincerely say, I never knew what it was to feel a good deal on the account of another person. The hazard of bringing a person into difficulties which she cannot possibly have any idea or prospect of, affects me, at times, very sensibly.

Mary became Joseph Priestley's wife on June 23, 1762 at Wrexham parish. Whether Mary brought a dowry to her marriage is not known, but if one were provided, her elder brother, John, may have been a contributor.

The newly married couple took in students as boarders to supplement Joseph's salary of 100 pounds per annum. Mary supervised the boarders and saw to the running of the household. In 1763 Mary bore her first child, Sarah. The difficulties of childbirth, challenges of caring for her boarders, and the damp environment of Warrington's location on the Mersey River may have contributed to the health problems that plagued Mary for the rest of her life (14).

Mary and Joseph moved several times—first to Leeds, Yorkshire, then to Calne, Wiltshire, and later to Birmingham in the Midlands—always in search of a situation that would afford Joseph professional opportunity and adequate financial support for the growing family that now included sons Joseph, William, and Henry.

Friends, patrons, and subscribers gave money to offset the Priestley's moving expenses and provide income to supplement the salary he received as a minister. Reverend Theophilus Lindsey and his wife, Hannah, introduced Priestley to Mrs. Elizabeth Rayner, one of Lindsey's "hearers and most zealous friends" who became Joseph's greatest benefactress (15). Mrs. Rayner gave Priestley annual gifts of 50 pounds and bequeathed 2,000 pounds to him in her will (16).

Mary's brother, John, found (and probably leased) the country Georgian house called Fair Hill, just outside Birmingham, for Mary and Joseph (17). The property had gardens and outbuildings, and Mary had three servants: Hannah Woodcock, Mary Rawlison, and a servant boy to help with the housework (18). The eleven years Mary and Joseph spent in Birmingham were years of relative peace, contentment, and happiness. They enjoyed spending evenings at the fireside in the parlor talking with the children (19). Daughter Sarah married



Figure 1. An older Mary Priestley wearing a shawl. Copy of James Millar (c.1735-1805) after Carl F. von Breda (1759-1818) painting of Mary Priestley by Beverley Conrad, 1995. Courtesy Joseph Priestley House, Pennsylvania Historical and Museum Commission.

and gave her parents their first grandchild, and their sons seemed destined for employment with their successful ironmaster uncles.

The Church and King riots of 1791 changed Mary's life forever. The drunken mob sacked, looted, and burned Fair Hill. The losses she and Joseph suffered were extreme and the days of mayhem affected Mary's health: her old illness returned and she was spitting blood.

With funds in short supply, John Wilkinson sent the Priestleys 500 pounds, invested 10,000 in French funds with the interest going to his brother-in-law, and provided 200 pounds annually for their support. The increasingly tense political and social atmosphere surrounding the Priestleys between 1791 and 1793 affected their sons, whose prospects for suitable employment in England were substantially reduced. When young Henry learned at school in Hackney that some friends desired to go to America, a plan for the family's emigration began to develop.

Mary was about 51 years old when she sat for a portrait (Fig. 1) by Swedish artist Carl F. von Breda, who painted her wearing a fine muslin cap trimmed with lace over her white hair. Her countenance is thoughtful but lined with distress. Mary is enveloped by a shawl, over the shoulders of her plain black dress, a source of warmth and comfort worn during threatening times. (20).

Tears and disappointment must have overflowed in the Priestley family in the spring of 1794 when Joseph and Mary Priestley set sail for America. They left Sarah and her four children, six years of age and under, in England, with a husband whose difficult and obstinate attitude was of great concern to her parents (21). The sadness of their farewells can only be imagined. After a voyage of much sickness, travel on rough roads from New York to Philadelphia, and thence 120 miles to remote Northumberland, Mary arrived in the village of about 100 houses. As her husband wrote to John Wilkinson from Philadelphia on June 27, 1794, Mary preferred a country home (22): "your sister, as well as myself, dislikes living in such a city as this. We want no more society than we shall have among ourselves at Northumberlan" On August 26, Mary confirmed (23):

I like America very well . . . and I am happy and thankful to meet with so sweet a situation and so peaceful a retreat as the place I now write from I am anxious to be settled ourselves, we are not at a time of life to keep rambling about.

Mary and Joseph planned a new home to be built on North Way near the Susquehanna River. From her temporary house nearby, she could see the progress of the home as it rose. Mary's illness became more serious, and she was nursed by her daughters-in-law and a friend, Mrs. Bakewell. She died on September 7, 1796, nine months after the death of her youngest son, Henry, and approximately fifteen months before her new home was ready for occupancy (24). Mary Priestley was fifty-four years old.

Since Mary destroyed most of her correspondence, we can only guess how she might have felt raising her children in so many houses crowded with her husband's books and accumulating collections of scientific apparatus, electrical machines, and bubbling vats where she witnessed the sparks, explosions, and strange smells emanating from his (25) "noxious effluvia." Joseph described his wife as (26):

a woman of an excellent understanding much improved by reading, of great fortitude and strength of mind, and of a temper in the highest degree affectionate and generous, feeling strongly for others and little for herself. Also excelling in everything relating to household affairs, she entirely relieved me of all concern of that kind, which allowed me to give all my time to the prosecution of my studies.

Martha Priestley Crouch, Sister

Like her brother, Martha Priestley was born in Fieldhead, probably in 1738. She married Zorobabel John Crouch in 1761 (27). From extant correspondence between Joseph and his younger sister, Martha, we can learn something about his affection, generosity, and concern for her situation. Joseph recommended the (28) "agreeable society in Leeds" to Martha in 1786 when she desired to leave Fieldhead, and in December of 1791 and 1792 he reminded Martha to visit his bankers and draw his annual gift to her of 15 pounds (29). Martha also learned about other personal family matters such as the health of her sister-in-law, Mary, and her nephew, Harry. Priestley invited his sister to stay with him in London (30) "whenever it shall be convenient to you to come this way."

After immigrating to America, Joseph continued to write to Martha. He described the eight-week long voyage from England and deplored his (31) "seemingly out of the world" location in Northumberland. In his last will and testament, Joseph bequeathed (32) "the sum of 10 pounds sterling for suits of mourning" each, to his sister Martha Crouch and to his brothers, Timothy and

Joshua, all living in England. Martha's special clothing could continue her connection to her brother as a lasting memorial.

Sarah Priestley Finch, Daughter

Sarah Priestley, Joseph's eldest child and only daughter, had a special connection with her father who desired to have her with him always. During her child-hood, Sarah learned to play the harpsichord (33), ventured into her father's 'elaboratory,' and cared for her younger brothers.

As a young adult in Birmingham, her social circle included Mary and Martha Russell, Elizabeth and Anne Ryland and their cousins, and Mary Anne Galton, offspring of prominent families who lived in the neighborhood. One of Sarah's friends recalled the occasion when 'Sally,' as she was known, decided to help out by cleaning her father's laboratory. In the process, she very carefully washed out all the bottles for him, necessitating tactful and loving intercession by her mother on Sally's behalf (34).

Faujas de Saint Fond, a French scientist and traveler, described Sarah (35) as Dr. Priestley's "amiable daughter," having "much vivacity of mind and gentleness of manner."

In 1786 Sarah married William Finch, an ironmaster and nail maker who experienced mixed business success in his career. Within sixteen months, Sarah bore her first child, a daughter Ann, who became a 'favorite' with Anna Barbauld, poetess and friend of the Priestley family. By 1797, when Sarah was pregnant with her sixth child, her husband was bankrupt. Joseph Priestley took up his daughter's plight and asked John Wilkinson to cash in funds from Priestley's French investments to aid Sarah (36).

In autumn of 1801 Sarah had her last child, a daughter named Catherine Irene. Although her grandfather never knew of Catherine's success as a schoolmistress, he would have been proud of her for she followed in his footsteps in education (37).

After eighteen years of marriage, Sarah died in June 1803 at Bordesley, England, and was buried at the New Meeting, Birmingham. She was forty years old. Because of slow delivery of the mails, Joseph Priestley, by this time in failing health, never learned of Sally's death before his own occurred. But, with the greatest of understanding and love for his dear Sally and her children,

Priestley bequeathed to her an annuity of sixty pounds sterling, or to her children in case of her death, and stipulated through three named trustees, that Mr. Finch was expressly not entitled to any part of the money, nor could he exercise any control over it.

Anna Letitia Aikin Barbauld, Friend

Anna Barbauld (Fig. 2), a poet and writer of children's books and political and religious miscellania, was born on June 20, 1743, to Dr. John Aikin and Jane Jennings Aikin (38). Dr. Aikin and Joseph Priestley were tutors at Warrington Academy from 1761 to 1767. Anna became very close friends with Mary and Joseph Priestley. In his Memoirs, Priestley wrote (39):

Mrs. Barbauld has told me that it was the perusal of some verses of mine that first induced her to write any thing in verse, so that this country is in some measure indebted to me for one of the best poets it can boast of. Several of her first poems were written when she was in my house, on occasions that occurred while she was there.

In 1767, when the Priestleys moved to Leeds, Anna wrote her first important poem, a farewell, entitled "On Mrs. P[riestley]'s Leaving Warrington." Here are a few lines from the poem (40):

How oft the well-worn path to her abode At early dawn with eager steps I've trod, And with unwilling feet retired at eve, Loath its approach unheeded to believe. Oft have there the social circle joined Whose brightening influence raised my pensive mind

According to Turner (41), "An Address to the Deity," "To Mrs. P," and "The Mouse's Petition" were probably written during one of Anna's several visits to the Priestleys in Leeds in the late 1760s. This was the period of some of Joseph Priestley's most famous experiments on gases. "The Mouse's Petition" is a supplication for release from one of Priestley's captured mice intended for experimental testing of his 'suffocating' gases. Turner tells us of its appearance: "Next morning it [the mouse] was brought in after breakfast, with the petition twisted among the wires of its cage." Here are a few lines from the poem (42):

Oh! Hear a pensive prisoner's prayer, For liberty that sighs;
And never let thine heart be shut
Against the wretch's cries.

For here forlorn and sad I sit, Within the wiry grate;

And tremble at th' approaching morn, Which brings impending fate.

As the story goes, the mouse was freed as a result of its kind friend's petition (43).

In a letter dated June 13, 1769, Joseph Priestley wrote to Anna, encouraging her to publish her poems (44). Thereafter she collected a number of them, including the poems mentioned above, and they were published in 1773 by Joseph Johnson, Priestley's publisher, in St. Paul's Church-Yard, London, in *Poems*. Also dur-

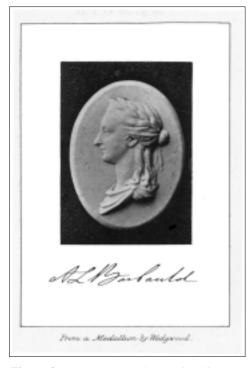


Figure 2. Anna Letitia Aikin Barbauld from a medallion by Wedgwood. Frontispiece from Memoir of Mrs. Barbauld, including letters and notices of her family and friends, by her great niece, Anna Letitia Le Breton, George Bell and Sons, London, 1874.

ing this period, Anna wrote one of her most important poems about Priestley while visiting them in Leeds in 1769 or 1771. "A Character of Joseph Priestley" includes these stirring lines (45):

Champion of Truth! Alike thro Nature's field,
And where in sacred leaves she shines reveal'd,
Alike in both, eccentric, piercing, bold,
Like his own lightnings, which no chains can hold,
Neglecting caution and disdaining art,
He seeks no armour for a naked heart.
Pursue the track thy ardent genius shows[,]
That like the sun, illumines where it goes!
Travel the various map of science o'er,

Record past wonders and discover more! Pour thy free spirit o'er the breathing page, And wake the virtue of a careless age!

"An Inventory of the Furniture in Dr. Priestley's Study" provided a word picture of the room. Schofield said that the description matches the house on Basinghall Street in Leeds (46). The poem alludes to Priestley's New Chart of History and Chart of Biography hanging on the walls, along with maps of every country. It refers to some of the books he owned, which included the works of the church fathers, books of jurisprudence, and Metamorphoses.

In 1774 Anna married Rochemont Barbauld, who had previously attended Warrington Academy, and was a minister of a church in Palgrave, Suffolk. Together they opened a very successful boarding school, which they ran until 1785. *Hymns in Prose for Children* was published in 1781 and was her best work according to the DNB (47). *Hymns* drew a strong connection between the beauties of the natural world and God's love. It remained popular well into the nineteenth century.

In 1785 the Barbaulds closed their school and spent a year touring France. They settled in Hampstead, near London, upon their return. After this Anna began publishing editorials and poems on various social and political issues, including several advocating religious tolerance, women's rights, and abolishment of the slave trade. After the Birmingham riots in 1791, Anna wrote her last poem concerning Priestley in "To Dr. Priestley. Dec. 29, 1792" (48).

Following the Priestleys' move to America, Anna resumed corresponding with Joseph in 1797. Priestley responded by expressing his sadness at (49) "the loss of a folio book [in] which she [his wife, Mary, now deceased] had copied all your unpublished poems, and other small pieces, especially the first poem we ever saw of yours ... We also regretted the loss of the little poem you wrote on the birth of Joseph." He mentioned his particular obligations to her for taking under her care a daughter of Sally [Finch]. This might have been Ann Finch, Sally Finch's daughter, for whom Anna wrote an obituary in 1809 in the *Monthly Repository* (50). The remainder of Anna's life passed quietly at Stoke Newington, where she died on March 9, 1825.

Lucy Barclay Galton and her Daughter, Mary Anne Galton Schimmelpenninck, Wife and Daughter of Joseph Priestley's Friend

Lucy Barclay (Fig. 3) was born in 1757 at Bushill. Lucy married Samuel Galton Junior, in October of 1777. Galton was a Quaker, who, in spite of the pacifist tenets of his religion, made a fortune exporting guns as part of the slave trade. He had scientific interests and became a member of the Lunar Society and the Royal Society. Galton was a strong supporter of Joseph Priestley, providing him with financial help for many years. Many of the Lunar Society meetings were held at the Galtons' country home, Great Barr, outside of Birmingham (51).

Mary Anne Galton was born in Birmingham in 1778, the eldest child of Samuel and Lucy Galton. Mary Anne's autobiography (Fig. 4) provides us a window into the life and times of the members of the Lunar Society from a unique perspective, that of a child of one of the members. As Quakers, the Galtons believed that girls should receive the same education as boys. They each took part of the responsibility for educating Mary Anne and their other children. Lucy had high expectations for her children and herself. During one of Lucy's several illnesses, Mrs. Joseph Priestley came to live with the Galton family and was in charge of the invalid (52).



Figure 3. Lucy Barclay Galton, wife of Samuel Galton Jr., friend of Joseph Priestley. Plate 28 of Vol. 1 of K. Pearson, The Life, Letters and Labours of Francis Galton, Cambridge University Press, Cambridge, 1914.

The Galton and the Priestley families continued to be close friends as their children grew. Even after the

Priestleys moved to America, Samuel Galton Junior's records show continued financial support for Priestley in 1798 and 1803. Letters to and from Priestley and Galton continued until Priestley's death in 1804 (53).

Mary Anne said that her acquaintance with the Lunar Society members and their friends extended from the time she was eight until she was twenty-four or five. She described her

early impression of many of her father's friends, saying of Joseph Priestley (54):

the father of discoveries on air; a man of admirable simplicity, gentleness, and kindness of heart, united with great acuteness of intellect. I can never forget the impression produced on me by the serene expression of his countenance.

Mary Anne mentions various visits from William Priestley, Joseph Priestley's son (55), "In the evenings when it was rainy, William Priestley would often come and amuse me with tales from the *Arabian Nights*, which was a very favourite book, not only with himself, but also with Dr. Priestley." She relates several occasions when various sons of the Lunar Society men reported at their meetings on visits to France. When Mr. Boulton brought his son to a meeting after a long trip to Paris, she comments (56):

I noticed, as a remarkable thing, that the company (which consisted of some of the first men in Europe) all with one accord gathered round him, and asked innumerable questions, the drift of which I did not fully understand. They almost hung upon his words; and it was impossible to mistake the indications of deep anxiety, hope, fear, curiosity, ardent zeal, or thoughtful gravity, which alternately marked their countenances, as well as those of my own parents. ... All present seemed to give a fearful attention. Why, I did not then well know, ... but the rest of the party heard, no doubt, in this young man's narrative,

the distant, though as yet faint, rising of the storm which, a year later, was to burst upon France, and,

LIFE

MARY ANNE SCHIMMELPENNING

Figure 4. Frontispiece and title page of the autobiography of Mary

Anne Galton Schimmelpennick. M. A. Schimmelpennick, Life of Mary

Anne Schimmelpennick, edited by her relation, Christiana C. Hankin,

Longman, Green, Longman, and Roberts, London, 4th ed., 1860, .

in its course, to desolate Europe.

Mary Anne described first hearing of the French Revolution at a Lunar Society meeting (57):

the door of the drawing-room opened, and in burst Harry, William Priestley's brother, a youth of sixteen or seventeen, waving his hat, and crying out 'Hurrah! Liberty, Reason, brotherly love for ever! Down with kingcraft and priestcraft. The majesty of the People for ever! France is free,

ever! France is free, the Bastille is taken: William is there, and helping. I have just got a letter from him. ...' We all stood thunderstruck. ... I never saw joy comparable in its vivid intensity and universality to that occasioned by the early promise of the French revolution. ... I can look back on my surprise at the total change introduced at this time in the subjects of conversation. Even with my father's scientific friends, politics became all-absorbing.

Mary Anne married, but had no children. She became a writer and was active in various causes during her life. In 1825 she was one of the founding members of The Female Society for the Relief of British Negro Slaves, along with several other female descendants of the Lunar Society men: Miss Galton, Mrs. Moilliet, the daughter of James Keir, Mrs. Sneyd Edgeworth, and Miss Wedgwood (58).

Elizabeth Fulhame, Scientific Associate

In 1816 when Thomas Dobson, a Philadelphia book-seller, catalogued the volumes in the library of the late Dr. Joseph Priestley prior to their sale, included in the list (59) was a 1794 London publication entitled "Fulhame on combustion." This unusual book—a serious scientific treatise authored by a woman and properly titled An Essay on Combustion with a View to a New Art of Dying [sic] and Painting wherein the Phlogistic and Antiphlogistic Hypotheses are Proved Erro-

neous—had been on Priestley's Northumberland library shelf for some time. In fact, he had witnessed her experiments in London (60). In 1800, Priestley published his book *The Doctrine of Phlogiston Established, and That of the Composition of Water Refuted* in which he commented on Fulhame's experiments and conclusions (61):

I was greatly struck with them; but I do not think that they prove the decomposition of water.

Elizabeth was the wife of Dr. Thomas Fulhame, a physician. She was an intelligent woman who began her scientific work about 1780 when she proposed "the possibility of making cloths of gold, silver, and other metals by chymical processes" to her husband and some friends who decided her ideas were "improbable" (62). She persisted in her efforts and made contributions to photochemical imaging and catalysis. Mrs. Fulhame was the first to be successful with creating photo images on dyed materials and conducted extensive combustion experiments which she interpreted as involving water as a catalyst (63). When she published her essay in 1794, it was widely read and commented on by other scientists and philosophers. Priestley disagreed with Fulhame's interpretations but enjoyed their discussions of phlogiston, airs, and metals (64). In 1810 an American edition of Fulhame's essay was published in Philadelphia and she was reported to be an honorary member of Philadelphia's Chemical Society, possibly at the recommendation of Joseph Priestley (65).

Catherine Hutton, Friend and Member of Joseph Priestley's Congregation

Catherine Hutton (Fig. 5), a writer of novels and miscellania, was born on February 11, 1756, to William Hutton and his wife, Sarah Cock, in Birmingham. William Hutton was most remembered for his histories of Birmingham. Catherine never married and was the constant companion of her father until his death in 1815 (66).

Catherine's early education came mainly from reading, which she loved. Dr. Priestley once observed to William Hutton (67), "A child believes everything to be real which is said;" and Catherine really believed in the fairy tales she read from the age of five." She grew to love novels, poetry, and plays. According to her cousin, Mrs. Catherine Hutton Beale, who edited Catherine's letters, she was of medium height with a graceful figure and plain features, though lighted up with much intelligence and refinement (68).

In a letter to Mrs. Coltman of Leicester in 1780, Catherine tells of Dr. Priestley, newly come and ministering, in Birmingham (69):

The celebrated Dr. Priestley has taken up his residence among us for the sake of facilitating his philosophical experiments; and Mr. Hawkes, one of the preachers at the New Meeting, having resigned his place, it has been offered to the Doctor, and it is generally believed he will accept it. If he does so, you may expect to hear of my becoming a convert to his religion, for I am very weary of Calvinistical monotony and nonsense.

And a year later:

I have much to say to you on the subject of Dr. Priestley. I look upon his character as a preacher to be as amiable as his character as a philosopher is great. In the pulpit he is mild, persuasive, and unaffected, and his sermons are full of sound reasoning and good sense. He is not what is called an orator; he uses no action, no declamation; but his voice and manner are those of one friend speaking to another.

William Hutton was a friend of Joseph Priestley but did not share his political or religious views. Still, Catherine's father's town house was completely destroyed in the Birmingham riots that began on July 14, 1791. The mob was angry about Hutton's decisions in



Figure 5. Catherine Hutton, member of Joseph Priestley's congregation in Birmingham. From C. H. Beale, Reminiscences of a Gentlewoman of the last Century: Letters of Catherine Hutton, edited by her cousin, Cornish Brothers, Birmingham, 1891, frontispiece.

the city's Court of Requests. In a letter dated July 21, 1791, a week after the riots began, Catherine describes her thoughts about Dr. Priestley and the riots (70):

A circumstance which particularly rendered Birmingham a likely theatre for mischief was the zeal of Dr. Priestley, fervent though not intemperate. Having fully assured himself of the truth in religion, he conceived it his duty to go abroad into the world and endeavour to persuade all mortals to embrace it, an idea which has done more mischief than any which ever entered the erring mind of man. He sometimes, too, in his sermons, glanced at politics—a subject that should never be mingled with religion; and this treasured up wrath for him against the day of wrath. I look upon Dr. Priestley as a good man, attached to his King and country, and meaning well to every creature; but, though unintentionally, and himself the first sufferer, he was, I think, one of the primary causes of the riots in Birmingham, by rousing the spirit of bigotry and all uncharitableness in others. He was himself so unconscious of having done wrong, nay, he was so certain of having done only right, that his friends took him almost by force from his house and saved him from the vengeance of a mob who would have torn him to pieces.

Catherine Hutton's connection with Joseph Priestley seems to have ended after his move to London, but she leaves us with an excellent example of how one gentlewoman of many must have felt about Priestley as a minister. She also leaves us with a unique and emotional explanation of her mixed feelings about Priestley, just after the Birmingham riots, which affected her and her family so greatly.

Elizabeth Ryland Priestley and Margaret Foulke Priestley, Daughters-in-law

Elizabeth Ryland was born October 25, 1769 in Birmingham to Samuel and Hannah Jeffreys Ryland (71). The Rylands were a well known Dissenting family involved in the wire drawing and pin making business. They were members of New Meeting Congregation where Joseph Priestley preached (72). Elizabeth married Joseph Priestley Junior in 1792, less than a year after the Church and King riots laid waste to both their parents' estates. Their first child, Joseph Rayner Priestley, was born in 1793, and the young family of three traveled to America shortly thereafter. They settled in the village of Northumberland, Pennsylvania, where they lived in a small brick house. For a time, Elizabeth's mother- and father-in-law also crowded into the brick house while their own home was being built (73). Elizabeth dutifully cared for her mother-in-law in these cramped circumstances during Mary's illnesses. For a time, Elizabeth's sister-in-law, Margaret, also helped care for Mary (74).

Elizabeth's family began to grow. Her first daughter, Elizabeth Rayner Priestley, was born in 1797. Called 'Eliza,' this favorite granddaughter of Joseph Priestley, who lived in her grandfather's house with her family beginning in 1798, later learned to read at his knee. Between 1801 and 1807, Elizabeth had three more children: Lindsey, Marianne, and Sarah. Elizabeth managed all the household affairs and supervised the three servants in Joseph Priestley's home. She accompanied her father-in-law on trips to Philadelphia and was a great comfort to him at all times.

Aspiring to Priestley's zeal for debate as the path to knowledge, Elizabeth boldly wrote two political essays: the first in response to Thomas Cooper's opinion about the power of the U.S. President to declare a day of fasting and prayer, and the second in support of unlimited enquiry as the means for governments to secure the greatest good for society. These articles were published under her initials 'E.P.' in Cooper's *Political Essays* in 1800 (75).

In 1812 Elizabeth and her husband returned to England with four of their children. Eldest son, Joseph Rayner Priestley, remained in America and acted as his father's legal agent. Elizabeth died in England in 1816 after a relatively short but severe illness (76).

While it is not known how they became acquainted, Margaret Foulke, born near Harrisburg, Pennsylvania in 1771, married William Priestley in 1796. They moved onto a farm near Northumberland (77). Joseph Priestley described Margaret and her situation (78), "He [William] has got a very suitable wife, tho rather too tender, and the life they lead, quite solitary in the woods, is such as you cannot easily form an idea of. We see him sometimes, but her seldom indeed, and yet she seems very happy."

Despite the appearances of contentment, Margaret's husband was deep in debt by 1800 and under suspicion of having attempted to poison members of his father's household. After Joseph Priestley paid off William's debts, the couple left Northumberland. They lived for a time in the Harrisburg area, where Margaret's first child, Lucy, was born in 1800 (79). The family later moved on to Louisiana and took up residence in St. James Parish at Priestley Point, a plantation along the Mississippi River, where three more children were born.

As he had done for his daughter Sarah, Joseph Priestley provided for Margaret in his will. He left her an annuity of sixty pounds sterling and stipulated that William was to have no part of or control over his wife's inheritance (80). In 1840 the then-widowed Margaret returned to Northumberland where she paid a visit to her nephew, Joseph Rayner Priestley. She died some years later in New Orleans (81).

Sarah Bull Haines Young and Mrs. William Bakewell, Friends

Sarah Bull was the youngest daughter of John and Mary Phillips Bull of Philadelphia. Sarah was educated in the city's better schools. Genealogist H. L. Dufour Woolfley describes her as (82) "a cultivated and highly literate woman with broad interests, political acuity, awareness of history, at least a smattering of French, and more than passing curiosity in matters scientific." Sarah married Josiah Haines, a wealthy Philadelphia Quaker with property in Northumberland. They built a large and imposing house with gardens there that occupied an entire town square near the river (83).

Mr. and Mrs. William Bakewell, an English couple who worked for Josiah Haines as house stewards, came to Northumberland in the spring of 1795 and (84) "found on our arrival there that Dr. Priestley was a resident in Mr. [and Mrs.] Haines' house, while his own was fitting up for his reception." When their year of employment with the Haines family was completed, the Bakewells took a house in Northumberland; and finding themselves more "at liberty," they spent a great deal of time with Joseph and Mary Priestley. Bakewell wrote (85):

Our frequent intercourse with the Doctor and his family occasioned Mrs. Priestley to contract a great partiality for my wife, which led her to seek her help whenever it was possible. . . we were both of us so often with them as to occasion an entire neglect of our own affairs at home. . . the old lady wished to buy all our incumbrances, and have us altogether. . . .

Josiah Haines died in May of 1795 and was buried in Northumberland's Quaker Green, a plot in the center of town set aside for a Meeting House and cemetery for those of Quaker faith (86). Sarah was "a gentlewoman of kind and liberal heart," whose connection with Joseph Priestley was so compassionate that when his son, Henry, died a few months later, she (87):

dispatched me [William Bakewell] with a note to Dr. Priestley, generously offering him the privilege of their family ground, if he chose to accept it; which

he did with thankfulness, returning an answer by me, in which he expressed a hope that he and all his would manifest a due degree of gratitude for her kindness.

In September of 1796, when Mary Priestley was taken ill and Mrs. Bakewell "was wholly taken up in attending upon her," William Bakewell (88) decided to pay a short visit to Philadelphia. While there, he received a letter announcing Mary Priestley's death. On his return to Northumberland, Bakewell "found that the Doctor had broken up housekeeping and was gone to live with his son Joseph." Mr. and Mrs. Bakewell did the same and "went to live in the [Priestley Junior] family during the winter."

When Joseph Priestley went to Philadelphia for the winter of 1797, he desired Mr. and Mrs. Bakewell, his trusted friends (89), "to sleep in his bed, in a comfortable room, well stored with books. . . to be sure to read to the servants at night in the kitchen, and endeavour to keep them cheerful and happy." This most intimate of connections was disrupted as Mr. and Mrs. Bakewell never saw Joseph Priestley again. They left Northumberland in April of 1797 and returned to England.

Sarah Haines, remarried in 1798 to Dr. Benjamin Young, was widowed again in 1803. In 1814 she married once more. It is believed Sarah was interred in Northumberland's Quaker Green alongside her parents, two husbands, and several children (90).

Ellen Sharples, Portrait Painter

Ellen Wallace Sharples, the only female artist known to have painted Joseph Priestley's portrait, was born in 1769 in Birmingham (91). She came from a well-to-do English Quaker family and was a student of James Sharples (1751-1811), a portrait painter who worked primarily in pastels, whom she later married. Ellen taught herself to paint miniatures and became a noted portrait painter in her own right, as well as a fine stitchery artist.

Biographer Charlotte Streifer Rubinstein, in her survey of American women artists, chronicled the Sharples family history. Ellen visited America twice, 1793-1801 and 1809-1811, with her husband and three children, traveling in an oversized horse-drawn caravan that housed the family and all their art supplies. James earned an uncertain living as an itinerant painter in New England prior to settling for a time in Philadelphia, where Ellen decided to use her drawing skills to supplement the family income (92).

Ellen assisted her husband by making copies of his paintings to order and was swamped with commissions for images of Alexander Hamilton, George and Martha Washington, and Lafayette, among other notable personages who visited the city. In her diary, Ellen wrote about her work in Philadelphia (93, 94), "they [her paintings] were thought equal to the originals, price the same; we lived in good style associating in the first society." Rubinstein describes the Sharples portraits as straightforward renderings that were much admired in their day—so accurate that dust from powdered wigs could often be seen on the subject's shoulders. Many years earlier, in 1864, Mr. G. Scharf, the Secretary and Keeper of the National Portrait Gallery, related in a letter how (95) "Sir Charles Eastlake, one of the Board of Trustees, admired the honest and sophisticated manner in which the countenance of Priestley had been expressed by Mrs. Sharples."

A number of images of Priestley painted by the Sharples are extant (96), but determining which of the Sharples painted which portrait can be complex because of Ellen's prolific work as a commissioned copyist as well as a painter in her own right.

In his book *Joseph Priestley, Man of Science 1733-1804: An Iconography of a Great Yorkshireman,* John McLachlan discusses two portraits of Joseph Priestley in England's National Portrait Gallery that are attributed to Ellen and believed to have been painted shortly after Priestley arrived in Philadelphia in 1794 (97). McLachlan describes the delicately drawn, rectangular and oval pastel representations as (98) "pleasing, and notable for the fact that we see a Priestley not depicted before. After he left England, Priestley ceased wearing a wig. Hence these are the first portraits in which he is seen with his own hair."

In an intriguing (but confusing) note, McLachlan refers to the existence of a copy of a portrait of Priestley by James Sharples of similar description to that of Priestley by his wife that was said to be in the collection of James Walter, Esq., Stratford Lodge, Kingston-on-Thames. McLachlan goes on to state (99) "the National Portrait Gallery Archives contain a photograph of this, but record that the whereabouts of the original are not known." Not having located any original painting of Priestley by James Sharples with which he might compare Ellen's work, McLachlan limits his discussion to those attributed to Ellen which have survived to inform us and record Joseph Priestley's image in particular detail.

Yet another image of Priestley attributed to Ellen is a profile in pastel painted in Philadelphia in 1796 or 1797 and owned by the Clements Library Associates, University of Michigan. The painting depicts (100) "the eminent doctor well into middle age – delicate features, aging skin, and faint smile," and is said to have been the inspiration for the engraving that appears at the frontispiece of Priestley's *Notes on all the Books of Scripture*, published in Northumberland in 1803-1804.

Did Joseph Priestley in fact 'sit' for Mrs. Sharples to have his portrait taken by this female artist? The biographical information emphasizing Ellen's role as a commissioned copyist suggests that probably he did not. However, this pair of artists obviously worked so closely together that Ellen must have met Dr. Priestley in their Philadelphia studio.

Caty Gable and Jane (Jenny) Moor, Family Servants

Caty and Jane served the Priestley Senior and Priestley Junior families. They transported a variety of foodstuffs and other goods from Robert Irwin's general store during 1796 and 1797 for the Priestleys (101). They may have been of Dutch and Irish descent according to William Bakewell, who read to them while Joseph Priestley was away from home (102). Perhaps Caty and Jane were the unnamed 'hired girl' and 'little bound girl' referred to in newspaper articles published by the *Reading Advertiser* and the *Philadelphia Gazette* that reported the attempted poisoning of members of the Priestley household (103). We do not know with certainty who these young women were, but their intimacy and connection with the Joseph Priestley households can not be denied.

Elizabeth Darch, Entrepreneur and Friend

Elizabeth Darch was connected with Joseph Priestley and his eldest son through a number of cash transactions that were conducted and recorded at Robert Irwin's general store throughout 1796. In July, she paid \$50 to Joseph Priestly [sic], and one month later, paid \$50 to Joseph Prestley Jur [sic]. Irwin's ledger indicates that Elizabeth made regularly scheduled payments to the Priestleys, but there is no indication as to the nature of her debts (104).

Mrs. Darch, said to be a woman of great spirit and enterprise, was the wife of an English banker who failed in business. While he remained in England to settle his affairs, Elizabeth came to America in 1794 with her daughters. The family purchased 100 acres of land near Northumberland on which was first erected a log cabin. Twenty acres was sown in wheat that was sold through Irwin's store (105, 106). A "Miss Darch," certainly one of Mrs. Darch's daughters, painted a watercolor view of the Susquehanna River from Northumberland that caught Joseph Priestley's attention (107). He wrote to Mrs. Barbauld (108):

It is a pleasure to be in a place that is continually and visibly improving, and this is the case here to an astonishing degree. ... Nature has done everything that can be done for any place. Perhaps you have seen the views of it taken by Miss Daich [sic]. They are not by any means too flattering.

Conclusion

In Joseph Priestley's roles as husband, father, friend, minister, teacher, and scientist he had occasion to interact with and influence many women in a variety of ways. The women in his family and households, wives and daughters of his friends, the women who attended his churches, and the women who were involved with the intellectual life of Birmingham and London were directly impacted. Later women of this period were able to read Priestley's writings, scientific, educational and religious, and use them to further their own efforts. Joseph Priestley's legacy of esteem, regard, and respect for the rationality of women lives on as inspiration to those of us today.

REFERENCES AND NOTES

- 1. J. Priestley, Memoirs of Dr. Joseph Priestley to the Year 1795, Written by Himself: With a Continuation, to the Time of his Decease, by his Son, Joseph Priestley. J. Johnson, London, 1806, 2-3.
- 2. Ref. 1, p 3.
- 3. Ref. 1, p 6.
- 4. Ref. 1, p 3.
- R. Schofield, The Enlightenment of Joseph Priestley, a Study of His Life and Work from 1733 to 1773, Pennsylvania State University Press, University Park, PA,1997, 67.
- 6. Ref. 1, p 27.
- 7. Ref. 5, pp 66-67.
- 8. Ref. 1, p 27.
- 9. Ref. 5, p 5.
- J. and J. Carlisle, Website: The Wilkinson Family, Ironmasters: A Series of Historical Essays. http:// www.iron.oakengates.com, 2001.

- 11. Ref. 10.
- 12. B. R. Belloc, "Joseph Priestley in Domestic Life," *Contemporary Review*, **1894**, *66*, 572.
- 13. Ref. 5, p 91.
- 14. Ref. 1, p 55.
- 15. Ref. 1, pp 87-88.
- 16. Ref. 1, p 204.
- 17. F. W. Gibbs, *Joseph Priestley: Revolutions of the Eighteenth Century*, Doubleday & Company, Inc., New York, 1967, 135.
- 18. Anon., "Inventory of the House and Goods of Dr. Joseph Priestley which were destroyed during the riots at Birmingham in 1791," Birmingham Reference Library, Birmingham, England, circa 1792.
- 19. Ref. 1, p 109.
- 20. J. McLachlan, *Joseph Priestley, Man of Science 1733-1804: An Iconography of a Great Yorkshireman*, Merlin Books Ltd., Devon, England, 1983, 26.
- 21. S. Haas, "Docent Guide Appendix I: Biographical Sketches of Sarah, Joseph, William, and Henry Priestley and Thomas Cooper," Joseph Priestley House, Degenstein Intern Project, Northumberland, PA, June 2004, 2.
- 22. J. Priestley, Letter to John Wilkinson, June 27, 1794, Collection of the University of Pennsylvania. Photocopy of letter in site research files, Joseph Priestley House.
- 23. M. Priestley, Transcription of letter to Wm. Vaughan Esq., London from Northumberland, August 26, 1794.
- 24. M. A. Bashore, "Joseph Priestley House: Private Home to Public History Museum," unpublished manuscript, Northumberland, PA, 2004, 3-4.
- 25. Ref. 5, p 265.
- 26. Ref. 12, p 573.
- 27. M. E. Ware, "Descendants of William Priestley of Hartshead," Self-published, 2003.
- 28. H. C. Bolton, *Scientific Correspondence of Joseph Priestley*, Kraus Reprint Co., New York, 1969, 80-81.
- 29. Ref. 28, pp121-123.
- 30. Ref. 28, pp 132-133.
- 31. J. Priestley, "Dear Sister": Transcribed letter from archives of the Wiltshire Archaeological and Natural History Society Museum and Library, Devises, Wiltshire, England (original manuscript given by William C. Priestley to Royal Society of Chemistry, London).
- 32. J. Priestley, Last Will and Testament, manuscript written January 1802 (Copy). Research files at Joseph Priestley House, Northumberland, PA.
- 33. Ref. 21, p 1.
- 34. Ref. 17, p 140.
- 35. E. G. Rose, "Mary Priestley: Life with a Famous Scientist," paper presented at Middle Atlantic Regional Meeting of the American Chemical Society, 1996, p 5.
- 36. Ref. 21, p 2.
- 37. P. Toulmin, "The Descendents of Joseph Priestley, LL.D., F.R.S.", *Proceedings of the Northumberland County Historical Society*, **1994**, *32*, 14.

- 38. Anna Letitia Barbauld, (1743-1825), Dictionary of National Biography (DNB), *I*, 1064.
- 39. Ref. 1, p 49.
- 40. W. McCarthy and E. Kraft, *The Poems of Anna Letitia Barbauld*, The University of Georgia Press, Athens, GA.and London, 1994, 1-3.
- 41. W. Turner, "Mrs. Barbauld," *Newcastle Magazine*, **1825**, *n.s.*, *4*, 183-186.
- 42. Ref. 40, pp 36-37.
- 43. Ref. 41.
- 44. Ref. 40, p 233.
- 45. Ref. 40, pp 37-38.
- 46. Ref. 5, p 162.
- 47. Ref. 38, p 1065.
- 48. Ref. 40, p 125.
- 49. A. L. Le Breton, *Memoir of Mrs. Barbauld, including letters and notices of her family and friends, by her great niece*, George Bell and Sons, London, 1874, 78-79.
- 50. A. L. Barbauld, "Miss Anne Finch," *Monthly Repository*, **1809**, *4*, 171-172.
- 51. K. Pearson, *The Life, Letters and Labours of Frances Galton*, Cambridge University Press, Cambridge, 1914, Vol. 1, 45-46.
- 52. M. Wilson, *Jane Austen, and Some Contemporaries*, Cresset Press, London, 1938, 153-155.
- 53. R. E. Schofield, *The Lunar Society of Birmingham, a Social History of Provincial Science and Industry in Eighteenth-Century England*, Clarendon Press, Oxford, 1963, 360-366.
- M. A. Schimmelpenninck, *Life of Mary Anne Schimmelpenninck*, edited by her relation, Christiana C. Hankin, Longman, Green, Longman, and Roberts, London, 4th ed., 1860, 31-33.
- 55. Ref. 54, pp 110-114.
- 56. Ref. 54, pp 125-126.
- 57. Ref. 54, pp 181-186.
- 58. M. Dick, *The Lunar Society and the Anti-slavery Debate*, Internet site, http://
 www.search.revolutionaryplayers.org.uk/engine/resource/exhibition/standard/default.asp?resource=670 p12.
- 59. T. Dobson, Catalogue of the Library of the late Dr. Joseph Priestley containing many very scarce and valuable books, T. Dobson, Philadelphia, PA, 1816, 45.
- 60. J. Priestley, *The Doctrine of Phlogiston Established and that of the Composition of Water Refuted*, A. Kennedy for the author, Northumberland, PA, 1800, 59.
- 61. Ref. 60, p 59.
- 62. D. A. Davenport and K. M. Ireland, "The Ingenious, Lively and Celebrated Mrs. Fulhame and the Dyer's Hand," *Bull. Hist. Chem.*, **1989**, *5*, 37.
- 63. K. J. Laidler, *The World of Physical Chemistry*, Oxford University Press, Oxford, 1993, 249-253, 277-279.
- 64. Ref. 62, p 37.
- 65. Ref. 63, pp 250-251.
- 66. Catherine Hutton (1756-1846), Dictionary of National Biography (DNB), *10*, 351.

- 67. C. H. Beale, *Reminiscences of a Gentlewoman of the last Century: Letters of Catherine Hutton Beale*, edited by her cousin, Cornish Brothers, Birmingham, 1891, 2.
- 68. Ref. 67, p 9.
- 69. Ref. 67, pp28-29.
- 70. Ref. 67, p 88.
- S. Dixon and A. M. Ronald, Introduction and Appended Notes to "Recollections of Dr. Priestley by John Ryland," *Transactions of the Unitarian Historical Society*, 1927-1930, 4, 428.
- 72. Ref. 71, pp 418-419.
- 73. Ref. 21, p 3.
- 74. W. J. Weston, *Priestley Chronicles: Essays on Joseph Priestley, LL.D., F.R.S., and His Northumberland Legacy,* The Unitarian Universalist Congregation of the Susquehanna Valley, Northumberland, PA, 1998, 27.
- 75. T. Cooper, *Political Essays*, Robert Campbell, Philadelphia, PA, 2nd ed., 1800, 3-7, 62-88.
- 76. J. Priestley Jr. Transcription of Letter to J. R. Priestley, May 18, 1816. Box 3-6, Dickinson College Library, Carlisle, PA.
- 77. Ref. 37, pp 16-23.
- 78. Ref. 21, p 6.
- 79. Ref. 37, p 16.
- 80. Ref. 32.
- 81. Ref. 37, pp 29-30.
- H. L. D. Woolfley, *The Story of William Lloyd*. Unpublished draft manuscript, 2003, pp 14-18.
- 83. Ref. 82, pp 17-19.
- 84. W. Bakewell, "Some Particulars of Dr. Priestley's Residence at Northumberland, America," *Monthly Repository*, **1806**, *1*, 394.
- 85. Ref. 84, pp 505-506.
- 86. Ref. 82, p 19.
- 87. Ref. 84, p 396.
- 88. Ref. 84, pp 565-567.
- 89. Ref. 84, p 622.
- 90. Ref. 82, pp 20-49.
- 91. J. L. Collins, *Women Artists in America: 18th Century to the Present*, University of Tennessee, Chattanooga, 1973, not paginated.
- 92. C. S. Rubinstein, *American Women Artists from Early Indian Times to the Present*. G.K. Hall & Co., Boston, MA, 1982, pp 40-42.
- 93. Ref. 84.
- 94. K. M. Knox, *The Sharples: Their Portraits of George Washington and his Contemporaries*, Yale University Press, New Haven, 1930, p 13.
- 95. Ref. 20, p 30.
- 96. Email message from M. Sofer-Frankel, doctoral student, University of Anglia to A. Bashore, Joseph Priestley House, July 24, 1999. Sofer-Frankel cites tow portraits of Priestley by Ellen Sharples in the National Portrait Gallery, London, and portraits of Priestley by james Sharples—one in Bristol City Museum, England, and one in the National Portrait Gallery, Washington, DC.
- 97. Ref. 20, pp 28-30.

- 98. Ref. 20.
- 99. Ref. 20, p 30.
- 100. A. Shy, "A Portrait of Joseph Priestley in America by Ellen Sharples, Philadelphia circa 1796-1801," *The Quarto: University of Michigan*, **1996**, 11.
- 101. Priestley House Staff. Database of Priestley Entries from selected volumes of the Robert Irwin Store Daybooks and Ledgers 1791-1812, courtesy Dr. Jack Fairweather, 2004, not paginated.
- 102. Ref. 84, p 622.
- 103. L. Patrick. "Priestley and the Inhabitants of Northumberland: Slaves and Servants, Friends and Acquaintances." Final Report for Raising Our Sites: Community Histories of Pennsylvania, 2000, 37.
- 104. Ref. 91.
- 105. J. F. Meginness, *Otzinachson: A History of the West Branch of the Susquehanna*, Gazette and Bulletin Printing House, Williamsport, PA, Vol. I, 1889, 689.
- 106. Ref. 91.
- 107. Photocopy of photograph of 1797 watercolor painting by Elizabeth Darch, courtesy Clifford Lewis 3rd, 1988. Darch research file at Joseph Priestley House, Northumberland.
- 108. T. E. Thorpe, Joseph Priestley, J. M. Dent & Co., London and E.P. Dutton & Co., New York, 1906, 160-161.

ACKNOWLEDGMENTS

Ms. Neeley extends her sincere thanks for the courtesy and efficiency of the Interlibrary Loan Department of the University of Kansas in borrowing many obscure and rare items for the author's perusal. Ms. Bashore extends her most sincere gratitude to Brooke Dearman, staff member at Joseph Priestley House, for her generous assistance in locating pertinent research materials in the museum files, and for her thoughtful perusal of the manuscript in its several versions with red pen in hand and much good humor.

ABOUT THE AUTHORS

Kathleen Neeley, M.S.L.S., graduated with a B.S. in chemistry from Chatham College and a degree in library science from Syracuse University. She has worked in corporate, medical, scientific and academic libraries, the last twenty-seven years at the University of Kansas. Her current position is Reference & Instruction Coordinator at the Spencer Research Library. Her research interests are the history of chemistry, women scientists, and women academicians.

M. Andrea Bashore, M.A., graduated in American Studies from Penn State University. She is the Historic Site Administrator of Joseph Priestley House in Northumberland, Pennsylvania, a chemical and National Historic Landmark administered by the Pennsylvania Historical and Museum Commission. Her research interests include women's history, British and American period costume, historic textiles, and in particular, Joseph Priestley, his family, friends and community relationships during his residency in America from 1794 to 1804.

HISTORY OF CHEMISTRY DIVISION

http://www.scs.uiuc.edu/~mainzv/HIST/