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COVER ILLUSTRATION: Mary Hallam Huntington's mother and another woman tend to the dying girl. From the front cover of *Memoirs of Mary Hallam Huntington, of Bridgewater, Mass.* (Boston, 1820). As Karol Weaver's article "'Painful Leisure' and 'Awful Business': Female Death Workers in Pennsylvania" shows, women held responsibility for the work of caring for the dying and the dead well into the nineteenth century. Image courtesy of the Library Company of Philadelphia.

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THE
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Editorial

The history of Pennsylvania is inextricably linked to the history of energy—from the forests and waters of Penn Woods, to the anthracite and bituminous coal fields of the northeast and southwest corners of the state, to the natural gas trapped in the state's Marcellus Shale formation. Today, Texas may be the nation's leading energy producer, but it was Pennsylvania energy that powered much of America's industrial revolution. In the twenty-first century, energy production and consumption remain central to the state's economy. Over the last few years, according to the US Energy Information Agency, Pennsylvania has been the second-largest producer of natural gas and nuclear energy in the nation and the fourth-largest producer of electricity and coal (as well as the only state that mines higher heat–producing anthracite). Nationally, Pennsylvania is ranked third in total energy production. It is also, unfortunately, ranked third in total carbon dioxide emissions.[1]

Energy—its production and consumption and its role in development and in devastation, both human and environmental—is central to Pennsylvania's history, present, and future. It is therefore appropriate that we dedicate this special issue to the history of energy in the commonwealth, in the hope that by better understanding this important past, we can make more informed decisions about our future.

[1] US Energy Information Administration, Independent Statistics & Analysis: Pennsylvania, http://www.eia.gov/state/overview.cfm?sid=PA, accessed Sept. 28, 2015.

Guest editors Brian Black and Donna Rilling bring their combined expertise to this issue. Brian Black is professor of history and environmental studies at Penn State, Altoona, and he has written extensively on the history of oil, gas, and the environment. Donna Rilling, professor of history at Stony Brook University, focuses on the history of early American work, business, and the economy; she is currently working on a project on early industrial pollution in the Delaware Valley. They have selected articles that comment on a wide range of Pennsylvania energy sources—from water and animal power to electricity and natural gas—and that examine these sources' creative as well as destructive potential. This issue does not, however, attempt to be comprehensive—and, as the essays make clear, there are many subjects in need of further study.

Beyond the importance of the topic, this issue of the *Pennsylvania Magazine of History and Biography* is significant for other reasons. As regular readers of *PMHB* will have noticed, there was no July issue this summer. This year *PMHB* moved to a new production schedule, publishing three issues per year, in January, April, and October, with the October issue being a double issue on a special topic. Readers can expect future special issues on the history of immigration and ethnicity, education, and more.

Finally, this is my last issue as editor of *PMHB*. With this issue I finish thirteen years of editing this journal. With you, I have learned a lot of fascinating history through its pages. I leave the journal in the very capable hands of its new editor, Christina Larocco, and managing editor, Rachel Moloshok. Christina received her PhD from the Department of History at the University of Maryland, College Park, and her research has focused on the culture and thought of twentieth-century social movements. Rachel, who received her MA in history from Northeastern University, has been the assistant editor of *PMHB* for the past four years. I look forward to watching *PMHB* grow under their stewardship.

Tamara Gaskell
Editor

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The Christian Deist Writings of Benjamin Franklin

Abstract: The solution to characterizing Benjamin Franklin's religious beliefs is realizing there were English deists who labeled themselves "Christian deists." Christian deists believed in miracles and thought Jesus was a deist: he taught only piety and morality. They claimed Jesus's message had been corrupted by priests who wanted money and power. By 1735, Franklin had given up his unorthodox deism and, in essays defending Reverend Samuel Hemphill, espoused Christian deist ideas. Franklin was possibly converted to Christian deism by James Pitt, a popular English writer whose essays Franklin frequently reprinted. Franklin also espoused Christian deist ideas at the end of his life.

Benjamin Franklin's religious beliefs have been difficult for scholars to characterize because they seem to combine real piety with Enlightenment irreligiosity. Franklin wrote that while a teenager, in the early 1720s, he "became a thorough Deist."[1] In 1725, Franklin published a pamphlet, *A Dissertation on Liberty and Necessity*, which was so unorthodox it has been described by one scholar as "sacrilegious," and "radical, even atheistic."[2] Three years later, in 1728, Franklin wrote an essay, "Articles of Belief and Acts of Religion," in which he maintained that the deity who created the universe was too distant from his creation to care about it. Franklin believed this distant God had delegated lesser divine beings to watch over every solar system, including ours.[3] Many scholars, such as Alfred Owen Aldridge, Kevin Slack, and Benjamin E. Park, focus on Franklin's earliest works and see Franklin as basically irre-

[1] Benjamin Franklin, *The Autobiography of Benjamin Franklin* (Mineola, NY, 1966), 43.

[2] J. A. Leo Lemay, *The Life of Benjamin Franklin*, 3 vols. (Philadelphia, 2006), 1:271, 287.

[3] Benjamin Franklin, "Articles of Belief and Acts of Religion," Nov. 20, 1728, in *The Papers of Benjamin Franklin* (hereafter *PBF*), ed. Leonard Labaree et al., 41 vols. to date (New Haven, CT, 1989–), 1: 101–9, and also http://franklinpapers.org/franklin//framedVolumes.jsp?vol=1&page=101a.

ligious.[4] Other scholars do not focus on Franklin's earliest writings, and instead consider the many devout statements he made later in his life. Carla Mulford, for example, shows how Franklin's ethics were deeply connected to his piety and "belief in the presence of divinity in the world."[5] She neglects, however, Franklin's longest religious writings, ones written in 1735 to defend the Reverend Samuel Hemphill. In one newspaper article and three tracts defending Hemphill, a Philadelphia minister accused of heresy and deism, Franklin referred to Jesus as "*Jesus Christ*, the Redeemer of Mankind" or "Our Saviour."[6] He continually described the Bible as the "sacred Scriptures" and the "holy Scriptures."[7] He stated Christianity was "the Christian Revelation," and he declared the apostles "were endued [*sic*] with the Gifts of the Holy Ghost."[8] By making these statements while simultaneously attacking the clergy and privileging reason over biblical revelation, Franklin was not being inconsistent. Instead, he was revealing that he was part of a significant eighteenth-century school of thought, one that scholars have long neglected. This school of thought is best described as *Christian deism*.

Christian Deism

American scholars are most familiar with the term "Christian deism" from David Holmes, who uses it in reference to the founding fathers. Holmes was trying to understand public figures who generally kept their religious views private and who often left no religious writings. Therefore, to decide if George Washington or James Madison should be classified

[4] Alfred Owen Aldridge, *Benjamin Franklin and Nature's God* (Durham, NC, 1967), 29–33 ; Kevin Slack, "Benjamin Franklin's Metaphysical Essays and the Virtue of Humility," *American Political Thought: A Journal of Ideas, Institutions, and Culture* 2 (2013): 42–46; Benjamin E. Park, "Benjamin Franklin, Richard Price, and the Division of Sacred and Secular in the Age of Revolutions," in *Benjamin Franklin's Intellectual World*, ed. Paul E. Kerry and Matthew S. Holland (Madison, NJ, 2012), 119–35, esp. 124–25.

[5] Carla Mulford, "Benjamin Franklin, Virtue's Ethics, and 'Political Truth,'" in *Resistance to Tyrants, Obedience to God: Reason, Religion, and Republicanism at the American Founding*, ed. Dustin Gish and Daniel Klinghard (Lanham, Maryland, 2013), 85-104, 93.

[6] Benjamin Franklin, *A Defence of the Rev. Mr. Hemphill's Observations: or, an Answer to the Vindication of the Reverend Commission* (Philadelphia, 1735), 19, 35. In *PBF*, 2:90–126, and also http://franklinpapers.org/franklin/framedVolumes.jsp?vol=2&page=090a.

[7] Franklin, *Defence of Hemphill's Observations*, 33–35; Franklin, *A Letter to a Friend in the Country, Containing the Substance of a Sermon Preach'd at Philadelphia, in the Congregation of the Rev. Mr. Hemphill, Concerning the Terms of Christian and Ministerial Communion* (Philadelphia, 1735), 9, 30. In *PBF*, 2:65–88, and also http://franklinpapers.org/franklin/framedVolumes.jsp?vol=2&page=065a.

[8] Franklin, *Defence of Hemphill's Observations*, 19; Franklin, *Letter to a Friend*, 20.

as a Christian, a deist, or a Christian deist, Holmes focuses on actions such as regularly attending church, receiving the Christian sacraments, or using Christian terminology. Holmes does not clearly state his theological criteria for someone to be considered a Christian deist, but in his book he seems to identify being a Unitarian with being a Christian deist. He maintains that Abigail Adams, who was a Unitarian, was a Christian deist. He also states that John Adams "was a Unitarian—a faith that in Adams's case, could be described with some accuracy as 'Christian deism.'" Holmes discusses the fact that Franklin was not a stereotypical deist—he believed in miracles and providence—but Holmes also does not consider Franklin a Christian deist.[9]

I offer another way of defining Christian deism, one that focuses on a person's theological writings. To be considered a Christian deist, a person must first be a deist: one who privileges natural religion—the religion humans arrived at through their natural faculties—over revealed religion. Many deists accepted the possibility and actuality of divine revelation, but they judged any revelation by the human standards of morality, fairness, and benevolence contained in natural religion. Secondly, Christian deists claimed to be Christian and even considered their interpretation of Christianity to be the only uncorrupted Christianity. The vast majority of Christian deists also had a special place for Jesus in their religious worldview. This special place generally ranged from seeing Jesus as divine to seeing him as the greatest teacher of morality and religion in human history. To exclude those thinkers who just claimed to be Christian to avoid persecution, I only include as Christian deists those who were so passionate about restoring pure Christianity that the majority of their religious works focused on articulating and spreading their interpretations of Christianity.

Many scholars scoff at the concept of Christian deism. For example, James Byrne argues that the idea of Christian deism was an "apparent oxymoron." Byrne contends that a thinker only labeled himself a Christian deist as "a tactical move to deter accusations of heresy."[10] A review of the contemporary scholarship on the Enlightenment and deism might help skeptical scholars see that someone could sincerely claim to simultaneously be a deist and a Christian.

[9] David L. Holmes, *The Faiths of the Founding Fathers* (Oxford, 2006), 53–57, 134–41, 73–78.
[10] James M. Byrne, *Religion and the Enlightenment: From Descartes to Kant* (Louisville, KY, 1997), 111.

In the last twenty years, scholars have shown that many Enlightenment thinkers did not fit into the once pervasive narrative that the period was a grand march from religious superstition to rational, scientific thought.[11] In particular, scholars have shown that English thinkers were generally much more pious than French thinkers. In England, ministers emphasized rationality and science. For this reason, some scholars say England had an Enlightenment led by clerics.[12]

Because of these changes in understanding the Enlightenment and English culture, a few scholars have been re-evaluating English deism. These scholars, in particular Jeffrey Wigelsworth and Wayne Hudson, maintain that English deism needs to be seen more as an aspect of English religious culture than as part of the irreligious, continental Enlightenment.[13] Fifteen of the sixteen most prominent English deists believed in miracles. Many of them also believed in divine revelation and prayer. Even more importantly, eleven of these sixteen English deists believed in direct divine inspiration: the belief that God or angels implanted thoughts into people's minds. Therefore, the vast majority of English deists believed in an active God who was involved in people's lives.[14]

This new scholarship on both the Enlightenment period in general and on English deism in particular means that scholars should not claim all deists believed in a distant, inactive God. Instead, a deist should be defined as a thinker who believed in God and privileged natural religion over external revelation. Natural religion did not exclude the supernatural; instead, it emphasized the moral standards these thinkers saw as inherent in natural law. These standards included justice, fairness, and benevolence. This meant that, unlike Calvinists, who emphasized God's sovereignty, deists emphasized God's goodness, fairness, and impartiality. Many deists believed God could and did make revelations, but they maintained that any true revelation had to be consistent with the concepts of justice, benevolence, and fairness inherent in natural religion. Because they privileged

[11] Jonathan Sheehan, "Enlightenment, Religion, and the Enigma of Secularization: A Review Essay," *American Historical Review* 108 (2003): 1061–80.

[12] B. W. Young, *Religion and Enlightenment in Eighteenth-Century England: Theological Debate from Locke to Burke* (Oxford, 1998), 3, 14–15; Roy Porter, "The Enlightenment in England," in *The Enlightenment in National Context*, ed. Roy Porter and Mikuláš Teich (Cambridge, UK, 1981), 5–6.

[13] Wayne Hudson, *Enlightenment and Modernity: The English Deists and Reform* (London, 2009); Jeffrey R. Wigelsworth, *Deism in Enlightenment England: Theology, Politics, and Newtonian Public Science* (Manchester, UK, 2009), 3.

[14] Joseph Waligore, "The Piety of the English Deists: Their Personal Relationship with an Active God," *Intellectual History Review* 22 (2012): 181–97.

natural religion, deists boldly rejected the Christian doctrines and practices they saw as inconsistent with it. A great number of them also attacked and mocked ministers and priests who, they believed, had established false religions that served ecclesiastical interests, adding doctrines only to increase their power and money.

Even though English deists rejected many traditional Christian doctrines, several of them labeled themselves Christian deists. Thomas Morgan (d. 1743), a doctor and a writer, wrote that he was a "*Christian Deist*." Morgan contended Christian deism was the "original, real, and indisputable Christianity," which "was preach'd to the World by Christ and the Apostles."[15] Another prominent English deist, Matthew Tindal (1657–1733) stressed several times in his book *Christianity as Old as the Creation* that people who shared his ideas were "*true Christian Deists*."[16] Finally, the writer Thomas Amory (1691?–1788?) asserted that he believed in "original Christianity," which was "that *pure Christian deism*, which the Lord of life and glory preached to the world."[17] Both Tindal and Morgan frequently called Jesus "our Saviour" and "Christ."[18] Amory went further, calling Jesus "*Christ*, the *appointed Mediator* . . . our Blessed Saviour." Amory also discussed "God's pardon granted to us by his blessed Son."[19]

Yet, these three self-identified deists declared that true Christianity as taught by Jesus was solely concerned with virtue and morality, and they held many unconventional beliefs about miracles, revelation, and prayer. Thomas Amory maintained that God did not work through secondary causes at all and instead accomplished everything by continual miracle. Amory said all natural phenomena "ought to be ascribed to the *immediate operation* of the *Deity*," as "he constantly interposes. The Divine Power is perpetually put forth throughout all nature." Amory believed that God directly caused gravity, tides, earthquakes, and even muscle movements. Amory also maintained that people who prayed often and focused on godliness could "become *partakers of a divine nature*." He contended that holy people were filled with the indwelling presence of God and "are the visible epistle of Christ to the world, written not with ink, but with the spirit of

[15] Thomas Morgan, *The Moral Philosopher*, 3 vols., 2nd ed. (London, 1738), 1:165, 439.

[16] Matthew Tindal, *Christianity as Old as the Creation: or, The Gospel, a Republication of the Religion of Nature* (London, 1731), 337, 340, 342.

[17] Thomas Amory, *Memoirs of Several Ladies of Great Britain* (London, 1755), 61; Amory, *The Life of John Buncle, Esq.*, 2 vols. (London, 1756–66), 1:380, 451.

[18] Tindal, *Christianity as Old as the Creation*, 49, 391, 42–43, 46, 384; Morgan, *Moral Philosopher*, 153–55, 144.

[19] Amory, *Life of John Buncle*, 1:15, 12.

the Living God."[20] Thomas Morgan believed God and angels sometimes implanted thoughts directly into people's minds, and he gave advice on how to receive divine inspiration.[21] Like these three self-identified Christian deists, Franklin used traditional Christian terminology and believed in miracles, revelation, and prayer.[22]

Morgan, Amory, and Tindal were the only three English deists who identified themselves as Christian deists. But there were other deists living in England who claimed to be restoring pure, genuine Christianity. These Christian deists lived in the same country, during the same time period, with a similar theology: that true Christianity was focused solely on piety and morality. Christian deism was not an organized movement with a leader or a set of beliefs to which everyone had to adhere. The members also did not agree about every point. Nevertheless, they shared enough characteristics to be considered members of a shared school of thought.[23]

The Christian deists should be not conflated with the seventeenth- and eighteenth-century ministers who were theologically liberal. These ministers were called Latitudinarians if they were members of the Church of England; they were called rational Christians or liberal Christians if they were not. In their edited volume on the role of reason and religion in the American founding era, Dustin Gish and Daniel Klinghard show that for the founders, reason and Biblical religion were not irreconcilable; instead, they were "intertwined strands shaping the American historical and political experience from the beginning."[24] The political beliefs of the Christian deists, the Latitudinarians, and the rational Christians were similar, and understanding the founding of America does not depend on placing a founder in one category or the other. Making this distinction is important, though, in order to understand the founder's theology and the century's religious milieu.

[20] Ibid., 1:173–74, 2:511, 1:393.

[21] Thomas Morgan, *Physico-Theology* (London, 1741), 318–19; Morgan, *Moral Philosopher*, 1:429–30.

[22] Joseph Waligore, "Christian Deism in Eighteenth Century England," *International Journal of Philosophy and Theology* 75 (2014): 205–22.

[23] While these thinkers did not usually label themselves Christian deists, scholars often apply to historical figures terms they did not claim during their lives. For example, most of the seventeenth-century liberal, English theologians we now call Latitudinarians did not label themselves that term, as it was commonly used as a reproach by their enemies. Martin I. J. Griffin Jr., *Latitudinarianism in the Seventeenth-Century Church of England*, annotated by Richard H. Popkin, ed. Lila Freedman (Leiden, 1992), 3–8.

[24] Dustin Gish and Daniel Klinghard, "The Mutual Influence of Biblical Religion and Enlightenment Reason at the American Founding," in Gish and Klinghard, *Resistance to Tyrants*, 1–15.

Latitudinarians and rational Christians were willing to reject a few Calvinist doctrines they saw as inconsistent with natural religion, such as predestination and justification by faith. But they defended many other important Christian teachings and practices against the deists' charge that these teachings and practices were inconsistent with natural religion. Prominent Latitudinarians and rational Christians defended the authority of all the books of the Bible, the divine institution of the sacraments, the idea that earthquakes were warnings of God's displeasure, and the belief God ordered the genocidal destruction of Israel's enemies.[25] The main point of caution for Latitudinarians was that they had to refrain from publishing any anti-Trinitarian views. But rational Christians living in England did not even have to do that after the 1719 conference at Salters' Hall.[26]

On the other hand, Christian deists rejected all Christian doctrines and practices they considered inconsistent with natural religion's emphasis on human standards of morality, more aggressively insisting on the Enlightenment values of rationality, free inquiry, and morality than did the Latitudinarians or rational Christians. For example, Thomas Morgan rejected the Old Testament, significant parts of the New Testament, and any ceremonies or sacraments that were not part of natural religion.[27] Ultimately, in many important areas, Latitudinarians and rational Christians privileged the Bible over natural religion, whereas Christian deists privileged natural religion over revelation. This theological distinction was so significant in the eighteenth century that it was seen as the difference between being a good Christian who respected God and the Bible and an infidel who attacked Christianity. While Latitudinarians and rational Christians were highly respected members of eighteenth-century European and American society, Christian deists were often arrested, excommunicated, or disinherited. They had to keep their religious views to themselves or publish them anonymously or posthumously.

All of the Christian deists claimed to be Christian, and the vast majority of them claimed they were the only ones advocating the Christianity Jesus

[25] For the authority of the Bible, see Joseph Priestley, *Unitarianism Explained and Defended* (London, 1796), 6; and Theophilus Lindsey, *The Catechist* (London, 1781), xvii, xi; for sacraments, see Samuel Clarke, *Sermons on Several Subjects* (London, 1738), 180–81; on the Canaanite genocide, see William Paley, *The Works of William Paley*, ed. Edmund Paley, 6 vols. (London, 1830), 6:309–10; on earthquakes, see Jonathan Mayhew, *A Discourse on Rev. XV. 3d, 4th* (Boston, 1755), 5–6.

[26] James C. Spalding, "The Demise of English Presbyterianism: 1660–1760," *Church History* 28 (1959): 63–83, 78–81.

[27] Morgan, *Moral Philosopher*, 1:v, 298, 359–61, 442.

taught. A better name for them might be "Jesus-centered deists" because they identified Christianity with Jesus's moral teachings.[28] Calling them "Jesus-centered deists" rather than "Christian deists" has the advantage of sidelining the contentious question about whether they actually were Christians. None of the Christian deists, however, described themselves as "Jesus-centered." Instead, they all described themselves as "Christian." Moreover, using the name "Jesus-centered deist" could be taken to imply that they should not be considered "Christian." It is more historically accurate to refer to them as they referred to themselves, so I will stick with calling them "Christian deists." By calling them that name, however, I do not mean to give the impression I am agreeing that they should be considered "Christian." While I refer to them as "Christian" deists, if the reader wants to call them a more cumbersome name like "Christianish" deists or deists who considered themselves Christian, that is understandable.

Franklin's Hemphill Writings

Franklin's 1735 Christian deist writings were all in defense of the Reverend Samuel Hemphill, who had arrived in Philadelphia in 1734 as the assistant minister for the city's Presbyterian church. Unlike other ministers, who emphasized Presbyterian doctrines, Hemphill emphasized virtue, morality, and reason. Franklin enjoyed Hemphill's popular sermons, describing them as "most excellent discourses." Franklin commented, "I became one of his constant hearers, his sermons pleasing me. "[29] Because Hemphill's sermons did not mention traditional doctrines such as justification by faith alone and original sin, he was soon accused of deism and heresy. Some of his accusers argued Hemphill was "a *Deist*, one who preach'd nothing but *Morality*."[30]

Presbyterian ministers convened a trial to decide if Hemphill was so unorthodox that he should be expelled from the church. Before the trial, Franklin wrote and published a short piece, "A Dialogue between Two Presbyterians," in his newspaper. In this piece, Franklin laid out his beliefs that true Christianity was solely concerned with piety and morality. He

[28] Brad Hart, "Franklin: A Jesus-Centered Deist," American Creation, accessed November 2, 2015, http://americancreation.blogspot.com/2008/10/franklin-jesus-centered-deist.html.

[29] Franklin, *Autobiography*, 77.

[30] Benjamin Franklin, *Some Observations on the Proceedings against the Rev. Mr. Hemphill*, 2nd ed. (Philadelphia, 1735), 5. In *PBF,* 2:37–65 (as "Observations on the Proceedings against the Rev. Mr. Hemphill"), and also http://franklinpapers.org/franklin/framedVolumes.jsp?vol=2&page=37a.

asserted that the Reformation had not gone far enough in removing the priestly corruptions that had been added to original Christianity.[31] Despite this defense, Hemphill was expelled. In response, Franklin wrote three long, argumentative tracts defending his and Hemphill's interpretation of true Christianity.[32]

There are five main reasons to consider these 1735 writings as a more important expression of Franklin's religious beliefs than his earlier religious writings, which have received greater scholarly attention. First, his writings in defense of Hemphill are considerably longer than his earlier religious writings. In the Yale *Papers of Benjamin Franklin*, these later writings total ninety-five pages. On the other hand, his four earlier religious works (*A Dissertation on Liberty and Necessity*, "Articles of Belief and Acts of Religion," "Doctrine to be Preached," and "On the Providence of God in the Government of the World") total only thirty pages altogether. The length of these Hemphill writings indicate Franklin expended time and effort on them. Second, he was significantly more mature when he composed them. Franklin's *Dissertation on Liberty and Necessity* was written when he was nineteen, while the Hemphill tracts were produced ten years later, when he was twenty-nine. Third, he never disowned the Hemphill writings. On the other hand, he declared in his *Autobiography* that his only other published religious work, his *Dissertation on Liberty and Necessity*, was "an erratum" because some error had "insinuated itself unperceiv'd into my argument, so as to infect all that follow'd."[33] Fourth, he still believed the ideas he espoused in his Hemphill writings at the end of his life.

The final reason to consider Franklin's defense of Hemphill as more important than his other early theological writings is that he was clearly stating his own beliefs in these 1735 works. Many scholars consider Franklin an ironic writer who used many different masks in his writings.[34] However, in these Hemphill writings, Franklin did not utilize any masks or irony. He used no fictional or satiric frame by adopting the voice of a charming, funny persona.[35] Instead, these writings are densely packed

[31] Franklin, "Dialogue between Two Presbyterians," *Pennsylvania Gazette*, Apr. 3–10, 1735, 2–4. In *PBF*, 2:27–33, and also http://franklinpapers.org/franklin/framedVolumes.jsp?vol=2&page=27a.

[32] Lemay, *Life of Benjamin Franklin*, 2:247; Melvin H. Buxbaum, *Benjamin Franklin and the Zealous Presbyterians* (State College, PA, 1975), 234. I follow Melvin H. Buxbaum and J. A. Leo Lemay in ascribing to Franklin the entire pamphlet *A Letter to a Friend in the Country*.

[33] Franklin, *Autobiography*, 33, 43.

[34] Slack, "Benjamin Franklin's Metaphysical Essays," 32.

[35] Buxbaum, *Benjamin Franklin*, 112.

with close theological arguments about Jesus's teachings and the nature of Christianity. In his defense of the minister, Franklin forthrightly stated his beliefs about traditional Christian doctrines and their relationship to morality and reason. Scholars commonly agree that Franklin was sincerely stating his religious convictions in these writings. Melvin H. Buxbaum avers, "Franklin defended Hemphill because he believed in his cause and thought his theology generally sound."[36] J. A. Leo Lemay maintains that Franklin defended Hemphill because he was "setting forth his own religious beliefs."[37] Douglas Anderson not only declares that Franklin was expressing his "own religious convictions"; he even compares Franklin's passion to that of a religious revivalist or a religious enthusiast.[38] Christian deists generally expressed this kind of passion in their writings because they believed they were showing people the one right way to earn God's favor and eternal rewards.

James Pitt's Possible Influence on Benjamin Franklin

As with any intellectual school of thought, the English Christian deists shared many beliefs while differing over others. Franklin's beliefs resembled those of the important English Christian deist James Pitt, the only Christian deist we know that Franklin read between the late 1720s, when he was radically unorthodox, and 1735, when he advocated Christian deist ideas. Franklin's Christian deist compositions have many deep similarities to Pitt's, both in the ideas expressed and in the style of writing. It seems Pitt influenced Franklin to convert to Christian deism. But we cannot be certain of this, as Franklin never discussed it or wrote about it.

James Pitt was born in Norwich and first worked as a schoolmaster. In early 1729, he was hired by the English government to edit and write political articles for the *London Journal*. Pitt not only wrote political articles supporting the government's policies, but he also wrote many pieces about his own religious views. In these articles, Pitt declared that the original Christianity Jesus taught was solely piety and morality. He further declared that throughout history crafty and greedy priests and ministers had added other doctrines and rituals. Because of his total focus on piety

[36] Buxbaum, *Benjamin Franklin*, 114.
[37] Lemay, *Life of Benjamin Franklin*, 2:261.
[38] Douglas Anderson, *The Radical Enlightenments of Benjamin Franklin* (Baltimore, 1997), 84, 82.

and morality, as well as his emphasis on reason and his attacks on priestcraft, Pitt was often considered a deist by his contemporaries.[39]

With the government's support, the *London Journal* became the most popular newspaper in England during Pitt's tenure. Considering how eighteenth-century newspapers were consumed, each one of Pitt's essays was likely read or heard by as many as a hundred thousand people.[40] The newspaper was even read in America. Franklin started publishing the *Pennsylvania Gazette* not long after Pitt began writing for the *London Journal*, and between 1730 and 1735 Franklin reprinted nine of Pitt's Christian deist essays in his own newspaper.[41] These nine Christian deist essays contained the essentials of Pitt's Christian deism, and Pitt's beliefs were very similar to Franklin's 1735 Christian deist beliefs.

So far I have assumed that James Pitt wrote these religious articles in the *London Journal*, but these articles did not carry the byline "James Pitt." Instead, the author was always listed as either "Socrates" or "Publicola." It is highly likely the same person wrote all the Christian deist articles the newspaper published between December 1728 and May 1734, as these pieces advocated the same Christian deist ideas. They were also written in the same style, used the same words and phrases, shared the same type of references, and showed the same level of education. It is almost certain that the author of these articles was James Pitt. First, they appeared at the time he was hired as the editor and main writer of the newspaper, and they stopped when he ceased his association with the newspaper. Second, James

[39] Eustace Budgell, *The Bee: or, Universal Weekly Pamphlet*, 9 vols. (London, 1733), 1:14; *Weekly Miscellany*, Jan. 27, 1733, 1, col. 2.

[40] Simon Targett, "Pitt, James," in *Oxford Dictionary of National Biography*, edited by H. C. G. Matthew and Brian Harrison, 61 vols. (Oxford, 2004), 44:440.

[41] Here and following all the Pitt articles were on page one of the *London Journal* unless otherwise noted. The Franklin reprints were all in the *Pennsylvania Gazette*. 1) "A Dialogue between Philocles and Horatio," Pitt: Mar. 29, 1729; Franklin: June 18–23, 1730. 2) "A Second Dialogue between Philocles and Horatio," Pitt: Sept. 20, 1729; Franklin: July 2–9, 1730. 3) "An Essay on Original Primitive Christianity," Pitt: Nov. 15, 1729; Franklin: July 9–16, 1730. 4) "A Second Essay on Original Primitive Christianity," Pitt: Nov. 22, 1729; Franklin: July 16–23, 1730. 5) "A Third Essay on Original Primitive Christianity," Pitt: Dec. 6, 1729; Franklin: July 23–30, 1730. 6) "An Essay on Temperance," Pitt: Dec. 20, 1729; Franklin: Oct. 7–14, 1731. 7) "A Discourse in Honour of the Queen," Pitt: Aug. 26, 1732; Franklin: Feb. 1–8, 1733. 8) "A Discourse on the Principles of some Modern Infidels," Pitt: Nov. 25, 1732; Franklin: June 14–21, 1733. 9) "A Philosophical Enquiry into the Summum Bonum, or Chief Good of Man," Pitt: Aug. 12, 1732; Franklin: July 17–24, 1735. Before Franklin bought the *Pennsylvania Gazette*, the previous publisher reprinted two other Pitt essays. "On Superstition" was originally published in the *London Journal* on February 15, 1729. It was reprinted July 11, 1729. "A Second Letter on Superstition" was printed in the *London Journal* on April 26, 1729, and reprinted in the *Pennsylvania Gazette* on July 18, 1729.

Pitt was arrested for blasphemy for writing one of Publicola's articles, "A Second Letter on Superstition."[42] Third, it is well-known that Pitt wrote the political articles signed "Francis Osborne" and that under that name he occasionally discussed the true nature of religion in the same unorthodox terms as he did in the articles signed "Socrates" and "Publicola."[43] Most other scholars agree with my assessment, as the *Oxford Dictionary of National Biography* says that between 1729 and 1734 James Pitt wrote many articles in the *London Journal* under the pen names of "Francis Osborne," "Socrates," and "Publicola."[44]

Pitt never outright labeled himself a Christian deist, but, considering that he had already been arrested for blasphemy, he came as close to it as was prudently advisable. He started by saying he was a Christian, declaring he had the "greatest reverence" for "true original primitive christianity."[45] He then cautiously identified true Christianity with the ideas of the well-known philosopher and deist Lord Shaftesbury, whom he declared "the wisest and most reasonable writer on *Moral Virtue* and *Deity* that ever appeared in the world."[46] Pitt then argued that Shaftesbury's ideas, which emphasized piety and morality, were real deism: "by *Deists* we declare once for all, that we mean only those who are in Lord *Shaftsbury's System of Morality and Deity*; for that System alone is *true Deism*."[47] The important claim Pitt made was that Jesus's teachings emphasized only piety and morality and were thus identical with Shaftesbury's teachings. Pitt concluded that true Christians were true deists and vice versa. He stressed, "*Lord Shaftsbury* is (upon this *true Plan* of Christianity,) a *real Christian*, without the Name of Christian; and *such* Christians, are *real Deists*, with the Name of Christians."[48] In this roundabout manner, Pitt cautiously declared himself a Christian deist.

[42] "Port News," *Daily Journal*, May 8, 1729, 1; "Affairs of Great Britain and Ireland," *Monthly Chronicle*, May 1729, 101.

[43] Pitt, "A Second Discourse on the Causes and Remedies of Corruption," *London Journal*, Mar. 27, 1731, col. 2; Pitt, "Discourse in Honour of the Queen," *London Journal*, Aug. 26, 1732, col. 2 (the discussion of Clarke and Wollaston); Pitt, "A Review of the Principles which have been Laid Down in these Papers," *London Journal*, July 22, 1732, cols. 1–2.

[44] Targett, "Pitt, James," in *Oxford Dictionary of National Biography*, 44:440.

[45] Pitt, "On True Religion," *London Journal*, Feb. 8, 1729, col. 2.

[46] Pitt, "A Vindication of Lord Shaftsbury's Writings and Character," *London Journal*, June 10, 1732, col. 2.

[47] Pitt, "The Vindication of Lord Shaftsbury's Writings Continued," *London Journal*, June 17, 1732, col. 1.

[48] Ibid., 2, col. 1.

The Basic Christian Deist Beliefs of James Pitt

The foundation of Christian deist theology was the belief that conventional Christians were not practicing true Christianity. Christian deists thought that priests and ministers had twisted Jesus's original religion into superstition in order to increase their power. "*Crafty and Ambitious Men*," Pitt asserted, "thro' an unreasonable Love of Power, have, by Degrees, in most Parts of the World, established what they call *Religion*, but what is, in reality *Superstition*."[49]

Instead of listening to priests and ministers who had perverted Christianity, Christian deists urged people to use reason to examine all religious claims. As Pitt wrote,

> *By Reason* they must judge of all Things, visible and invisible, natural and supernatural, divine and humane; by this, they must judge of the Authority and Meaning of all Books; the Truth of all Doctrines, and the Reality of all Miracles. This *Divine Principle* they must never give up on any Pretence whatever.[50]

Pitt believed people should not just accept the religion they had been taught; instead, he insisted, all religious doctrines had to be examined by reason.

The most crucial point scholars miss about Christian deists is that, while they emphasized reason, theirs was not a modern, secular view of reason. Pitt called reason a "*Divine Principle*" and "our celestial Guide, and divine Light."[51] Christian deists called reason a divine principle because they believed reason itself gave humankind reliable knowledge about God and morality. Reason did this because it included innate moral ideas, a conscience, or a moral sense that God had implanted in humans. Pitt said that people could tell right from wrong as easily as they could distinguish one geometrical figure from another. Pitt insisted a person "is as able to distinguish *Justice* from *Injustice*, and *Benevolence* from *Cruelty*, as he is to distinguish a Cube from a Square." Pitt asserted that these ideas of right and wrong did not come from our social training but were part of our constitution. He thought there were "*natural Ideas*; or Ideas of Right and

[49] Pitt, "A Third Essay on Original Primitive Christianity," *London Journal*, Dec. 6, 1729, col. 1.

[50] Pitt, "On True Religion," *London Journal*, Feb. 8, 1729, col. 2.

[51] Ibid.; Pitt, "An Answer to Mr. Woolaston's Third Question," *London Journal*, Mar. 14, 1730, col. 3.

Wrong, which *naturally* grow up with us, and thrust themselves upon us whether we will or not, without any Teaching or Instruction." Pitt then concluded God was teaching us through these implanted moral ideas: "In this Sense, we are all *taught of God*; and these Ideas, all Men, of all Countries, and of all Ages, do agree in, or would agree in were they not *led wrong*, by Men whose *Interest* 'tis to deceive them."[52]

Christian deists did not believe that reason and conscience had been perverted through original sin. Instead, they maintained that humanity had turned away from natural religion because priests and ministers misled them. They believed that Jesus had been sent by God only to bring people back to the knowledge of natural religion. According to Pitt, Jesus "was *Sent of God*."[53] He also believed that disputes about Jesus's nature and whether he was part of the Trinity were fruitless. As he argued,

> All those Controversies which have been so hotly agitated at the Expence of the Peace, and Blood of the Christian World, about the Person of Jesus Christ, concerning the Trinity, and a Thousand other Things, make us neither *wiser nor better*. We may embrace one Scheme, or t'other, or neither, as Evidence appears to us, and be equally good Christians, and faithful Subjects of the Kingdom of God.[54]

As long as a Christian was moral, Pitt believed that person could have any view about Jesus's nature. Pitt personally believed, however, that Jesus would raise people from the dead on the Day of Judgment, implying that he thought of Jesus as more than human.[55]

The Christian deists revered Jesus and equated true Christianity with his teachings and the similar first sermons of the early apostles. For this reason, Pitt pronounced,

> The *first Sermons* of Christ and his Apostles must contain the *whole Will of God* in relation to the Salvation of Men, because Thousands were *converted*, or *made Christians*, by those Sermons; which could not have been, had not the Sermons contained *all that was necessary* to make them Christians.[56]

[52] Pitt, "A Philosophical Enquiry into the Summum Bonum, or Chief Good of Man," *London Journal*, Aug. 12, 1732, col. 3.

[53] Pitt, "An Essay on Original Primitive Christianity," *London Journal*, Nov. 15, 1729, col. 3.

[54] Pitt, "An Answer to Mr. Woolaston's Third Question Continued," *London Journal*, Mar. 21, 1730, col. 3.

[55] Ibid., col. 2.

[56] Pitt, "An Essay on Original Primitive Christianity," *London Journal*, Nov. 15, 1729, col. 1.

Pitt believed Jesus's sermons could only have had salvific efficacy if they had contained all that was essential to be a Christian. The rest of the Bible was superfluous to him; as he wrote, "we may be saved without understanding the true Meaning of the rest of the Bible."[57]

Most importantly, Christian deists believed Jesus taught only natural religion, meaning that Jesus taught that piety and morality were enough to earn an eternal reward. Pitt pointed out that the first discourses of Jesus, which Pitt was convinced contained all that was necessary for our salvation, were focused purely on piety and virtue:

> In these *first Discourses* we find nothing inculcated but the Practice of moral Virtue, or *Obedience to the Eternal Universal Law of God written in Mens* [*sic*] *Hearts*. . . . Jesus Christ therefore, the *Messiah or Sent of God*, could come amongst us with no other Intention than to *repeat, restore and enforce the great Law of Nature*.[58]

Pitt declared that on the Day of Judgment, Jesus would reward "those who have done well to everlasting Life." Pitt was sure, however, that Jesus would only reward the virtuous, writing that "*Happiness and Misery* were, by him [Jesus], always join'd to *Virtue and Vice*; not to *Opinions or Speculations; to Rites or Ceremonies*."[59]

According to Christian deists, Jesus restored natural religion, a religion all humans could understand because of the innate ideas or conscience God had instilled in them. Human moral standards were the same as those that applied to the actions of every intelligent moral being, whether that being was a human, an angel, or God. "*Wisdom and Goodness* are the same in all intelligent Beings in the Universe," Pitt believed.[60] Therefore, Christian deists were certain God's actions were always moral. Pitt had confidence that the will of God "is always in Conjunction with Right."[61] He also insisted, contrary to the Calvinists who emphasized God's sovereignty, that God could never deviate from the laws of reason. God, Pitt declared "is obliged *by the eternal Laws of Reason*, from which he can never deviate."[62]

Because humans had innate ideas of morality and God acted by the same standards of morality that humans did, Christian deists reasoned

[57] Pitt, "A Second Essay on Original Primitive Christianity," *London Journal*, Nov. 22, 1729, col. 1.
[58] Pitt, "An Essay on Original Primitive Christianity," *London Journal*, Nov. 15, 1729, col. 1.
[59] Ibid., col. 2.
[60] Pitt, "An Answer to Mr. Woolaston's Third Question," *London Journal*, Mar. 14, 1730, col. 3.
[61] Pitt, "An Enquiry into the Original of Right," *London Journal*, Dec. 14, 1728, col. 1.
[62] Pitt, "An Essay upon Piety," *London Journal*, Jan. 17, 1730, col. 2.

individuals had a reliable rule to judge whether something was a divine revelation. Christian deists declared that a person should only accept an alleged revelation as divine if it agreed with the individual's internal moral standards. Pitt asserted that "in order to know whether *that Message* be from God, we must *compare* what the Messenger delivers *in his Name* with what by the Light of *Nature* and *Reason* we already *know* of Him, and see whether they *agree*."[63]

Because of the conviction that natural religion gave people the criteria to judge any revelation, Christian deists were willing to reinterpret or reject any part of the Bible that did not accord with natural religion. For example, Pitt agreed that many biblical passages emphasized faith, but he disagreed with the traditional Protestant doctrine that people were justified by faith alone. Instead, Pitt reinterpreted these passages to say that faith was always related to virtue. To Pitt, faith meant "*Faith of a moral nature*; not a Sett [*sic*] of speculative Opinions; not *Faith* absolutely considered in itself; but *Faith as it relates to Virtue*." He explained that true faith was a belief that God had ordered the universe so that morally good people would be rewarded in the next life. Pitt thought Christ came to teach this belief, and so he wrote, "This Faith in Jesus Christ, *as the Messiah, or Sent of God*, is a *supernatural Means* of believing in God, or acknowledging the Truth of this practical Proposition, *That God will finally make Good Men happy*."[64]

While Christian deists emphasized natural religion, almost all of them thought it included supernatural elements, and all of them saw natural religion as a form of spirituality in which a person had a personal relationship with God. Pitt believed Jesus was resurrected from the dead and that Saint Paul performed miracles.[65] He also thought that natural religion included duties to God such as adoration, prayer, worship, and service to others. Pitt thought God's goodness was obvious, not only because God created and governed us, but also because God made laws that worked in "every way tending to make us *good and happy*." For these reasons, Pitt believed humans owed God homage and gratitude: "As *his Creatures*, we owe him the most profound Veneration, Worship, and Homage, the most humble Acknowledgments, and the highest Gratitude."[66] The best kind of

[63] Pitt, "The Vindication of Lord Shaftsbury's Writings Continued," *London Journal*, June 17, 1732, col. 1.

[64] Pitt, "An Essay on Original Primitive Christianity," *London Journal*, Nov. 15, 1729, cols. 2 and 3.

[65] Pitt, "A Second Essay on Original Pure Christianity," *London Journal*, Nov. 22, 1729, cols. 1 and 3; Pitt, "An Answer to Mr. Woolaston's Third Question Continued," *London Journal*, Mar. 21, 1730, col. 2.

[66] Pitt, "An Essay upon Piety," *London Journal*, Jan. 17, 1730, col. 2.

homage and service people could do to God was to help others. For this reason, Pitt wrote that "Piety to God, *is Love to Mankind*."[67] He thought that God wanted individuals to serve others; "it follows, that doing all the Good we can to Men, is *true Religion*. He who promotes the Happiness of Men to the utmost of his Power, his Will is One with the Will of God."[68]

Franklin's Christian Deist Beliefs in the 1735 Hemphill Writings

Understanding Franklin's Christian deism starts by realizing that he considered himself a Christian. He wrote, "I am conscious I believe in Christ, and exert my best Endeavours to understand his Will aright, and strictly to follow it." Furthermore, Franklin saw himself as part of the Christian community. He referred to "us Christians," and "My Brethren of the Laity." Moreover, he talked of "our common King *Jesus*," and he considered the Protestant Reformation as "our happy Reformation from Popery and religious Slavery."[69]

Franklin agreed with Pitt and the other Christian deists that it was in the nature of ministers and priests to desire power and authority and to teach doctrines that perverted true Christianity. Franklin contended that the clergy made "exorbitant Claims to Power & Authority" and that "the Generality of the Clergy were always too fond of Power to quit their Pretensions to it."[70] Franklin was full of vitriol in attacking the ministers who were judging Hemphill. He called these clergy "*Rev. Asses*," full of "contemptible Stupidity" who "propagate Doctrines tending to promote Enthusiasm, Demonism, & Immorality in the World."[71]

Because priests and ministers wanted power, lay people, Franklin believed, could not trust their priests' or ministers' interpretations of Christianity. Like other Christian deists, Franklin emphasized that individuals had to use their faculties of reason to examine traditional religious beliefs. Franklin thought religious prejudices formed by education and custom were deeply ingrained, and he praised people who could interrogate their religious convictions. In a tract solely concerned with the need to question religious training, he wrote, "how glorious a Conquest they make,

[67] Ibid.
[68] Pitt, "On True Religion," *London Journal*, Feb. 8, 1729, col. 1.
[69] Franklin, *Letter to a Friend*, 22, 23, iv, 14, 12.
[70] Ibid., 7, iv.
[71] Franklin, *Defence of Hemphill's Observations*, 31, 41, 18.

when they shake off all manner of Prejudice, and bring themselves to think *freely*, *fairly*, and *honestly*. This is to think and act like Men."[72]

Franklin emphasized reason, although it is not clear if he agreed with the other Christian deists that humans had innate ideas of morality. He did not mention inherent ideas in the Hemphill writings. In an essay written in 1732, however, he said that simplicity was "innate and original" to human nature, and in the essay he either identified or came very close to identifying simplicity with honesty, virtue, and goodness.[73] Moreover, in another essay written in 1732, he accepted or seemed close to accepting that humans had a moral sense implanted in them by God.[74] Finally, at the height of the Hemphill controversy, Franklin reprinted the Pitt essay "A Philosophical Enquiry into the Summum Bonum, or Chief Good of Man" that defended the idea that God implanted natural moral standards in humans.[75] This essay declared that people could as easily distinguish good from evil as light from dark or a cube from a square. It also argued that following these natural, God-given ideas of right and wrong was the same as being taught by God. Therefore, Franklin, at least in 1735, most likely agreed with Pitt and the other Christian deists that humans had a moral standard implanted in them by God.

Franklin, similar to Pitt and the other Christian deists, thought human reason had not been perverted in the Fall. Franklin also believed God sent Jesus to help humanity, but, like Pitt, did not think it was important to specify Jesus's exact nature. While he rejected many other traditional Christian doctrines, Franklin wrote nothing in the Hemphill tracts about the doctrine of the Trinity. These tracts do, however, imply he saw Jesus as divine. Franklin stated that "God sent his son into the world," suggesting an otherworldly origin. In a similar, but complicated, passage, Franklin asserted that Jesus "came from Heaven," again implying Jesus was in heaven before he was born.[76]

Franklin agreed with Pitt that Jesus taught everything Christians needed to believe and that these teachings were natural religion. Franklin contended, unlike the more orthodox Christians who also emphasized Paul's epistles, that "*Jesus Christ*, the Redeemer of Mankind, elsewhere

[72] Franklin, *Letter to a Friend*, iii.

[73] Franklin, "Dialogue between Two Presbyterians," *Pennsylvania Gazette*, Apr. 6–13, 1732.

[74] Franklin, "To the Printer of the Gazette," *Pennsylvania Gazette*, Nov. 23–30, 1732.

[75] Franklin, "A Philosophical Enquiry into the Summum Bonum, or Chief Good of Man," *Pennsylvania Gazette*, July 17–24, 1735.

[76] Franklin, *Defence of Hemphill's Observations*, 36, 37.

gives us a full and comprehensive View of the Whole of our Religion, and of the main End and Design of the Christian scheme. "[77] Franklin agreed that Jesus taught only piety and virtue. He insisted that Jesus taught a

> full and comprehensive View of the Whole of our Religion, and of the main End and Design of the Christian scheme, when he says, *thou shalt love the Lord thy God with all thy heart, and with all thy Soul, and with all thy Mind, and thy Neighbour, as thy self.* and [*sic*] he plainly tells us, that these are the most necessary and essential parts of God's Law, when he adds, *on these two Commandments hang all the Law and the Prophets*.[78]

Franklin believed Jesus's command to his followers to love God and their neighbors was "a full and comprehensive View" of Christianity and that doing this was enough to be rewarded in the next life. Franklin declared that Jesus came into the world "to promote the Practice of Piety, Goodness, Virtue, and Universal Righteousness . . . and by these Means to make us happy here and hereafter."[79]

Franklin privileged natural religion's emphasis on fairness and benevolence, and thus reinterpreted or rejected any passages in the Bible that were not consistent with natural religion. Franklin reinterpreted passages of the Bible dealing with faith in much the same way Pitt did.[80] He was more forthright than Pitt, however, in rejecting outright some biblical passages, such as those that supported the doctrine of original sin. The doctrine of original sin could not be true, Franklin insisted, because it was "arbitrary, unjust and cruel." This meant it was "contrary to Reason and to the Nature and Perfections of the Almighty God." It was also "contrary to a thousand other Declarations of the same holy Scriptures." Franklin even proclaimed the doctrine of original sin was the "teaching of Demonism" and that any scriptural passage advocating the doctrine of original sin could not be genuine. Even "if there was such a Text of Scripture" that advocated original sin, he elaborated, "for my own Part, I should not in the least hesitate to say, that it could not be genuine, being so evidently contrary to Reason and the Nature of Things."[81] Franklin also rejected the doctrine that only Christians were saved because the idea God would damn people to hell

[77] Ibid., 19–20.
[78] Ibid.
[79] Franklin, *Defence of Hemphill's Observations*, 20.
[80] Franklin, "Dialogue between Two Presbyterians," *Pennsylvania Gazette*, Apr. 3–10, 1735, 3, col. 1.
[81] Franklin, *Defence of Hemphill's Observations*, 32–33.

who had never heard of Christianity was "utterly impossible to reconcile . . . with the Idea of a good and just God; and is a most dreadful and shocking Reflection upon the Almighty." He finally advised the judges of Hemphill, who were preaching traditional Presbyterian doctrines, "to take the utmost Care of saying any thing, or interpreting Scripture after a Manner injurious to the infinite Justice, Goodness and Mercy of God, and contradictory to Reason."[82]

Franklin focused his 1735 tracts on defending Hemphill from the judges' charges and so had no reason to discuss miracles in these tracts. In an essay written a few years earlier, however, Franklin said he believed in miracles. In this essay, entitled "On the Providence of God in the Government of the World," Franklin maintained that God "sometimes interferes by his particular Providence" and performed miracles. Furthermore, he assumed a deity who did not perform miracles was not worthy of the name. He pronounced a deity who "never alters or interrupts" the course of nature "has nothing to do; he can cause us neither Good nor Harm; he is no more to be regarded than a lifeless Image."[83]

In his 1735 tracts, Franklin declared that God was responsible for other supernatural activities besides miracles. He believed that some people were blessed with the gifts of the Holy Ghost in apostolic times. He asserted that "the Apostles . . . were endued [*sic*] with the Gifts of the Holy Ghost."[84] Franklin also believed the New Testament was the Christian revelation. In one place he stressed that "the surest way to find out the End and Design of the Christian Revelation, or what View the Author of it had in coming into the World, is, to consult the Revelation itself." In another passage, Franklin pronounced that the principles of loving God with all one's heart and one's neighbor as oneself were "Revelations the Almighty has made to Mankind."[85]

Franklin agreed with Pitt that humans had a duty to worship God and promote the goodness of others. He affirmed that natural religion "oblige[s] us to the highest Degrees of Love to God, and in consequence of this Love to our almighty Maker, to pay him all the Homage, Worship and Adoration we are capable of." Because of this love of God, Franklin

[82] Franklin, *Defence of Hemphill's Observations*, 39, 38, 33, 40.

[83] Franklin, "On the Providence of God in the Government of the World," [1732], in *PBF*, 2:264–69, and also http://franklinpapers.org/franklin//framedVolumes.jsp?vol=1&page=264a.

[84] Franklin, *Letter to a Friend*, 20.

[85] Franklin, *Defence of Hemphill's Observations*, 19, 20.

thought, people should "do good Offices to, and promote the general Welfare and Happiness of our Fellow-creatures."[86]

In his 1735 writings defending the Reverend Hemphill, Franklin emphasized reason and morality like other deists. He also claimed to be a Christian and passionately advocated for his view of Christianity. These are the hallmarks of Christian deism and show that Franklin was a Christian deist at this time.

Franklin's Later Religious Beliefs

This article has focused on showing that Franklin espoused Christian deist views in his defense of Reverend Hemphill. These works were written in 1735, when Franklin was about thirty years old. A discussion of whether he continued to maintain any or all of these beliefs at every point in his later life lies outside the scope of this essay. Nevertheless, Franklin did still espouse the most important of these views at the end of his life. Shortly before he died, Franklin wrote a letter to Ezra Stiles describing his religious views. At this time, Franklin reaffirmed his agreement with the most important Christian deist beliefs he advocated in 1735.[87]

Franklin still had a special place for Jesus in his religious outlook. He professed, "As to Jesus of Nazareth, my Opinion of whom you particularly desire, I think the System of Morals and his Religion as he left them to us, the best the World ever saw, or is likely to see." Franklin still did not concern himself with Jesus's exact nature, merely commenting that he had "some Doubts as to his Divinity: tho' it is a Question I do not dogmatise upon, having never studied it."[88]

Unlike in 1735, Franklin did not viciously attack priests and ministers for having corrupted Christianity. Instead, he moderated his critique, just claiming it had "received various corrupting Changes." While we cannot know what Franklin meant by "corrupting charges," considering his very harsh 1735 attacks on the Christian clergy, he probably still thought the clergy had purposefully corrupted Christianity.[89]

Franklin also continued to emphasize that one's moral conduct determined one's status in the next life. He maintained, "the Soul of Man is

[86]Ibid., 20-21.

[87] Benjamin Franklin to Ezra Stiles, Mar. 9, 1790, available at http://franklinpapers.org/franklin//framedVolumes.jsp.

[88]Ibid.

[89]Ibid.

immortal, and will be treated with Justice in another Life respecting its Conduct in this." He believed that people were not saved by faith or by being part of the Christian church or by performing any ritual but were rewarded due to their conduct in life.[90]

Further, Franklin maintained humankind's obligation to worship God. He stressed that God existed and that "he ought to be worshipped." As before, he argued that the best service a person could do for God was to help other people, noting that "the most acceptable Service we can render to him [God], is doing Good to his other Children."[91]

Finally, Franklin showed that he did not care about traditional Christian doctrines. He first mentioned his creed contained a few basic doctrines of natural religion such as God existed and we ought to worship him. Then Franklin proclaimed, "These I take to be the fundamental Principles of all sound Religion." He did not include in his creed any exclusively Christian doctrines.[92]

Franklin did not mention miracles in his letter to Stiles. However, in a letter written in 1784, he was sure God did miracles to help the Americans win the Revolutionary War.[93] Thus, he still believed in miracles and an active God at the end of his life.

Conclusion

Benjamin Franklin's longest religious writings, defending a minister accused of deism, were a passionate defense of nontraditional Christianity. It is hard to understand the significance of these writings unless we realize that Christian deism was a viable theological option in England. Recent scholarship on English deism has shown that three important English deists called themselves Christian deists and that their beliefs were significantly different from conventional deists who believed in a distant, cold deity.

Christian deists claimed to be restoring the pure, original Christianity that Jesus taught. They thought the priests and ministers had perverted true Christianity for their own purposes by adding extraneous doctrines and rituals to it. According to them, Jesus taught nothing but natural

[90]Ibid.
[91]Ibid.
[92]Ibid.
[93] Benjamin Franklin to William Strahan, Aug. 19, 1784, available at http://franklinpapers.org /franklin//framedVolumes.jsp.

religion, which was centered on piety and morality. They believed any passage or book of the Bible inconsistent with natural religion had to be reinterpreted or rejected. Christian deists believed in miracles, revelation, and other forms of divine activity in the world. They also thought people should worship and pray to God. In his 1735 writings defending Reverend Hemphill, Franklin seems to have sincerely shared all these beliefs. Therefore, these writings should be classified as Christian deist writings.

University of Wisconsin–Stevens Point JOSEPH WALIGORE

"Painful Leisure" and "Awful Business": Female Death Workers in Pennsylvania

Abstract: In late eighteenth- and nineteenth-century Pennsylvania, women were the primary caretakers of the dying and dead. Watchers tended to the physical, spiritual, and social needs of the dying. Layers out of the dead washed, groomed, fixed, and dressed dead bodies. Watchers and layers included female relatives and neighbors and women who offered their services for pay. By the second half of the nineteenth century, most Pennsylvania women did not participate in these activities; the care of the dying and dead became the responsibility of formally trained and licensed professionals. The Civil War, industrial tragedies, the rise of undertaking and embalming as professions, and the increasing dependence on medical institutions such as hospitals and homes for the incurable contributed to the changes in the care of the dying and dead.

> We have lost our Neighbor Waln, she died this forenoon between nine and ten o'clock . . . . I went over and stay'd with the afflected children 'till their other friends and relations arrived—Molly Humphriss who lays her out, was also come, I then came away before that awful business commenced.
>
> —*Elizabeth Drinker,* Diary, *April 19, 1798*

Before the rise of funeral directing and the funeral home, women such as Molly Humphriss practiced their "awful business," washing, grooming, dressing, and laying out the dead in the home of the deceased. In late eighteenth- and nineteenth-century Pennsylvania, women were the primary caretakers of the dying and dead. Known as

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watchers and layers, they included the female relatives of the dead, neighbors, and women who offered their services for pay. One watcher was poet Annis Boudinot Stockton, who kept vigil as her husband Richard Stockton died of oral cancer. Writing to a friend, she described her watch as "painful leisure."[1] Once death occurred, the layers out of the dead took over and tended to what Quaker diarist Elizabeth Drinker referred to as "that awful business."[2] Eventually, this "painful leisure" and "that awful business" no longer occupied women's time. In the second half of the nineteenth century, death moved from the bedroom to the hospital room and from the front parlor to the funeral parlor due to changes in warfare, industry, and medicine.

Researchers who consider the history of death in America have focused on five main themes. First, historians offer surveys of how attitudes toward death changed over large periods of time and across geographic regions. For example, Philippe Ariès's *Western Attitudes toward Death: From the Middle Ages to the Present* concentrates on Western attitudes toward death—primarily European, although it does address American values in a portion of the text. Second, scholars investigate the connections between American views of death and the Civil War; this literature largely seeks to understand how American men envisioned and experienced death. Drew Gilpin Faust's *This Republic of Suffering: Death and the American Civil War* shows how the tremendous loss of life fundamentally transformed how Americans thought about, dealt with, and felt about death. Researchers have also turned their attention to women and death in the United States in the nineteenth century. *Radical Spirits: Spiritualism and Women's Rights in Nineteenth-Century America,* by Ann Braude, traces the influence of spiritualism upon the development of women's authority in both the private and public spheres. Women empowered themselves through their association with death. Historians also investigate the social, cultural, and economic practices that characterize dying, death, and dead bodies. Christine Quigley's *The Corpse: A History* offers a wide-ranging analysis of how dead bodies were handled in a variety of historical and regional contexts. Finally, some scholars study artifacts of nineteenth-century American death culture, examining objects, such as mourning dress, artwork, and cemetery

[1] Annis Boudinot Stockton, letter to Elizabeth Graeme Fergusson, Nov. 24, 1780, in *Only for the Eye of a Friend: The Poems of Annis Boudinot Stockton*, ed. Carla Mulford (Charlottesville, VA, 1995), 50.

[2] Elaine Forman Crane, ed., *The Diary of Elizabeth Drinker*, vol. 2, *1796–1802* (Boston, 1991), 1024.

monuments, that marked the American experience of death. Mary Brett's *Fashionable Mourning Jewelry, Clothing, and Customs*, for instance, is an elegantly illustrated analysis of aesthetic reactions to dying and death.[3]

Unlike historical surveys about death, this essay focuses on how Pennsylvania women offered a variety of services to the dying and the dead and how, due to military, industrial, and medical changes, their role in this work diminished and was performed increasingly by trained, male professionals. This article clearly recognizes the impact that the Civil War had on women's authority over dying and dead bodies. It employs written primary sources, including city directories, dictionary entries, diaries, and poetry to understand how women served as caretakers of the dying and dead and when this caretaking declined. City directories document layers out of the dead, indicate where they lived, and record whether they offered other services, like midwifery and nursing. Dictionary entries attest to the variety of titles applied to women who tended to the dying and dead, show how this work died out economically and socially, and suggest how the important labor that death workers undertook lived on linguistically as figurative language. Diaries record how friends, neighbors, and paid workers assisted family members with the dying and dead. Poetry expresses the immense emotional and physical energy that death care required. These

[3] Surveys about Western and American ideas and practices concerning death include Philippe Ariès, *Western Attitudes toward Death: From the Middle Ages to the Present*, trans. Patricia M. Ranum (Baltimore, 1974), 85–107; and David Stannard, *The Puritan Way of Death: A Study in Religion, Culture, and Social Change* (New York, 1977). Books that focus on how the Civil War transformed death are Drew Gilpin Faust, *This Republic of Suffering: Death and the American Civil War* (New York, 2008); Gary Laderman, *The Sacred Remains: American Attitudes toward Death, 1799–1883* (New Haven, CT, 1996), 96–116; and Mark S. Schantz, *Awaiting the Heavenly Country: The Civil War and America's Culture of Death* (Ithaca, NY, 2008). The following sources address the topic of women's roles in relation to death: Ann Braude, *Radical Spirits: Spiritualism and Women's Rights in Nineteenth-Century America* (Boston, 1991), 10–81; Briony D. Zlomke, "Death Became Them: The Defeminization of the American Death Culture, 1609–1899" (MA thesis, University of Nebraska, 2013); Georganne Rundblad, "Exhuming Women's Premarket Duties in the Care of the Dead," *Gender and Society* 9 (1995): 173–92; Wendy Simonds and Barbara Katz Rothman, *Centuries of Solace: Expressions of Maternal Grief in Popular Literature* (Philadelphia, 1992), 1–31; and Ann Douglas, *The Feminization of American Culture* (New York, 1977). Sources that focus on the history of dead bodies and funerary practices include Gary Laderman, *Rest in Peace: A Cultural History of Death and the Funeral Home in Twentieth-Century America* (New York, 2003), 70–71; Christine Quigley, *The Corpse: A History* (Jefferson, NC, 1996); and Robert V. Wells, *Facing the "King of Terrors": Death and Society in an American Community, 1750–1990* (Cambridge, UK, 2000). Works that analyze memorial art and design include Mary Brett, *Fashionable Mourning Jewelry, Clothing, and Customs* (Atglen, PA, 2006); Blanche Linden-Ward, *Landscapes of Memory and Boston's Mount Auburn Cemetery* (Columbus, OH, 1989); Ann Schofield, "The Fashion of Mourning," in *Representations of Death in Nineteenth-Century US Writing and Culture*, ed. Lucy E. Frank (Burlington, VT, 2007), 157–66; and Anita Schorsch, *Mourning Becomes America: Mourning Art in the New Nation* (Philadelphia, 1976).

sources describe the death services that women provided and how this work was transformed in the second half of the nineteenth century.

This study pays close attention to the language used to describe those who cared for—and the type of care provided to—the dying and dead. Women who tended to the dying usually were described as "watchers" and "watch-women," but the more common title of "nurse" was also employed. Persons who prepared bodies for burial were called "layers out," "layers out of the dead," "shrouders," and "streekers." As time passed, these occupations ended, and other skilled workers took over tasks for which women were once responsible. As a consequence, these dead jobs became dead words, buried in figures of speech that hid their original and full meanings. In addition to the significance of the titles used to identify the type of death work that was done, the phrases that described the tasks were deeply evocative. The expressions usually combined an adjective and noun that were meant to signify to the listener or reader the depth of the services that were provided and the intensity of physical, spiritual, and emotional energy that was expended and experienced. "Painful leisure" and "awful business" were two examples.

This history's geographic focus, Pennsylvania, is an appropriate location for a study of women's death services because death work in the state reflected national trends while still possessing unique characteristics. Like other states in the early nineteenth century, Pennsylvania began to industrialize. However, though Pennsylvania possessed one of the nation's largest cities, Philadelphia, it was also home to small towns and rural areas. Agriculture and commerce balanced the state's emerging industrial sector; its economy, thus, was similar to that of other northern states such as New York and Massachusetts. In addition, the ideology of domesticity shaped the experiences of Pennsylvania men and women; the effects of the domestic ideal were felt throughout the United States. Pennsylvanians, like other Americans, faced epidemics and other public health dangers. The state's youngest members died from childhood illnesses, and the commonwealth's mothers succumbed during labor and delivery. American children and women in different locales underwent similar tragedies.

Even though Pennsylvania participated in national economic, social, and cultural developments, it retained distinctive qualities that affected women's association with death. Pennsylvania law and custom influenced women's inheritance of spousal property and family property. Specifically, in Pennsylvania, all of a deceased husband's property could be sold to pay

for his debts. Only then might a wife receive her dower, or one-third of real property. Daughters usually did not receive real estate; instead, they inherited movable property.[4] As a result of these economic circumstances, women entered or stayed in the paid workforce, and one job in which they participated was death care. Philadelphian Rebecca Powell notably offered her services as a layer out after she was widowed. Furthermore, the ethnic diversity that characterized the state impacted the types of death rituals in which women participated. Pennsylvania German women, for example, heeded folk proverbs that instructed them about the proper presentation of the deceased. Philadelphia's Quaker heritage and the city's need for labor impacted women's experiences. In particular, a high percentage of the city's female residents remained unmarried. Some chose never to marry; others who had been widowed decided not to remarry. Instead, they lived in a variety of households—extended families, female-headed households, and partnerships made up of family and friends—and pursued a variety of economic opportunities.[5] The layers documented in Philadelphia directories frequently identified themselves as widows, and some were the most senior women in their female-led families. These factors—Pennsylvania inheritance law, ethnic beliefs and rituals, and urban women-focused households—shaped death services in the first half of the nineteenth century.

Women who cared for the dying were called "watchers," "watchwomen," and "nurses," and they tended to the physical, spiritual, and social needs of the dying. They fixed coverings, offered food, water, and medicine, and managed bodily evacuations. Spiritual tasks included praying and arranging visits by clergy and other religious persons. Women who kept the death watch welcomed visitors and loved ones to the side of the dying. Watchers made sure to observe the dying person's attitude toward death—was the death a Good Death and one that could comfort the living? The Good Death was a religious and cultural tradition that was important to Americans in the nineteenth century. A Good Death was one in which a person met the end with courage, confident resignation, and faith. Religious books, advice literature, and popular fiction instructed Americans on how to die well. Watchers hoped that the testimony of a loved one's passing consoled those left behind and demonstrated the

[4] Marylynn Salmon, *Women and the Law of Property in Early America* (Chapel Hill, NC, 1986), 160–68; Karin Wulf, *Not All Wives: Women of Colonial Philadelphia* (Philadelphia, 2005), 3.

[5] Wulf, *Not All Wives*, 2, 10, 12–15, 20, 22–23, 87, 90–91, 96–98, 110–11.

Christian devotion of the person who had passed. When individuals struggled against death, experienced tremendous pain and trauma, and repudiated the divine, observers noted that they had experienced a Bad Death. In these cases, a watcher might choose to withhold testimony from bereaved families, an example of another kindness performed. On the other hand, the watcher might decide to share the deathbed scene as a warning to others to fortify their faith and transform their behavior.[6] The watcher's most significant task was acknowledging her charge's passing by verifying that the person was indeed dead. Women who watched looked closely to see if the individual was breathing and shook the body to see if life remained.[7]

Family members and friends performed these important physical, spiritual, and social duties. Philadelphia diarist Deborah Logan documented the passing of her cousin Hannah Griffits in August 1817. Logan and several female friends tended to the physical needs of their beloved companion. Logan noted, "She has been most kindly and affectionately nursed . . . and nothing omitted that we thought would contribute to her comfort and the alleviations of her sufferings." Logan and the other women also performed spiritual duties; they observed Griffits's demeanor, her final words to family and friends, and her last breath.[8]

Poet Annis Boudinot Stockton's accounts of the dying and death of her husband, Richard, also provide evidence of the tasks that female family members rendered and the struggles women who watched withstood. She memorialized her watching experience in a poem entitled "*An* extemporal Ode *in a* Sleepless Night." Stockton recounted hearing the physical suffering of her husband and the emotional turmoil she endured:

> Thro' all the silence of this dreary night,
> Made awful by that taper's gloomy light;
> My aching heart re-echos ev'ry groan,
> And makes each sigh, each mortal pang, its own!

Stockton kept vigil at her husband's bedside, tending to his physical needs and comforting him as he cried out in pain. Stockton offered to take her husband's dying place, writing,

[6] Faust, *This Republic of Suffering*, 6–7, 26–28.

[7] Susan M. Stabile, *Memory's Daughters: The Material Culture of Remembrance in Eighteenth-Century America* (Ithaca, NY, 2004), 196–97.

[8] Ibid., 189–91, quote on 189.

Ah! Could *I* take the fate to him assign'd
And leave the helpless family their head;
How pleas'd, how peaceful to my lot resign'd;
I'd quit the nurse's station for the bed![9]

Stockton's words have multiple meanings: she was exhausted physically, emotionally, and mentally from hearing and seeing her husband suffer, but she could not sleep; she wished to trade her bedside station for the bed; and she desired to die instead of her dear, dying husband.

In another poem, titled, "A Short Elegy to the Memory of Her Husband," she asserted that the loss of him was a loss for many, that he was "*husband, father, brother, master, friend*." She again noted the suffering he endured and the pain it brought to her:

Can we forget how patiently he bore
The various conflicts of *the trying hour*;
While *meekness, faith,* and *piety* refin'd,
And steadfast *hope* rais'd his exalted mind
Above the sufferings of this mortal state,
And help'd his soul in smiles to meet her fate?
O fatal hour! Severely felt by me![10]

Stockton stressed that Richard's virtues sustained both him and her during his dying. "His soul" not only referred to his immortal core, but also described her relationship to him. The "smiles" assisted both him and her to "meet . . . fate." Annis Stockton's poem not only documented the physical and social services she provided to her husband, but also indicated that she did a spiritual task demanded of watchers—she related that, despite his suffering, his dying and death were good. They testified to his virtue and instructed the living, especially her, how to be strong and face adversity.

Stockton's letter to Elizabeth Graeme Park on November 24, 1780, also described her care of her husband, hinted at the tasks she did, and expressed the pain it brought her. She asked her friend to excuse "my silence" as she was "totaly confin'd to the chamber of a dear and dying husband." The let-

[9] Stockton, "*An* extemporal Ode *in a* Sleepless Night," 1789, in *Only for the Eye of a Friend*, 156–57.

[10] Stockton, "A Short Elegy to the Memory of Her Husband," 1781, in *Only for the Eye of a Friend*, 99.

ter, like her poems, testified to the watch that she kept at Richard's bedside. As a writer, Stockton recognized that letter-writing—likely any writing—offered "one of the greatest reliefs I could have." However, her husband was not able to "bear the Scraping of a pen, on paper in his room, or Even the folding up of a letter." She lamented, "I have *Leisure*, painful *Leisure* enough." Stockton's leisure was painful—teeming with Richard's suffering and her own emotional and physical turmoil. Stockton held out false hope that Richard would improve. In the same letter, she revealed, "I have kept up my courage by flattering my self [*sic*], that the ulcer would heal, but it proves so obstinate that his constitution is sinking fast under it, and I have been very apprehensive for a week past, that he could not survive long, but he is now a little better." His cancer spread, and he died three months later on February 28, 1781.[11] These last months required Annis to tend to a man whose cancer had spread from his lip to his neck and throat. His health already undermined as a result of the cruel treatment he had received as a prisoner of war during the American Revolution, Richard likely endured immense pain in the neck, shoulder, and mouth and had difficulty chewing, swallowing, speaking, and breathing. The physical, social, and spiritual tasks that Annis rendered to her beloved were immense.[12]

Deborah Logan and Annis Boudinot Stockton nursed and watched over dying friends and family members. Hired help also acted as watchers; their assistance gave primary caregivers much-needed rest, especially at night. In some cases, their care extended to providing objects, such as candles, that were essential for evening work. The candles supplied by watchers served both practical and symbolic purposes. Nighttime caregivers needed to illuminate darkened chambers in order to tend to the dying person's needs. Candles in the death chamber also lent the space a sacred quality, and the illumination they provided was believed to light the deceased person's passage toward the other side. In addition, the shape that a candle took was thought to indicate the proximity of death. Witnesses watched for the shape of the winding sheet on a tallow candle, looking to see if wax had spilled down and hardened on its side. Lit candles comforted some

[11] Stockton to Fergusson, Nov. 24, 1780, in *Only for the Eye of a Friend*, 50. See also 21–22 for biographical information about the Stocktons.

[12] Even today, advanced oral cancer is one of the most difficult cancers to treat, and the physical issues that patients face are harrowing. Laura McLaughlin and Suzanne Mahon, "A Meta-Analysis of the Relationship Among Impaired Taste and Treatment, Treatment Type, and Tumor Site in Head and Neck Cancer Treatment Survivors," *Oncology Nursing Forum* 41, no. 3 (2014): E194–95; and Herbert B. Ershkowitz, "Richard Stockton," in *Encyclopedia of New Jersey*, ed. Maxine N. Lurie and Marc Mappen (New Brunswick, NJ, 2004), 782.

who kept vigil; for others, they only served as flickering reminders of life's shadows. Stockton eloquently characterized the foreboding quality of candles when she wrote, "Thro' all the silence of this dreary night / made awful by that taper's gloomy light."[13] The quiet of the chamber where Richard lay was worsened by the candle's glow.

While watchers kept watch over the dying, the care of the deceased body was left to women known as layers out of the dead. Like watchers, these women might be female relatives, neighbors, or paid workers. Some women, in fact, acted as both watchers and layers. As noted in the epigraph, the diary of Elizabeth Drinker mentioned the death of her neighbor R. Waln and the attentions that Waln received from a layer out of the dead identified as Molly Humphriss.[14]

Layers out of the dead had a variety of duties to perform. They washed, dressed, and groomed the body. The "awful business" to which Drinker referred meant the disturbing but necessary steps of closing the deceased person's mouth with a piece of cloth tied around the top of the head and the jaw or via a stick lodged between the chin and breastbone and of ensuring the eyes remained shut by means of coins or other weighted objects. Diarist Deborah Logan recorded that she performed this kindness for her cousin Hannah Griffitts: "I closed her dying eyes, and we sat for a time in solemn Silence, each, I believe, contemplating the joyful landing of her Soul upon the celestial Shore."[15]

The considerate work of the layers out of the dead became enshrined in Pennsylvania German folklore. One omen advised, "If the eye or eyes of a corpse remain unclosed, there will be another death, for it is looking for the next one to follow." A variation of this omen said, "If the eyes of a corpse are difficult to close it is said they are looking after a follower."[16] The open eyes of a corpse likely frightened onlookers; as a result of this fear, layers out of the dead took care to shut them. Layers out of the dead also removed internal organs, blocked orifices, and applied chemicals to the

[13] Emily K. Abel, *The Inevitable Hour: A History of Caring for Dying Patients in America* (Baltimore, 2013), 11–15, 24–25; and James K. Crissman, *Death and Dying in Central Appalachia: Changing Attitudes and Practices* (Urbana, IL, 1994), 14–21. For articles on the significance of candles, see W. T. O'Dea, "Artificial Lighting Prior to 1800 and Its Social Effects," *Folklore* 62 (1951): 314; Isabella Barclay, "Scraps of Folklore," *Folklore* 5 (1894): 337; H. J. Rose, "Folklore Scraps," *Folklore* 45 (1934): 161. Stockton, "*An* extemporal Ode *in a* Sleepless Night."

[14] Crane, *Diary of Elizabeth Drinker*, 1024.

[15] Quoted in Stabile, *Memory's Daughters*, 191.

[16] For Pennsylvania German death omens and superstitions, see Edwin Miller Fogel, *Beliefs and Superstitions of the Pennsylvania Germans* (Philadelphia, 1915), 122.

body. They wrapped the corpse in alum-covered cloth or filled body cavities with charcoal to retard putrefaction. The title of "shrouder" referred to the skills the women had: they dressed, groomed, and preserved the body so loved ones could view it. They had to know how weather and climate affected decomposition; in hot weather, they placed bodies on ice and, in the freezing winter, they stored bodies in dead houses until the ground was soft enough to receive them.[17] Layers out had to work efficiently due to the onset of rigor mortis and the decay and discoloration of the body. Humphriss's work was, as Drinker described, "awful," in that it was both full of awe and truly dreadful. Women like Humphriss performed tasks that eased the suffering of family members and friends who hoped to look on their beloved's dead body and face without revulsion or horror. In order for this witnessing to take place, layers had to do chores that put them into contact with bodily fluids, dramatic skin changes, and potentially hazardous substances.[18] Humphriss was likely a professional layer out of the dead, or someone who performed these services in exchange for money or material goods, and not a neighbor, friend, or family member, like Deborah Logan, who completed these tasks out of a sense of community and compassion. The fact that Drinker described Humphriss's work as a "business" supports this conclusion. The systematic tasks—washing, dressing, and fixing the body—also kept the layer busy; she learned to read the dead body closely and completed her tasks with precision and care.

In addition to diaries, Philadelphia city directories are rich sources of information about professional layers out of the dead. The names of layers appear in both the general lists of business persons that the majority of the directories comprise and in the listings of medical workers that appear at either the beginning or end of the directories. Some layers out of the dead also advertised themselves as "nurses" or as "midwives."[19] All three medical specialties depended on women's entrance into the domestic sphere of

[17] Vertie Knapp, "The Natural Ice Industry of Philadelphia in the Nineteenth Century," *Pennsylvania History* 41(1974): 412–21.

[18] Quigley, *The Corpse*, 52–53; and Wells, *Facing the "King of Terrors,"* 48, 70. See Robert V. Wells, "A Tale of Two Cities: Epidemics and the Rituals of Death in Eighteenth-Century Boston and Philadelphia," in *Mortal Remains: Death in Early America*, ed. Nancy Isenberg and Andrew Burstein (Philadelphia, 2003), 57. For the tasks assigned to persons who laid out the dead, see Crissman, *Death and Dying in Central Appalachia*, 29–35; Zlomke, "Death Became Them," 16–23; and Rundblad, "Exhuming Women's Premarket Duties in the Care of the Dead," 180.

[19] Philadelphia directories used the term "layer out of the dead"; directories from other parts of Pennsylvania did not use the term but instead documented "nurses": women who, most likely, also cared for the dead. See R. L. Polk and Co., *Pittsburgh in the Year Eighteen Hundred and Twenty-six,*

their customers. Sickrooms, lying-in chambers, and homes were the locales where people suffered through their illnesses, where women labored to give birth, and where bodies were laid out. The tie between domesticity and femininity allowed female nurses access to private homes. The fact that sickness and childbirth sometimes resulted in death also explains why nurses and midwives served as layers out of the dead. The intimate care that women provided to the living body extended to their concern for the dead body.[20]

In addition to being named as "midwives" or "nurses," some layers out of the dead listed themselves as "widows" in the city directories. Their widowhood affirmed their domestic status. It also signified their direct connection with death—they had buried husbands, and, if they were mothers, they likely had lost children too. Death was essential to their very identity as widows. The physical losses that these widows had experienced and the limitations placed on them by inheritance laws forced many to ply trades—such as nursing, midwifery, and laying out of the dead—that brought them into close contact with bodies.[21]

Rebecca Powell was one layer out of the dead who exemplified these multiple identities. According to the 1790 census, Powell was a young widow, in her twenties or thirties, who resided in Shepherd's Alley with three children, one boy and two girls, under the age of sixteen. The 1791 and 1793 city directories list her title as "widow." Three years later, in 1794, she advertised herself as a layer out of the dead. For the next three years, she identified as a widow and mantua maker. Historian Marla Miller describes the mantua as "a one-piece gown worn over a separate bodice" that appealed to both upper-class women and the middle-class

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Containing Sketches Topographical, Historical and Statistical; Together with a Directory of the City, and a View of Its Various Manufacturers, Populations, Improvements, &c. (Pittsburgh, 1826), 107, 118, 121, 127, 129, 132, 142, 150, and 151.

[20] James Robinson, *The Philadelphia Directory for 1805* (Philadelphia, 1805), lxiii; Robinson, *The Philadelphia Directory for 1808* (Philadelphia, 1808), n.p.; Robinson, *The Philadelphia Directory for 1809* (Philadelphia, 1809), l; Robinson, *The Philadelphia Directory, for 1810* (Philadelphia, 1810), n.p.; John A. Paxton, *The Philadelphia Directory and Register for 1813* (Philadelphia, 1813), xiv; Paxton, *The Philadelphia Directory and Register for 1819* (Philadelphia, 1819), n.p.; McCarty and Davis, *The Philadelphia Directory of Register for 1822* (Philadelphia, 1822), n.p.; Robert DeSilver, *DeSilver's Philadelphia Directory and Stranger's Guide, 1831* (Philadelphia, 1831), 105. Patricia D'Antonio, "The Legacy of Domesticity: Nursing in Early Nineteenth-Century America," in *Nurses' Work: Issues Across Time and Place*, ed. Patricia D'Antonio, Ellen D. Baer, Sylvia Rinker, and Joan Lynaugh (New York, 2007), 33–48; and Patricia D'Antonio, *American Nursing: A History of Knowledge, Authority, and the Meaning of Work* (Baltimore, 2010), 3–4, 9.

[21] Cornelius William Stafford, *The Philadelphia Directory for 1801* (Philadelphia, 1801), 137.

women who hoped to dress like them.[22] By 1801, Powell returned to advertising herself as a widow and layer out of the dead. However, from 1803 until 1807, she offered her services as a "tayloress [*sic*]," dropping the title "layer out of the dead." The occupation of tailoress meant that Powell constructed a wide variety of simple garments—including pants, skirts, shirts, and jackets for women, men, and children—and altered and repaired such garments.[23] In the 1808 directory and in eleven subsequent directories up until 1825, she advertised as both a "layer out of the dead" and as a "nurse."[24]

These shifting titles indicate that Powell was willing to do what it took to support herself and her children. They also highlight that Powell was a skilled worker. Layers and nurses like Powell had knowledge of chemistry, anatomy, and physiology. As a mantua maker and tailoress, Powell also had to be aware of the human body. Her occupations depended on similar abilities, including cutting and shaping. Layers cut skin, muscles, and tendons when they removed organs and packed the body; they sewed skin; and they shaped features such as the eyes, mouth, jaw, and limbs. Similarly, mantua makers and tailoresses cut fabric, molded it, and sewed it to fit the body. Since they possessed similar skills, a layer, man-

[22] Marla Miller, *The Needle's Eye: Women and Work in the Age of Revolution* (Amherst, MA, 2006), 16, quote on 60.

[23] Ibid., 16, 64–65, 117–18.

[24] Philadelphia, PA 1790 US Federal Census, File 2 of 2 for Philadelphia City, Middle District, USGenWeb Census Project (2004), accessed Jan. 15, 2015, http://us-census.org/pub/usgenwebcensus /pa/philadelphia/1790/pg0226.txt; Clement Biddle, *The Philadelphia Directory* (Philadelphia, 1791), 103; James Hardie, *The Philadelphia Directory and Register* (Philadelphia, 1793), 114; Hardie, *The Philadelphia Directory and Register*, 2nd ed. (Philadelphia, 1794), 123, 218–21; Edmund Hogan, *The Prospect of Philadelphia and Check on the Next Directory: Part I* (Philadelphia, 1795), 39; Thomas Stephens, *Stephens's Philadelphia Directory, for 1796* (Philadelphia, 1796), 148; Stephens, *The Philadelphia Directory of 1797* (Philadelphia, 1797), 146; Cornelius William Stafford, *The Philadelphia Directory for 1798* (Philadelphia, 1798), 76–77; Stafford, *The Philadelphia Directory for 1801* (Philadelphia, 1801), 137; James Robinson, *The Philadelphia Directory, City and County Register, for 1803* (Philadelphia, 1803), 201; Robinson, *The Philadelphia Directory for 1804* (Philadelphia, 1804), 185; Robinson, *The Philadelphia Directory for 1806* (Philadelphia, 1806), 214; Robinson, *The Philadelphia Directory for 1807* (Philadelphia, 1807), 235; Robinson, *The Philadelphia Directory for 1808*, 2; Robinson, *The Philadelphia Directory, for 1810*, 13, 225; Paxton, *The Philadelphia Directory and Register for 1813*, xiv; B. and T. Kite, *Kite's Philadelphia Directory for 1814* (Philadelphia, 1814), 16–17, 366; Robinson, *The Philadelphia Directory, for 1816* (Philadelphia, 1816), 9, 338; Robinson, *Robinson's Original Annual Directory for 1817* (Philadelphia, 1817), 353, 491; Paxton, *The Philadelphia Directory and Register for 1818* (Philadelphia, 1818), 10, 269; Paxton, *The Philadelphia Directory and Register for 1819*, 43, 323; Edward Whitely, *The Philadelphia Directory and Register for 1820* (Philadelphia, 1820), 40, 354; *The Philadelphia Directory and Register for 1821* (Philadelphia, 1821), 364; McCarty and Davis, *The Philadelphia Directory and Register for 1822*, 56, 398; *The Philadelphia Directory and Strangers Guide for 1825* (Philadelphia, 1825), 112, 160; D'Antonio, "Legacy of Domesticity," 39–40.

tua maker, and tailoress depended on many of the same tools, including scissors to cut fabrics and skin, irons to flatten fabrics or weigh down and close the eyes, extra pieces of cloth from which to fashion chin straps, and large tables on which to lay the dead or one's latest sartorial creation.[25] As a layer, a mantua maker, and a tailoress, Powell dressed bodies. Scholars of dress and fashion have pointed out that one's clothing acts as a second skin, helping persons to adopt new personas that may serve to empower them.[26] Nurses dressed wounds and applied plasters to return persons to good health and to shift the ailing individual's identity away from suffering and disease. Layers out fashioned bodies to their original state by working against rigor mortis and other changes brought on by death. At the same time, they dressed bodies for the eternal by wrapping them in shrouds and winding clothes.

Powell intimately understood her customers—she entered their homes, she knew their bodies, and she experienced their most private moments of nakedness, distress, and death. Powell's talents as nurse, layer, mantua maker, and tailoress were likely mutually beneficial; her dress clients might have requested her nursing and death services upon their demise, allowing her to reap profits from both her death services and from the fashion products in which she outfitted the corpses. Specifically, she may have offered burial garments such as shrouds and winding clothes and sold black fabric that was used as draping in and on people's homes.[27] She must have been a busy woman, given that she served the living, the dead, the young, and the old and offered a variety of semiskilled and highly skilled services. Her choice of work labels was also affected by health crises, namely the yellow fever epidemic of 1793 and subsequent flare-ups of the disease that struck the city. In fact, she dropped the title "layer out of the dead" in 1795. Perhaps her neighbors feared the work she did with dead bodies, especially during the time of an epidemic. The five deaths due to yellow fever that struck the residents of Shepherd's Alley might have been traced to her door; perhaps she thought it best to instead list herself as a widow, a mantua maker, and a tailoress. Or maybe

[25] Miller, *Needle's Eye*, 64–65, 70, 75–77, 79, 81, 83; Jacqueline Barbara Carr, "Marketing Gentility: Boston Businesswomen, 1780–1830," *New England Quarterly* 82 (2009): 44–45.

[26] Jessica Hemmings, "Altered Surfaces. The *Ambi Generation* of Yvonne Vera's *Without a Name* and *Butterfly Burning*," in *Body, Sexuality, and Gender: Versions and Subversions in African Literatures* 1, ed. Flora Veit-Wild and Dirk Naguschewski (Amsterdam, 1994), 175.

[27] Elizabeth C. Sanderson, *Women and Work in Eighteenth-Century Edinburgh* (New York, 1996), 64, 68–69, 71.

the epidemic brought her so much business that it was not necessary to advertise—her fine and caring work spoke for itself.[28]

Rebecca Powell was one of several layers in Philadelphia who offered services in the late eighteenth and early nineteenth centuries. For the first three decades of the nineteenth century, she, Hannah January, and Selah Knowles worked as layers out of the dead. By 1819, the number of layers out of the dead had increased to fifteen women. Three years later, there were eighteen, including what appears to have been a mother-daughter business. The same directory notes the removal of the following businessperson: "William Adams, scrivener, teacher, and layer out of the dead." Adams may have been pushed from the market because the trade was one pursued by women. Whatever the case, the number of layers out of the dead had increased tremendously over a twenty-year period. This expansion resulted from the growth of Philadelphia's population. The city's industrialization afforded middle-class families the services of layers out of the dead. They no longer depended exclusively on neighbors or women of the household. Immigrants from overseas and migrants from rural Pennsylvania who died without the care of mothers, sisters, and aunts might have requested the services of the layers out of the dead before they died. Jane Hook, a layer out of the dead, catered to these single souls not only by arranging their final passages but also by lodging them (when living) in the boarding house she ran. Only fifteen years later, the number of women who provided death services had dropped dramatically. Only three women are listed in the 1837 Philadelphia directory. This drop marked a trend that continued for the remainder of the nineteenth century.[29]

Social factors accounted for why women such as Logan, Stockton, Humphriss, and Powell watched the dying and laid out the dead. First of all, dying and death, like other life events, took place in the home. Women gave birth at home, they married their husbands at home, they welcomed visitors at home, they tended the dying at home, and they died there themselves.[30] In addition, watchers and layers performed a key feminine social

[28] Hardie, *Philadelphia Directory and Register*, 123, 218–21; Hogan, *The Prospect of Philadelphia*, 39. My thanks to Robert Sieczkiewicz, research librarian and assistant professor at Blough-Weis Library, Susquehanna University, for suggesting that Powell may not have advertised after the 1793 yellow fever epidemic because her skills were known and appreciated.

[29] Paxton, *Philadelphia Directory and Register for 1813*, xiv; Paxton, *Philadelphia Directory and Register for 1819*, n.p.; Whitely, *Philadelphia Directory and Register, for 1820*, n.p.; McCarty and Davis, *The Philadelphia Directory of Register for 1822*, n.p.; A. McElroy, *A. McElroy's Philadelphia Directory, for 1837* (Philadelphia, 1837), n.p.; D'Antonio, "Legacy of Domesticity," 39–40.

[30] Thomas Lynch, *The Undertaking: Life Studies from the Dismal Trade* (New York, 1997), 34–37.

function—they acted as good neighbors, entering the homes of family and friends and offering both physical and social comfort. Like good mothers and daughters, they dutifully cleaned and dressed others. Their work also gave them opportunities to make money or to accrue material or social compensation for their services. Watching and laying out made good business sense—people got sick, and people died. Their services, in other words, were needed. Cultural factors also shaped women's death services. Religious tradition provided women with feminine and female models who hurried to tend to Jesus's dying and dead body and who were rewarded with the honor of announcing his resurrection.

As the nineteenth century progressed, women's involvement in death care waned. The trend that appeared in the 1830s continued. Military, industrial, and medical developments transformed the ways Americans understood and dealt with dying, death, and the dead. The carnage wrought by the American Civil War played a large part in removing women from their caretaking responsibilities for the dead and dying. Men died suddenly and violently on battlefields or lingered in hospitals. Because mothers, sisters, and daughters often could not be with the dying, proxy kin—fellow soldiers, doctors, and nurses—took their places. For men who died alone, beloved objects and photographs substituted for their loved ones. Men held photographs and locks of hair, speaking their last words to images and mementos their dear ones had given them. The duty of family, especially female relatives, to witness directly the final actions and words of their departing member was not possible; as a result, letters written by the dying, by compassionate medical workers, and by officers and friends became prized evidence of a life well lived and a death welcomed and embraced.[31]

Not only did the Civil War transform women's duties in relation to tending the dying, it also changed how dead bodies were handled. The sheer number of dead and their distance from their homes and families meant that middlemen emerged who readied the body for burial immediately or for burial back home. In the case of immediate burial, those middlemen were laborers, including fellow soldiers and prisoners of war, who carted hundreds of soldiers or dragged individual soldiers by rope and with hooks to mass graves and covered them with dirt. Without kin to tend to them, the dead were buried naked, their clothes and belongings stripped by scavengers, or, at best, in their underwear, or perhaps with

[31] Faust, *This Republic of Suffering*, 9–13, 15–16, 18–22.

blankets, if available, wrapped around them. Sometimes, comrades erected crude markers to indicate to the living the presence of those buried underground. Due to the development of awesome and awful weaponry, some bodies simply ceased—pulverized by technology, men were obliterated, vaporized—leaving nothing to find. As the war dragged on and as families desired the return of their loved ones, embalming improved and increased in frequency. Undertakers, embalmers, and men who promised to find the location of dead kin appeared on battlefields.[32]

Although undertaking had developed prior to the Civil War, the national military crisis provided undertakers with a large clientele. The tasks once performed by individual specialists, including the sexton who readied the burial plot, the carpenter who crafted the coffin, and the layer out who prepped and preserved the body, became the responsibilities of the undertaker. Undertakers took control of the funeral from start to finish. With a coffin on hand; a hearse ready to transport it; a corpse preserver to ice the body until transfer to the coffin for burial; and fabrics to dress the corpse, line the coffin, and hang as crepe, the undertaker was the one-stop shop for the bereaved. In the second half of the nineteenth century, the undertaker took on the title of "funeral director," partnering with a local embalmer or learning how to embalm the dead. A new profession was thus established, and the public sought the services offered.[33]

The Civil War was also a boon to embalmers and embalming. Previously, embalmers, many of whom had medical degrees, practiced their craft by preserving bodies used in anatomical demonstrations in medical schools. The Civil War offered them multiple bodies on which to hone their skills and a public eager to purchase their services so that sons, brothers, and fathers might be returned for proper burials at home. Moreover, the military ordered embalmers to submit to licensing, a trend that continued for the profession once the war ended. The tragic assassination of Abraham Lincoln and the embalming of his body, which was viewed by thousands of Americans, popularized the technique. A process known for centuries, practiced in various parts of the globe, and improved as a result of the

[32] Ibid., 63–64, 66, 67–69, 71, 73, 74–75, 79–80, 89, 91–94, 96–98, 102; Laderman, *Sacred Remains*, 103–16.

[33] Brent W. Tharp, "Preserving Their Forms and Features: The Role of Coffins in the American Understanding of Death, 1607–1870" (PhD diss., College of William and Mary, 1996), 149–50, 157–65; Edward C. Johnson, Gail R. Johnson, and Melissa Johnson, "The Origin and History of Embalming," in *Embalming: History, Theory, and Practice*, 3rd ed., ed. Robert G. Myer (New York, 2000), 474.

Civil War eventually became the leading way the dead were handled and prepared.[34]

The 1867 *Philadelphia City Directory* provides substantial evidence that undertaking and embalming by men eclipsed women's work as layers out of the dead. The directory lists 125 male undertakers, one female undertaker, and only four female layers out of the dead. In addition, the source notes that as many as sixteen families may have practiced undertaking as family businesses; seven pairs of men with the same last names and identical addresses were involved in family-run undertaking firms. The fact that these men practiced family trades indicates that undertaking had a future; fathers were willing to train their sons. Moreover, the need for two undertakers at a single address shows that business was good enough to warrant two specialists at a particular location. Finally, the paired men might have devoted themselves to different aspects of the funeral business—one might have arranged the funeral services, for example, while the other prepped bodies for viewing.[35]

The Civil War definitely impacted death care services. Another reason for women's loss of control over the dead body stemmed from the terrible deaths experienced by those maimed and killed in industry. Characterized as the workshop of America, Pennsylvania was home to a wide variety of industries, including coal mining, steel production, railroad, and textile manufacturing. Machines malfunctioned, workers became fatigued or did not perform their tasks properly, tools slipped, and women, men, and children were injured, permanently disabled, and even killed. Farming, which became industrialized by the first half of the nineteenth century, also witnessed a greater number of accidents and deaths. This industrial trauma played a part in transforming who performed death services and where these services were rendered. In the nineteenth century, concern over accidents and injuries became a matter of public scrutiny—business owners wanted to decrease mortal dangers, politicians wanted to contain them, and scientists wanted to study them. Fatal incidents moved from private tragedies to public calamities.[36] In cases of industrial trauma, death often no longer occurred in the private space of the home; the woman who had offered care to the dying and dead was likely not present in this new space. Moreover, the dreadful mangling of bodies that frequently accompanied industrial accidents meant there might be

[34] Johnson et al., "Origin and History of Embalming," 463, 465–70.

[35] A. McElroy, *Philadelphia City Directory for 1867* (Philadelphia, 1867), 39–1124 passim.

[36] John C. Burnham, *Accident Prone: A History of Technology, Psychology, and Misfits of the Machine Age* (Chicago, 2009), 9.

little for layers to fix or compose. In 1846, a Reading newspaper reported that the young daughter of William Saltzer was crushed in a threshing machine, "her neck fractured and the whole body dreadfully lacerated and mangled."[37] By the second half of the nineteenth century, embalmers had developed a subspecialization known as restorative art, which historians Edward Johnson, Gail Johnson, and Melissa Johnson describe as the repair of "injuries to the dead caused by disease or trauma." The wounds inflicted by industrial accidents gave specialists such as Joel E. Crandall, a leading restorative artist, experimental subjects on which to perfect their techniques.[38] In some cases, the dead were lost permanently—unable to be identified or recovered, they remained where they fell. The gendered nature of some industries also explains why women no longer provided their traditional services: the masculine character of these occupations excluded them.

Coal mining and the railroad industry highlight how industrial trauma altered death care. The anthracite coal mines of northeastern and north central Pennsylvania were locales where men and boys worked. In fact, Pennsylvania law prohibited women from working in or around mines. The exclusion of women from the mines was such an ingrained part of mining life that superstitions concerning women and miners developed. If a miner happened to see a woman, especially a redheaded woman, on the way to work, he believed he would meet with danger. Many women remained indoors as the men went to work, and miners refused to allow women in or near the mines, fearing that they might cast a spell on it. Thus, the colliery was a man's world. Above and below ground, men and boys worked, talked, and socialized. The mines were also places where men and boys died. Mine explosions and flooding accounted for the loss of life. When possible, bodies were located, cleaned, dressed, and placed in coffins by fellow miners, who sought to ease the burdens of already grieving wives. In other cases, bodies were not retrieved and lay in the rubble where they had fallen.[39]

Railway fatalities also illustrate how death was affected by industrialization in the nineteenth century. Railroad accidents not only killed workers but also resulted in the deaths of passengers and people walking along or crossing

[37] Jamie Bronstein, "Caught in the Machinery: The Cultural Meanings of Workplace Accidents in Victorian Britain and the United States" *Maryland Historical Magazine* 96 (2001): 170.

[38] Johnson et al., "Origin and History of Embalming," 474.

[39] Harold W. Aurand, *Coalcracker Culture: Work and Values in Pennsylvania Anthracite, 1835–1935* (Selinsgrove, PA, 2003), 32; George Korson, *Minstrels of the Mine Patch: Songs and Stories of the Anthracite Industry* (Hatboro, PA, 1964), 145–46; Crissman, *Death and Dying in Central Appalachia*, 191–96.

tracks. Trains crashed, brakes failed, boilers exploded, bridges collapsed, and people failed to outrun oncoming trains—workers, passengers, and everyday people fell victim to the violence wrought by the railroad industry. Work accidents, in fact, posed the highest risk of death for the men and women who worked in the industry.[40]

One of the most tragic train wrecks that took place in Pennsylvania was the collision between an excursion train originating in Philadelphia and filled with over 1,000 school children and their teachers and a passenger train originating in Gwynedd. On July 17, 1856, as a result of conductor error, the locomotives collided and the excursion coaches shattered and caught fire. Twenty-seven out of the thirty-nine dead were not definitively identified. As poet John McDevitt described,

> Many of these mortals,
> Were burned and mangled so,
> That neither friend or neighbor
> Their bodies they could know.
> About thirteen in number,
> Their friends could never find.[41]

As was the case in the Pennsylvania coal mines, women had no bodies to prepare because they could not be retrieved from the wreckage or were burned and disfigured beyond recognition. Although these dead bodies were memorialized in history and via song, the small comforts, such as tending to, dressing, grooming, and looking upon the deceased, were denied to family members, specifically to the women whose jobs these duties entailed.

A train wreck eight years later, in Shohola, Pennsylvania, not only shows the tremendous, destructive power of industrialization but also highlights how military struggle in the Civil War era shaped how the dead were cared for and treated. Confederate prisoners of war being transported from Jersey City, New Jersey, along with Union guards, fell victim to a crash near the New York border. A coal train collided with the prison transport train, resulting in sixty-five deaths, Union and Confederate combined. Emergency crews gathered the shattered bodies, placed the dead in pine boxes, buried them nearby, and marked the location in order

[40] Mark Aldrich, *Death Rode the Rails: American Railroad Accidents and Safety, 1828–1965* (Baltimore, 2006), 2–3.

[41] John McDevitt, *Disastrous Calamity on the North Pennsylvania Rail Road* (Philadelphia, 1856).

to assist grieving families who might come in search of loved ones. At least nine other major train wrecks in Pennsylvania between 1872 and 1947 furthered the industrial transformation of death in the state. Finally, the railroad industry prodded the development of professional organizations among undertakers and funeral directors, associations that played a factor in women no longer offering death services. The transportation of dead bodies on trains raised issues about the spread of disease and questions about the safety of embalming. Baggage handlers, who were primarily responsible for moving bodies being shipped across the nation, were especially anxious to have definitive answers. Since railroads crossed state borders, railroad bosses wanted a national answer to their concerns. They received that response from the National Funeral Directors Association in the late 1880s. The association recommended rules governing the transport of those who died from infectious diseases, the need for embalming, and the proper paperwork.[42]

This professionalization of funeral work matched the professionalization of other fields, especially in medicine. Just as doctors elbowed traditional female caretakers from the sickroom and the lying-in room, embalmers and undertakers nudged female death workers from the side of the deceased. Embalmers first honed their skills on or near battlefields and sites of industrial accidents, spaces that largely excluded women. Undertakers and embalmers then banded together to form associations. They deployed science and medicine in order to convince legislators and the general public that the state needed to take greater control of exactly who should tend to and dispose of dead bodies. Both sanitarian philosophy and germ theory stressed pathways of disease transmission and suggested the dangers posed by dead and rotting corpses. Embalming became a privileged technology that required formal training and an array of tools, supplies, and procedures. Book-length and serial publications communicated information about embalming. *The Sunnyside* (1871), *The Casket* (1876), and *The Undertakers' Manual* (1878) educated their readers about new methods, tools, and chemicals used to preserve the body and included advertisements for the specialized supplies used in the trade. Mortuary education evolved from home study to short, three- to five-day courses offered by itinerant embalmers to full-fledged, licensed, and accredited

[42] Edgar A. Haine, *Railroad Wrecks* (New York, 1993), 35–38, 43, 59–61; Zlomke, "Death Became Them," 16–18; Robert W. Haberstein and William M. Lamers, *The History of American Funeral Directing*, 7th ed. (Brookfield, WI, 2010), 302–3, 318–20.

embalming and mortuary science schools. Embalmers developed specialized tools, such as the trocar, and preservation treatments, which they then patented. The use of formaldehyde and the need to ventilate the space where embalming took place led to the transfer of the procedure from the deceased person's home or hospital room to the funeral home.[43] Citing their specialized knowledge, attendance at special schools established for the education of undertakers and funeral directors, and mastery of modern technology, mortuary professionals argued that they were the best people to offer death services. The state of Pennsylvania responded with the nation's first licensing law, enacted in 1895. Upper- and middle-class families who desired to show their love and respect for the deceased did so by purchasing services from the professionals they deemed the most capable.[44]

The transfer of death from the home to the hospital also accounted for the transformation of death care. Over the course of the late nineteenth and early twentieth centuries, growing numbers of people died in hospitals or in public facilities such as homes for the incurable. This increase occurred despite the fact that hospital death was something that medical practitioners did their best to avoid. Hospitals shunned dying patients by discharging them and sending them home or to almshouses. Doctors hid dire prognoses from patients and their loved ones. When death in the hospital was inevitable, the dying person was moved out of the public ward and into a special room. In spite of medicine's aversion to death, hospital deaths multiplied due to the growth in the number and size of hospitals. Increasingly, family and friends no longer watched the dying or tended dead bodies; instead, medical personnel assumed these responsibilities.[45]

As women entered the paid workforce in greater numbers in the second half of the nineteenth century, their participation in death services diminished. Feminized professions, such as social work, librarianship, and nursing, emerged. Women, likewise, might choose to work in department stores, as secretaries, or in factories. Some women likely gave up death care

[43] Johnson et al., "Origin and History of Embalming," 470–71, 474, 477–81.

[44] Joseph W. Epler and James L. Schwartz, "Early Undertakers and Funeral Directors: Interesting Facts and Information," Pamphlet, Susquehanna University Medical Humanities Initiative Program, Selinsgrove, PA, Oct. 2, 2012; Haberstein and Lamers, *History of American Funeral Directing*, 291–325; Laderman, *Rest in Peace*, 70–71; Mark Harris, *Grave Matters: A Journey through the Modern Funeral Industry to a Natural Way of Burial* (New York, 2007), 43.

[45] Abel, *The Inevitable Hour*, 1–7, 22–56; Ariès, *Western Attitudes toward Death*, 86–88; Charles E. Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (New York, 1987), 292–93; Wells, *Facing The "King of Terrors,"* 195.

gratefully. Watching and laying out were hard work, requiring physical strength, putting women in contact with bodily fluids, and demanding that they deal with the raw emotions of bereaved family members and friends.[46]

The migration of rural American women and foreign-born women to the bustling cities of the late nineteenth century also explains why women no longer offered their services as watchers or layers. The limited spaces in which whole families or groups of single women lived did not allow for the laying out of the dead in family parlors; instead, the dead were visited at funeral parlors. Like birth and marriage, death moved from private rooms in family homes to public spaces rented or inhabited for fleeting activities.[47]

The diminishing role that women played in serving the dying and dead was reflected in the loss of these occupational categories and their replacement with titles like "undertaker," "embalmer," "mortician," and "funeral director." Female death services experienced language death—the words used to describe these women and their work passed away. In their place, figurative phrases remained that hinted at the type of services the women once offered and accomplished. Although most Americans might not be familiar with a streeker and the work she did, they would recognize a stretcher, or a bed upon which the wounded or ill lay before and during transport. The term "stretcher," in fact, refers to the flat board on which the dead were stretched before being placed in a coffin.[48] Similarly, many readers today would not be acquainted with a layer and the tasks she did, but they would recognize the idea of a corpse being "laid out" for its funeral or viewing. This concept implicitly refers to the actions once undertaken by a layer but erases the individual from the process. The figure of the layer out is even more elusive in the figurative phrase to "lay out," meaning "to knock (a person) unconscious; to kill."[49] New job titles, like "undertaker," "embalmer," and "funeral director," emerged; new specialties,

[46] Karen Rae Mehaffey, *Rachel Weeping: Mourning in Nineteenth-Century America*, revised 3rd ed. (Northville, MI, 2012), 49.

[47] Lynch, *The Undertaking*, 34–37. For analyses of how space limitations affected American society and culture, especially courtship and leisure, see Beth Bailey, *From Front Porch to Back Seat: Courtship in Twentieth-Century America* (Baltimore, MD, 1993); and Kathy Peiss, *Cheap Amusements: Working Women and Leisure in Turn-of-the-Century New York* (Philadelphia, 1986).

[48] *Oxford English Dictionary Online* (June 2015), s.v. "stretcher, n.," accessed July 7, 2015, http://www.oed.com/view/Entry/191529.

[49] *Oxford English Dictionary Online* (June 2015), s.v. "to lay out" accessed July 7, 2015, http://www.oed.com/view/Entry/106496.

like restorative art and dermasurgery, developed; and the skills that female caretakers of the dead once possessed were forgotten or absorbed by the new specializations.[50]

The removal of women from death care was not immediate or total. Women who continued to cater to the dying and dead included family members and neighbors; private duty and hospital nurses; members of ethnic communities; and undertakers, embalmers, and other workers associated with the funeral industry. In many rural areas and small towns, female relatives and friends washed, dressed, and prepared the body, readied the home for and welcomed visitors, and made the food that was distributed to guests.[51] Private duty and hospital nurses remained (and still do today) the first professionals to assist the dying and to prepare dead bodies. Persons of color and men and women of diverse ethnic backgrounds expected members of their community to tend to them as they lay dying and hoped that traditions, customs, and rituals honored their passing and comforted their family and friends. In the midst of the Civil War, Elwood Davis, the young nephew of Emilie Davis, a free woman of color who faithfully kept pocket diaries, died. A Philadelphia layer named Mrs. Williams prepared his body. Davis recorded, "This is the day we have to part with our little Elwood. I went down home in the morning. Mrs. Williams laid him out. Very nice but he did not look like himself." Although Williams's race is not identified in Davis's diary, due to the strong connection that Davis, her family, and her friends had to their community, it is likely she was a woman of color.[52] Folk rituals also kept some women in contact with the dying and with death; Irish families expected to see women wailers at the side of the deceased.[53] Finally, women entered the professional ranks of undertakers and embalmers or helped to run family funeral businesses. In the 1859–60 Lancaster city directory, Mary Hofman advertised herself as a "a grocer and furnishing undertaker."[54] Her second title meant that she supplied funeral undertakers with items and services that they then used to officiate at funerals.[55] In the late nineteenth century, women trained

[50] Harris, *Grave Matters*, 18.

[51] Haberstein and Lamers, *History of American Funeral Directing*, 260–61.

[52] Emilie Davis, entry for Feb. 2, 1864, in Karsonya Wise Whitehead, *Notes from A Colored Girl: The Civil War Pocket Diaries of Emilie Frances Davis* (Columbia, SC, 2014), 10, quote on 109, 169.

[53] Mehaffey, *Rachel Weeping*, 27–28, 45, 48; Brett, *Fashionable Mourning Jewelry, Clothing, and Customs*, 19, 25.

[54] William Henry Boyd, *Boyd's Lancaster County Business Directory* (Lancaster, PA, 1859–60), 101.

[55] Habenstein and Lamers, *The History of American Funeral Directing*, 2nd ed. (Milwaukee, WI, 1962), 435–36.

and practiced as embalmers.[56] Wives and daughters assisted in family funeral businesses as receptionists, greeters, organists, and bookkeepers.[57] Neighborhood beauticians visited funeral parlors and styled the hair of the deceased.

Up until the second half of the nineteenth century, the care of dying and dead bodies had been primarily the sphere of women. Female death workers were watchers or caretakers that served the dying and their family members and friends. They kept watch over the dying by tending to their physical, spiritual, and social needs. Women also worked as layers out of the dead. Female relatives of the dead, neighbors, and women who offered their services for pay watched the dying and laid out the dead. Eventually, most Pennsylvania women did not participate in these activities; the care of the dying and dead became the responsibility of formally trained and licensed professionals. The Civil War, industrial tragedies, the rise of undertaking and embalming as professions, and the increasing dependence on medical institutions like hospitals and homes for the incurable contributed to the changes in the care of the dying and dead.

Yet, the life cycle of death care seems to be circling back. Motivated by reasons that convinced women to perform death services and turned off by the industrialization and commercialization of the funeral business, some women and men are turning to death midwives or educating themselves so that they can honor their loved ones when they pass. The high costs of viewings and funeral services; the environmental degradation wrought by the funeral industry, one of the nation's worst polluters; and the search for greater meaning have persuaded many Americans to bypass funeral homes and traditional rituals. Instead, they attend workshops—like those offered by Crossings, a national organization that promotes home funerals and green burials—that teach them how to wash, dress, and preserve their dead.[58] After these preparations, family and friends spend time with their deceased at home and craft ceremonies that they understand to be more meaningful to their loved one's memory and to their own grief. As in the first half of the nineteenth century, family members learn death care techniques to assist the dead on their final journeys; other women form them-

[56] Johnson et al., "Origin and History of Embalming," 476–77.

[57] See James L. Schwartz and Joseph W. Epler, "Undertakers and Funeral Directors of Union County, Pennsylvania, Researched and Compiled in 2009–2010" and "Undertakers and Funeral Directors of Snyder County, Pennsylvania, Researched and Compiled in 2008–2009." Privately published by authors.

[58] "Crossings: Caring for Our Own at Death," accessed Oct. 6, 2015, www.crossings.net.

selves into small neighborly groups, larger, regional networks, and even national associations.[59] Thus, as in the first half of the nineteenth century, female friends, relatives, and hired professionals are taking up death care and honoring loved ones by doing so.

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[59] Harris, *Grave Matters*, 31–34, 38–45, 104–11, 113, 119.

The New Psychology in the Modern University: James McKeen Cattell and William Pepper at the University of Pennsylvania, 1880–1891

Abstract: As provost, William Pepper sought to transform the University of Pennsylvania into a "modern university" in the 1880s. He appointed James McKeen Cattell, who had studied experimental psychology at the University of Leipzig, as one of America's first professors of this emerging laboratory-based science. This article analyzes the course of events that led to this appointment, Cattell's own experimental achievements while in Philadelphia, and, finally, the reasons for his 1891 move to Columbia University. In doing so, it illustrates how and suggests why Pepper's reform efforts remained only partially realized.

In 1888, the University of Pennsylvania appointed James McKeen Cattell as one of America's first professors of the new science of experimental psychology.[1] In implementing his pioneering position in

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Two younger friends—Jonathan Knapp and Emily Handlin—deserve special thanks. Jon has long known of my interest in Cattell. Some time ago, his girlfriend, Emily—an art historian writing on Eadweard Muybridge—happened to mention that her subject had links with the University of Pennsylvania that seemed to parallel those of a scientist she had never heard of named James McKeen Cattell. Jon immediately put two and two together, and this article certainly reflects all I soon learned from Emily. I hope she found our talks just as profitable.

In any case, I must accept sole responsibility for all remaining errors of detail, logic, and presentation.

[1] William Pepper, *Report of the Provost of the University of Pennsylvania for the Two Years Ending October 1, 1889* (Philadelphia, 1890), 16, 18, and also http://www.archives.upenn.edu/primdocs/upi

Philadelphia, Cattell did much to establish the scientific status of his discipline.[2] More personally, he initiated an ambitious research program that highlighted this status in the eyes of other Americans. It also enhanced his own reputation—confirmed in 1901, when he became the first psychologist elected to the National Academy of Sciences—as one of the most highly respected Americans in his field.[3] Cattell's initial appointment, however, did not derive solely from his scientific stature. It embodied, instead, one aspect of the University of Pennsylvania's ambitious efforts to transform itself. Led by its chief executive, provost William Pepper, to create what would later be called a "Modern University," these efforts fostered "researches and original investigations . . . [as] an important part of its work."[4] In encouraging such work, Pepper hoped to help his alma mater catch up with developments at other major American universities and reinstate his university as one of America's leading institutions of higher education.

It was the confluence of the careers of these two men—one hoping to promote his science and the other working to rebuild his university—that had such a major impact on the science of psychology and the University of Pennsylvania. Cattell's and Pepper's efforts reinforced each other and did much to implement their broader ambitious goals for American science and American higher education.

Charles Stillé, William Pepper, and University Transformation in Philadelphia

William Pepper's ambition stemmed largely from his identity as a Philadelphian and from his pride in his university. Born in 1843, he had graduated from the University of Pennsylvania's college in 1862

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[2] For overviews of Cattell's life and career, see Michael M. Sokal, "James McKeen Cattell," in *American National Biography*, ed. John A. Garraty and Marc C. Carnes, 24 vols. (New York, 1999), 4:584–86; Michael M. Sokal, "James McKeen Cattell," in *Complete Dictionary of Scientific Biography*, 26 vols. (Detroit, 2008), 20:73–74.

[3] Michael M. Sokal, "William James and the National Academy of Sciences," *William James Studies* 5 (2010): 29–38.

[4] William Pepper, "Notes," in *Animal Locomotion: The Muybridge Work at the University of Pennsylvania. The Method and the Result* (Philadelphia, 1888), 5, as quoted in Sarah Gordon, "Prestige, Professionalism, and the Paradox of Eadweard Muybridge's *Animal Locomotion* Nudes," *Pennsylvania Magazine of History and Biography* 130 (2006): 79–104; quotation on 100–101.

and from its medical school in 1864, where he then taught for many years before becoming provost in 1880. He had high hopes for the university's future. In particular, Pepper sought to have the University of Pennsylvania regain its place among the nation's leading institutions of higher learning just as the American university system began revolutionizing itself.[5]

In the decades following the Civil War, many American universities, both private and those supported by the state, came to resemble those in Germany, which emphasized graduate education and faculty scholarship more than did the many religiously affiliated colleges in America. Often led by dynamic and charismatic presidents, the era's newly founded, "modern" universities included Cornell (1865; President Andrew Dickson White), Johns Hopkins (1876; Daniel Coit Gilman), Clark (1887; G. Stanley Hall), Stanford (1891; David Starr Jordan), and the University of Chicago (1892; William Rainey Harper). Meanwhile, several older universities—including Harvard (led since 1869 by the especially forceful Charles William Eliot) and the universities of Michigan and Wisconsin, among others—also transformed themselves.

Pepper's efforts actually preceded those of many of his contemporaries, though a later observer described his style as "less conspicuous" than theirs.[6] In promoting reform at the University of Pennsylvania, he built upon the precedent set by his immediate predecessor, Charles Janeway Stillé. As early as his first year as provost—that is, in 1870, six years before the founding of Johns Hopkins—Stillé began implementing (or at least trying to implement) curricular reform, beginning with the teaching of modern European languages in addition to the university's traditional emphasis on classical Greek and Latin. In doing so, however, he apparently alienated the institution's trustees, who, he had been warned, "lack[ed] sympathy with any initiative stemming from the faculty" or even from the

[5] David Y. Cooper, "William Pepper," in Garraty and Carnes, *American National Biography*, 17:314–16; Edward P. Cheney, *History of the University of Pennsylvania* (Philadelphia, 1940), 296–97. See also Edward A. Skuchas, "Biographical Note," in "A Guide to the Office of the Provost Records, William Pepper Administration, 1887–1892" (finding aid), University Archives and Records Center, University of Pennsylvania, Philadelphia, PA (2002), accessed Feb. 3, 2015, http://www.archives.upenn.edu/faids/upa/upa6/upa6_2pep_guide.pdf. The best overview of this revolution remains Laurence R. Veysey, *The Emergence of the American University* (Chicago, 1965). For an almost contemporaneous view, see Edwin E. Slosson, *Great American Universities* (New York, 1910). A just-published analysis is Roger L. Geiger, *The History of American Higher Education: Learning and Culture from the Founding to World War II* (Princeton, NJ, 2015).

[6] Veysey, *Emergence of the American University*, 305–6.

provost.[7] As Stillé's title as provost (instead of president) might suggest, these trustees remained committed to close oversight of their chief executive, limiting his freedom. They resented his attempts to assume "actual executive power" and voted against all reforms. To be sure, later observers noted that Stillé's "personal style" apparently cost him friends. In addition, through these years (and even into the twentieth century), the university faced significant financial limitations that other contemporaneous institutions escaped. While Cornell and Johns Hopkins had their namesakes, the University of Chicago had John D. Rockefeller, and Columbia had rich New York families, the University of Pennsylvania's trustees usually earmarked their generosity for pet projects. Archetypically, in 1881 Joseph Wharton endowed the creation of the practically oriented School of Finance and Commerce that bears his name. Stillé left the provostship in 1880 without having achieved his goals. But he had succeeded in setting the university on a new course.[8]

Stillé's departure paved the way for Pepper's ascension. The university's trustees seemed initially to have trusted in his leadership more than they had his predecessor's, granting him the kinds of "executive powers" they had denied Stillé. Stillé claimed that Pepper had made such changes "an indispensable condition" of his accepting the office, and Pepper readily took advantage of them.[9] He revealed the extent of his ambitions in a statement quoted years later by another contemporaneous university chief executive, President Charles Franklin Thwing of Western Reserve: "After the days of Benjamin Franklin the University went to sleep. It slept in peace till I came one hundred years after. When I came it woke up."[10]

Like many of his academic contemporaries, Pepper believed that

[7] On the attitudes and influence of the university's trustees, see E. Digby Baltzell, *Puritan Boston and Quaker Philadelphia: Two Protestant Ethics and the Spirit of Class Authority and Leadership* (New York, 1979), 246–68. More specifically, see Martin Meyerson and Dilys Pegler Winegrad, *Gladly Learn and Gladly Teach: Franklin and His Heirs at the University of Pennsylvania, 1740–1976* (Philadelphia, 1978), especially chap. 9, "Charles Janeway Stillé and William Pepper: Creating the Modern University," 101–15, 247; quotation on 104.

[8] Meyerson and Winegrad, *Gladly Learn and Gladly Teach*, 105.

[9] Ibid., 105–6.

[10] Charles Franklin Thwing, "William Pepper," in *Friends of Men* (New York, 1933), as quoted in Meyerson and Winegrad, *Gladly Learn and Gladly Teach*, 10, 247. In 1895, a University of Pennsylvania historian wrote of Pepper's "remarkable awakening" of the institution "after a sluggish life of almost a century." See Franklin N. Thorpe, "The University of Pennsylvania," *Harper's New Monthly Magazine* 91 (1895): 285–303; quotation on 292.

> the function of a [fully awake and modern] university is not limited to the mere instruction of students. Researches and original investigations conducted by mature scholars composing its faculties are an important part of its work, and in a larger conception of its duty should be included the aid which it can extend to investigators engaged in researches too costly or elaborate to be accomplished by private means.[11]

Pepper devoted his time as provost to implementing this vision for the University of Pennsylvania. For example, under his leadership the university instituted an unusual (and perhaps unique) mechanism to promote such "original investigations": a series of "commissions" designed to oversee "costly researches" by "individual investigators" or on a particular topic. Perhaps the best known and most successful of these was the "Muybridge Commission," established in 1883, to sponsor Eadweard Muybridge's photographic studies of animal and human locomotion. The photographer had long sought—and failed—to win support from other American universities. Pepper convinced Philadelphia publisher J. B. Lippincott to cover initial expenses and, eventually, to publish the results of Muybridge's work. When it appeared in 1887, Muybridge's *Animal Locomotion: An Electro-Photographic Investigation of Consecutive Phases of Animal Movements, 1872–1885* was soon recognized as an epoch-making artistic and technological achievement.[12]

Another commission—one more relevant to the history of psychology in Philadelphia—emerged in 1883. In that year, the will of Henry Seybert, a chemist and scion of an eminent local family, endowed a chair of philosophy at the university on the condition that it also appoint a commission to investigate "all systems of Morals, Religion, or Philosophy which assume to represent the Truth, and particularly of Modern Spiritualism."[13] In the 1880s, many educated Americans looked to what later observers called psychical research and parapsychology as an adjunct or an alternative to more traditional Christian beliefs shaken by Darwinian ideas; few saw Seybert's request as

[11] Pepper, "Notes," as quoted in Sarah Gordon, "Prestige, Professionalism, and the Paradox of Eadweard Muybridge's *Animal Locomotion* Nudes," 100–101. See also University Archives and Records Center, "Muybridge's *Animal Locomotion* Study: The Role of the University of Pennsylvania," accessed Feb. 3, 2015, http://www.archives.upenn.edu/histy/features/muybridge/muybridge.html; and Meyerson and Winegrad, *Gladly Learn and Gladly Teach*, 111.

[12] See Gordon, "Prestige, Professionalism, and the Paradox."

[13] Moncure Robinson, "Obituary Notice of Henry Seybert," *Proceedings of the American Philosophical Society* 21 (1883): 241–63.

beyond the pale.[14] That said, most scientifically informed scholars of the era never accepted spiritualism. With few exceptions (such as quasibeliever William James), most viewed spiritualist mediums as, at best, self-deluded naïfs or, at worst, frauds. Nonetheless, through the mid-1880s, members of the university's Seybert Commission—including such eminent scientists as paleontologist Joseph Leidy and neurologist S. Weir Mitchell—attended séances and consulted magicians who duplicated the mediums' results using traditional sleight of hand. In 1887, the commission published its *Preliminary Report*, which (despite its title) was its only publication. It refuted the claims of all the spiritualists it had investigated and helped set the stage for later debunking studies.[15]

In addition to Pepper's support for such work, he followed more traditional patterns in his efforts to have the University of Pennsylvania evolve into a "Modern University" that fostered scholarship. Most notably, in 1882 he established a graduate school for the university, the Faculty of Philosophy, whose title echoed German university practice.[16] As he wrote in his "Report of the Provost" for 1883, "one of the most important functions of a University is to provide every possible accommodation for students . . . pursuing their investigations beyond . . . the college curriculum."[17]

Such postcollegiate studies required a large cohort of active scholars actively pursuing their own researches. The university's initial Faculty of Philosophy comprised fifteen longstanding professors, including such eminent researchers as physicist George F. Barker, mathematician Ezra Otis Kendall, and paleontologist Joseph Leidy.[18] But Pepper knew he had to recruit fresh faces for the new school.

As he did so, his successive annual reports of the provost between 1883 and 1889 listed at least fifteen new Faculty of Philosophy professors whose notable

[14] Robert Laurence Moore, *In Search of White Crows: Spiritualism, Parapsychology, and American Culture* (New York, 1977).

[15] Cheney, *History*, 319; William Pepper et al., *Preliminary Report of the Commission Appointed by the University of Pennsylvania to Investigate Modern Spiritualism* (Philadelphia, 1887); S. M. Lindsay, "The Seybert Commission," *Pennsylvanian* 3 (1887–88): 59–60; Joseph Jastrow, "The Psychology of Spiritualism," *Popular Science Monthly* 34 (1884): 721–32; "The Seybert Commission," *New York Times*, June 13, 1887.

[16] Nineteenth-century German academics understood philosophy as encompassing all learning except the professional practices taught in faculties of medicine, law, and theology. Just as these faculties awarded MDs and JDs, German faculties of philosophy awarded PhDs. See James Morgan Hart, *German Universities: A Narrative of Personal Experience* (New York, 1874).

[17] William Pepper, "Report of the Provost," in *Annual Reports of the Provost and Treasurer of the University of Pennsylvania for the Year Ending October 1, 1883* (Philadelphia, 1883), 37, and also http://www.archives.upenn.edu/primdocs/upi/upi25_2/upi25_2_1882_1883.pdf.

[18] Clark A. Elliott, *Biographical Dictionary of American Science: The Seventeenth through the Nineteenth Centuries* (Westport, CT, 1979), 23 (Barker), 145 (Kendall), 165 (Leidy).

fields of research included astronomy, chemistry, biology, political economy, Arabic and rabbinical literature, and American archaeology and linguistics. Several had earned PhDs at the Universities of Göttingen, Halle, and Leipzig or MDs at Philadelphia medical schools. At least two—Semiticist Morris Jastrow Jr. and chemist Edgar Fahs Smith—had long and distinguished careers at the University of Pennsylvania and had built programs whose national and international reputations continued well into the twentieth century.[19] Each embodied the kind of active researcher that Pepper had in mind as he created the Pennsylvania Faculty of Philosophy.

Pepper also knew that he had to supplant some of the university's long-serving professors who lacked such scholarly interests. Fortunately for this goal, longtime professor of moral and intellectual philosophy Charles Porterfield Krauth died in January 1883, even before the Seybert bequest took effect. Krauth had held his chair since 1868, and Pepper's 1883 report of the provost includes a tribute to his long service. But Krauth had been well known for his strongly reactionary attitudes and, unlike occupants of similar chairs at other institutions, who wrote influential books on mental philosophy, he slighted the psychological in his teaching. Instead, he stressed the moral and played a major role in systematizing American conservative Lutheran theology.[20] Pepper saw Krauth's death as an opportunity to build the university's reputation in psychology, a subject that had just recently begun to emerge as a science and was beginning to attract national and international attention.

The Emergence of the New Psychology

Of course, mental philosophers had been asking psychological questions for centuries. What (and how) do our senses tell us about our world? How do we learn? What *is* the mind, and how does it work? As laboratory sciences expanded, German scientists of the early and mid-nineteenth century such as Ernst Heinrich Weber, Hermann von Helmholtz, and Gustav Theodor Fechner developed laboratory-based

[19] Harold S. Wechsler, "Morris Jastrow," in Garraty and Carnes, *American National Biography*, 11:886–87; Wyndham D. Miles, "Edgar Fahs Smith," in *Complete Dictionary of Scientific Biography*, 12:465; George B. Kaufman, "Edgar Fahs Smith," in Garraty and Carnes, *American National Biography*, 20:161–62.

[20] Pepper, "Report of the Provost," in *Annual Reports of the Provost and Treasurer . . . 1883*, 3–4; James D. Bratt, "Charles Porterfield Krauth," in Garraty and Carnes, *American National Biography*, 12:910–11; Cheney, *History*, 296–97.

research programs to attack these problems and, in doing so, created what soon became widely known as the "new psychology."[21]

Among the best known of these programs was experimental psychophysics, which claimed that mental sensations could be measured and that their magnitudes had determinable quantitative relationships with the intensities of the specific physical stimuli that caused them. Another focused on reaction time determinations, as these scientists believed they could measure how long it took the human mind to perform specific mental acts.[22] Mid-nineteenth-century German universities, which stressed scientific and scholarly research more than any other at the time, proved fertile ground for the evolution of these programs into the science of experimental psychology.

The scientific achievements of one man in particular, Wilhelm Wundt of the University of Leipzig, did more than any contemporaneous work to promote this new field.[23] By 1879, Wundt had established a psychological laboratory that soon achieved official university recognition. Through the 1880s he attracted hundreds of students from around the world. News of these exciting developments soon reached America; most American mental philosophy textbooks of the era at least mentioned them.[24] In 1882, Pepper and other Pennsylvanians hoped to move at least segments of the university's philosophy teaching in the direction of the new psychology, especially if such instruction would also involve "researches and original investigations."

The Education and Promotion of James McKeen Cattell

Among the other Pennsylvania academics to also try to promote these changes was William C. Cattell, president of Lafayette College in Easton, Pennsylvania, about seventy miles north of Philadelphia. He had personal reasons to do so, for his then twenty-two-year-old son, James McKeen Cattell, had just decided to seek an academic career in the new psychol-

[21] The richest account of these developments remains Kurt Danziger, *Constructing the Subject: Historical Origins of Psychological Research* (Cambridge, UK, 1990).

[22] Contemporaneous reaction-time experiments excited public attention. Professor Redwood, the protagonist of H. G. Wells's novel *The Food of the Gods and How It Came to Earth* (London, 1904), achieved his scientific eminence through his "voluminous work on Reaction Times."

[23] Danziger, *Constructing the Subject*, 34, 48. See also Wolfgang G. Bringmann and Ryan D. Tweney, eds., *Wundt Studies: A Centennial Collection* (Toronto, 1980).

[24] See Hart, *German Universities*.

ogy.[25] Born in 1860, the younger Cattell had grown to maturity in an upper-middle-class home within the warmth of a close and loving family. Though others might have found such a closeness stifling, Cattell thrived in this setting, and for the rest of his life he consciously sought to recreate this family-centered life with his wife and their children. He had graduated with high honors from Lafayette less than three years earlier and had spent two years studying at German universities. Although Cattell spent some time with Wundt at Leipzig, Herman Lotze's lectures at Göttingen especially impressed him, and he focused his scholarly attention on Lotze's attempts to reconcile the results of scientific investigations with philosophical and psychological concerns: what Cattell called (in an 1882 essay) "the world of fact and the world of value."[26]

In the fall of 1882, Cattell returned to America to assume a fellowship in philosophy at Johns Hopkins.[27] In Baltimore, he attended seminars on the history of philosophy but also began working in H. Newell Martin's physiological laboratory, ambitiously seeking to learn more about the physiological "world of fact" on which the psychological "world of value" rested. Like many of his classmates, Cattell also began taking psychoactive drugs—hashish, morphine, and opium, among others—and in doing so stirred his interest in psychological responses to physiological change. As he noted in October 1882, after his first experience with hashish, "I seemed to be two persons one of which could observe and even experiment on the other."[28] Less than four months later, soon after Krauth's death (and perhaps at his father's suggestion), Cattell wrote that he would "save up" his earlier philosophical studies and "go to work on physiological psychology."[29] He thus began his work as a psychologist under the influence of drugs, and though his father never knew the reasons for his son's career choice, William Cattell did all he could to foster it.

[25] Michael M. Sokal, ed., *An Education in Psychology: James McKeen Cattell's Journal and Letters from Germany and England, 1880–1888* (Cambridge, MA, 1981).

[26] James McKeen Cattell, "Untitled Essay on the Philosophy of Herman Lotze," Cattell Papers. See also Michael M. Sokal, "Launching a Career in Psychology with Achievement and Arrogance: James McKeen Cattell at the Johns Hopkins University, 1882–1883," *Journal of the History of the Behavioral Sciences* (in press).

[27] Sokal, *An Education in Psychology*, 47–82.

[28] James McKeen Cattell, Student Journal, entry for Oct. 5, 1882, Cattell Papers; Sokal, *An Education in Psychology*, 50–51.

[29] James McKeen Cattell, Student Journal, entry for Jan. 21, 1883, Cattell Papers; Sokal, *An Education in Psychology*, 61.

Within a week of Krauth's death, the older Cattell began lobbying for his son's appointment at the University of Pennsylvania and soon met twice with Pepper. Knowing the great influence of the university's trustees, he also called on Frederick Fraley, a Philadelphia merchant and the board's president.[30] Despite William Cattell's actions, the university soon appointed George S. Fullerton, one of its own alumni, as instructor of moral and intellectual philosophy.[31] Though only one year older than James Cattell and more interested in the psychological aspects of his philosophical studies than Krauth had ever been, Fullerton was equally concerned with religious philosophy and was soon ordained an Episcopal priest.[32] Nonetheless, through the mid-1880s he did much to stimulate his students' interests in the new psychology by using Lotze's *Outlines of Psychology* as a textbook. He had also played a major role in the Seybert Commission on spiritualism, serving formally as its secretary. And once the commission denounced those whom it had studied, Pepper and Fullerton managed to convince the university trustees that the new science, based in experimentation, provided a modern alternative both to spiritualism and to traditional psychology, rooted in philosophy.[33]

Meanwhile, William Cattell continued his campaign. By September 1886 James McKeen Cattell had earned a German PhD for experimental research in the new psychology. That month both Pepper and board president Fraley recommended the appointment of the younger Cattell as lecturer in psychophysics, drawing his salary from the remnant of the Seybert bequest.[34] For Pepper, the appointment represented a major step

[30] Elizabeth McKeen Cattell to James McKeen Cattell, Jan. 8, 1883, and William C. Cattell to James McKeen Cattell, Jan. 18, 1883, Cattell Papers; Sokal, *An Education in Psychology*, 57, 59–61.

[31] William Pepper, "Report of the Provost," in *Annual Reports of Provost and Treasurer of the University of Pennsylvania for the Year Ending October 1, 1885* (Philadelphia, 1886), 33, 35, and also http://www.archives.upenn.edu/primdocs/upi/upi25_2/upi25_2_1883_1885.pdf. Elizabeth McKeen Cattell to James McKeen Cattell, Jan. 22, 1883, and William C. Cattell to James McKeen Cattell, Jan. 18, 1883, Cattell Papers.

[32] "George Stuart Fullerton," in *Dictionary of American Biography*, 20 vols. (New York, 1928–36), 7:66–67; Cheney, *History*, 297, 336; Dickinson S. Miller, "Fullerton and Philosophy," *New Republic* 42 (1925): 310–12; University of Pennsylvania, *Catalogue and Announcements, 1887–88* (Philadelphia, 1887), 19, and also http://www.archives.upenn.edu/primdocs/upl/upl1/upl1_1887_88.pdf.

[33] See William C. Cattell to James McKeen Cattell, Apr. 12, 1883, Cattell Papers; Sokal, *An Education in Psychology*, 73.

[34] William C. Cattell to William Pepper, Sept. 28, 1886, enclosing Wilhelm Wundt to William C. Cattell, Apr. 15, 1885 (in German, with attached English translation), University Archives and Records Center; William Pepper, *Annual Report of the Provost of the University of Pennsylvania, Including Reports of Departments and Abstract of the Treasurer's Report, for the Year Ending October 1, 1887* (Philadelphia, 1888), 6–7, 29, 31, 40–50, 97–98, and also http://www.archives.upenn.edu/primdocs/upi/upi25_2/upi25_2_1885_1887.pdf. See also Sokal, *An Education in Psychology*, 226–31.

in his campaign to build a research-oriented graduate school, and Cattell's research-based German PhD made him especially attractive. Pepper apparently chose "psycho-physics" as part of Cattell's title to emphasize the scientific basis of his approach to psychology.

Cattell had not been intellectually stagnant in the two-and-a-half years since Krauth's death. In Baltimore, he had completed a major series of reaction-time experiments that had observers identify letters and read words as quickly as possible. Later observers drew implications from Cattell's results for the teaching of reading, citing them to support whole-word (rather than phonics-based) methods.[35] Unfortunately, Johns Hopkins professor G. Stanley Hall tried to appropriate Cattell's results as his own, and the resultant clash contributed to Cattell's dismissal from Johns Hopkins in May 1883.[36]

Cattell then went to Leipzig, where he worked with Wundt and articulated the scientific ideology he had developed at Lafayette. In Easton, his warm upbringing and focus on the importance of family life, as well as his wide reading, had led him to the ethics of Auguste Comte's positivism, which stressed altruism as the basis of all ethical behavior, exemplified by the mother's sacrifice in childbirth.[37] Cattell's serious study of Comte's ethics for his senior thesis led him directly to a more prominent aspect of Comte's system, his positivist philosophy of science. This philosophy highlighted the authority of mathematics and precise quantification, and Cattell combined this focus with Francis Bacon's methodological and utilitarian prescriptions for science, which his Lafayette professors had emphasized. This scientific ideology stressed both the importance of collecting, without a hypothesis, vast quantities of observational and experimental detail, and the belief that all science must be ultimately useful.[38] As a result, through his earliest scientific work, Cattell set out to gather large amounts of highly precise quantitative data, even if he had no firm idea of their meaning and import.

[35] Sokal, *An Education in Psychology*, 64–82. Cattell reported the results of these experiments in James McKeen Cattell, "Über die Zeit der Erkennung und Benennung von Schriftzeichen, Bildern und Farben," *Philosophische Studien* 2 (1885): 635–50, translated by Robert S. Woodworth as "On the Time Required for Recognizing and Naming Letters and Words, Pictures and Colors," in *James McKeen Cattell: Man of Science*, ed. A. T. Poffenberger, 2 vols. (Lancaster, PA, 1948), 1:13–35. See also Edwin B. Huey, *The Psychology and Pedagogy of Reading* (New York, 1908), 71–75; and Eleanor J. Gibson and Harry Levin, *The Psychology of Reading* (Cambridge, MA, 1975), 189.

[36] Sokal, *An Education in Psychology*, 87–88, 110–12.

[37] See Giacomo Barzellotti, *The Ethics of Positivism: A Critical Study* (New York, 1878).

[38] Sokal, *An Education in Psychology*, 16–17; Michael M. Sokal, "Life-Span Developmental Psychology and the History of Science," in *Beyond History of Science: Essays in Honor of Robert E. Schofield*, ed. Elizabeth W. Garber (Bethlehem, PA, 1990), 67–80.

This understanding of science led him to extend his work with reaction times and to measure them more precisely than Wundt ever had. Cattell believed that his procedures allowed him to determine the duration of specific functional mental actions. For example, at Leipzig he measured how long it took a subject to identify a color, to read a word, to translate the word from one language to another, to remember in which language a particular author wrote, or to judge if that author was greater than Goethe. Throughout this work he ignored any theoretical implications that might have been drawn from his work, but he challenged many of Wundt's methodological assumptions. For example, although Wundt did not adopt the highly systematized and precisely defined introspective techniques later developed by others, he did rely upon a set of careful procedures he characterized as experimental self-observation. Cattell, however, never could introspect or even (in Wundt's terms) self-observe, and he never could employ even such a limited methodology. He thus quickly abandoned Wundt's methods to study the behavior of laboratory subjects under carefully controlled conditions.[39]

Cattell thus was the first psychological experimenter to formally differentiate between a subject and an observer. Through his later rhetorical pronouncements, the behavioral emphases of his experimental work became especially influential in the early twentieth century. Cattell had earned his PhD in March 1886 and had soon become Wundt's first formal assistant, a position that allowed him to enhance his experimental skills. He then went to England as a fellow-commoner of St. John's College, Cambridge, planning to study medicine and, perhaps, to seek a career in neurology that would parallel that of S. Weir Mitchell, the eminent Philadelphia physician and university trustee who had served on the Seybert Commission.[40]

Cattell and his ambitions thrived at Cambridge, and he enjoyed both the university's heady intellectual atmosphere and its rich social life. He reacted ambivalently to the initial news of his appointment in Pennsylvania. Although he felt gratified, he did not want to leave cosmopolitan Cambridge for what he saw as the relatively provincial city of Philadelphia. He put off his return to America for as long as he could,

[39] Michael M. Sokal, "Scientific Biography, Cognitive Deficits, and Laboratory Practice: James McKeen Cattell and Early American Experimental Psychology, 1880–1904," *Isis* 101 (2010): 531–54.

[40] Sokal, *An Education in Psychology*, 218–23. On Mitchell, see William F. Bynum, "Silas Weir Mitchell," in *Complete Dictionary of Scientific Biography*, 9:422–23; Dennis Wepman, "Silas Weir Mitchell," in Garraty and Carnes, *American National Biography*, 15:629–31; and Percival Bailey, "Silas Weir Mitchell," *Biographical Memoirs of the National Academy of Sciences* 32 (1958): 334–53.

finally arranging to begin his lectures in January 1888.[41] In the meantime, he became engaged to a young Englishwoman, Josephine Owen, whom he had met in Leipzig. Through their later life together, Josephine Owen Cattell did much to support her husband's scientific work, and he often praised her major role in his professional achievement.[42] Cattell also met regularly with Francis Galton, the London-based scientific polymath. In the 1870s, Galton had developed the concept of eugenics and, in the following decade, he sought scientific bases for this ideology. In 1883, he opened an anthropometric laboratory to collect data documenting the physical and physiological differences between individuals. From the start, he knew he would also have to measure psychological differences, and in 1885 he began corresponding with Cattell, who knew better than any other English-speaker just what Wundt's new experimental psychology entailed. These contacts helped Galton adapt his laboratory's procedures, and through the late 1880s visitors to the laboratory had their reaction times measured.[43]

More importantly for the evolution of American psychology, Cattell's dealings with Galton helped him refine his scientific interests. His earlier work with Wundt focused largely on technical matters. But under Galton's influence, his utilitarian concerns re-emerged, and he began to emphasize that the procedures he had learned in Germany could be used to measure individual differences. For Galton, these differences were the Darwinian variations that made natural selection possible and that allowed him to preach the gospel of eugenics. Cattell accepted this view completely, and unlike others at the time and later—who promoted the well-known practices of "negative" eugenics (including sterilization and immigration restriction)—Cattell both promoted and practiced "positive" eugenics. This ideology called for the "best" members of each generation to seek out and marry others who shared their positive traits and for each such couple to have as many children as practicable. Cattell believed that he and his wife represented superior members of the species, and this understanding meshed directly with his interests in forming a warm and loving family like the one he had grown up in. Over the next two decades, then, he and his wife eschewed birth control and had seven children.[44] Cattell's science

[41] Sokal, *An Education in Psychology*, 274–75.
[42] Ibid., 213, 267–68, 313, 327, 340–41.
[43] Ibid., 208, 214, 218, 222, 234, 261–62, 265, 297–300, 328.
[44] Ibid., 340–41.

and his personal life both continued to reflect the impact of Galton's ideas throughout the decades that followed.

When Cattell finally arrived at the University of Pennsylvania as lecturer in psychophysics, the modern university and the new psychology finally came together in a way that gratified Pepper. Cattell's first intellectual chore involved public lectures on his subject from January through March 1888; Pepper had arranged for many of the university's newly appointed faculty members to give such lectures on their research.[45] Cattell's attracted much attention from the *Pennsylvanian*, the university's student newspaper, which editorialized on his lectures' importance, and even from the *Philadelphia Public Ledger*, which reported on each. In these lectures, Cattell differentiated the new psychology from both spiritualism and "distinctly metaphysical subjects." He emphasized "what can be learned by the methods of exact and experimental science concerning the mind and its relation to the external world" and stressed the importance of precise quantification.[46] These lectures proved intellectually successful and gratified Pepper. Cattell returned to Cambridge in April 1888, and, in the months that followed, Pepper worked to appoint him professor of experimental psychology—a title that highlighted the scientific nature of his work—and a salary of $1,000.[47] He also urged Cattell's father to raise funds to support an experimental laboratory for psychology. By January 1889, when James McKeen Cattell assumed his chair, the senior Cattell had raised almost $2,000. Cattell himself gave $100, and trustee Frederick Fraley, instructor George S. Fullerton, and professor S. Weir Mitchell each gave $50. Pepper himself gave $250, a donation that illustrates his belief in Cattell's program.[48] Cattell opened his laboratory soon afterward, thus embodying Pepper's goals for his university. To be sure, Cattell was seventeen years younger than Pepper—a significant gap for a young man in his mid-to-late twenties—and (as noted) he was one of sev-

[45] Pepper, *Annual Report of the Provost . . . 1887*, 55–56.

[46] James McKeen Cattell, draft lecture outlines, Cattell Papers; J. Duncan E. Spaeth, "Editorial," *Pennsylvanian* 3 (1887–88): 209; Duncan E. Spaeth, "Psycho-Physical Lectures," *Pennsylvanian* 3 (1887–88): 239; clippings from the *Philadelphia Public Ledger*, Jan., Feb., and Mar. 1888, Cattell Papers.

[47] Charles P. B. Jeffreys, *Pennsylvanian* 3 (1887–88): 257, and *Pennsylvanian* 4 (1888–89): 9; Pepper, *Report of the Provost . . . 1889*, 16, 18, and also http://www.archives.upenn.edu/primdocs/upi/upi25_2/upi25_2_1887_1889.pdf.

[48] Pepper, *Report of the Provost . . . 1889*, 170; Frederick Fraley to Henry Phillips, Apr. 20, 1888, American Philosophical Society archives; James McKeen Cattell to William C. Cattell, Dec. 16, 1883, Elizabeth McKeen Cattell to James McKeen Cattell, May 11, 1886, June 18, 1888, and June 22, 1888, Cattell Papers; James McKeen Cattell, "The Psychological School," reprinted from the *Philadelphia Public Ledger* in the *Pennsylvanian* 5 (1889–90): 241; Samuel W. Fernberger, "The First Psychological Laboratory at the University of Pennsylvania," *Psychological Review* 25 (1928): 445.

eral new professors that the provost had just recruited and appointed. The two men never grew personally close. But the first month of 1889 was a special moment in the lives of both of them.

Experimental Achievement in the University's Laboratories

Through this period, Cattell began three scientific projects, focusing his attention successively on reaction times, on psychophysics, and on psychological testing. All three illustrated the impact of his scientific ideology and of the setting in which they began. The first extended Cattell's earlier research on reaction times to a study of the velocity of the nervous impulse in living human beings.[49] Working with Charles S. Dolley, professor of biology at the university—the two men experimented largely on each other—Cattell hypothesized that increasing the distance an impulse had to flow from the point of stimulation on an individual's body to his brain would increase his reaction time to the stimulus.[50] The experimenters thus varied the stimulus point along a subject's limb—for example, striking the big toe in one series of trials and the inside of the thigh in another—and measuring how these changes affected the reaction time. Their experiments used many kinds of stimuli—including electrical shocks, which blistered their subjects' skins—and sought consistent and precise quantitative results. Their work, however, remained inconclusive. For example, the impulses they studied apparently traveled faster in their subjects' legs than in their arms, and seemed twice as fast in Cattell's limbs as in Dolley's. They concluded that, though the speeds they measured fell "within the limits of those obtained by others, it does not seem likely that [a physiological trait like] the velocity of the nervous impulse . . . should differ so greatly in two observers."[51] From there, they argued that such variations in the reaction times they measured embodied "differences in cerebral processes" and thus further emphasized the importance of a differential psychology. Such a concern for the precise measurement of individual differences meshed well with Cattell's two other major projects at the university (see below), and he was

[49] James McKeen Cattell and Charles S. Dolley, "On Reaction-Times and the Velocity of the Nervous Impulse," *Memoirs of the National Academy of Sciences* 7 (1896): 393–415; first appearance (without figures and charts) in *Psychological Review* 1 (1894): 159–68; reprinted in Poffenberger, *James McKeen Cattell*, 1:265–301.

[50] James McKeen Cattell, ed., *American Men of Science*, 1st ed. (New York, 1906), 87.

[51] Cattell and Dolley, "On Reaction-Times and the Velocity of the Nervous Impulse," in Poffenberger, *James McKeen Cattell*, 1:284.

pleased when his work was later published. Those who nominated Cattell for National Academy membership in 1900 made sure to emphasize that "the scientific character of [this] paper could not be denied by the narrowest specialist."[52]

Cattell's second scientific project involved him and Fullerton—who by then held the title of Seybert Professor of Moral and Intellectual Philosophy—in a close collaboration that focused on experimental psychophysics. It led to a volume of the *Philosophical Series* of the *Publications of the University of Pennsylvania* entitled *On the Perception of Small Differences*.[53] Even today their research program remains closely identified with the university. It helped establish a scientific tradition that researchers at Pennsylvania long have followed, and psychophysicists still cite their long monograph over 120 years after its initial appearance.[54]

Despite Cattell's original title as "lecturer in psycho-physics" at the University of Pennsylvania—a title Pepper had selected—he had never before worked in experimental psychophysics. Earlier in the century, German physiologists had claimed that the magnitude of a felt sensation (as reported by an experimental subject) increased as the logarithm of the magnitude of the physical stimulus (as measured by an experimenter) causing it, expressing their conclusions in a mathematical formula known as Weber's law. Despite the precision of psychophysics' meticulous laboratory procedures, many psychologists avoided the field. Many reacted as did William James, who claimed that "the proper psychological outcome [of psychophysics] is just nothing." Specifically, James and others raised what came to be known as the "quantity objection." They argued that felt sensation quite simply could not be quantified, though many expressed their concerns more metaphorically. James wrote that "our feeling of pink is surely not a portion of our feeling of scarlet; nor does the light of an electric arc seem to contain that of a tallow candle in itself." Similarly, German psychologist Oswald Külpe argued that "this sensation of 'gray' is not two or three of that other sensation of 'gray,'" and through his reading in psychology, Fullerton came to accept the quantity objec-

[52] Sokal, "William James and the National Academy of Sciences," 32.

[53] George S. Fullerton and James McKeen Cattell, *On the Perception of Small Differences: With Special Reference to the Extent, Force, and Time of Movement*, Publications of the University of Pennsylvania, Philosophical Series, no. 2 (Philadelphia, 1892); reprinted in Poffenberger, *James McKeen Cattell*, 1:142–251.

[54] For example, see Lazar Stankov, Gerry Pallier, Vanessa Danthiir, et al., "Perceptual Underconfidence: A Conceptual Illusion?" *European Journal of Psychological Assessment* 28 (2012): 190–200.

tion.[55] During the late 1880s, he talked at length with Cattell about their joint psychological interests in a way that helped shape their experimental work years that followed.

Cattell readily accepted the quantity objection. Psychophysics assumed that an observer could accurately report, through careful introspection, when one sensation duplicated, or bore some other precise relation to, another. Cattell, however, never could introspect in Leipzig, and he doubted that anyone could observe his own mind that accurately. The experimenters' final report stressed that they "c[ould] not estimate such quantitative differences in sensation in a satisfactory manner." Like James before them, they generalized their conclusions metaphorically: "Most men will think that a just king is happier than a tyrant, but few will agree with Plato in considering him 729 times as happy."[56]

Both men still believed they could adapt psychophysical methods to study other important psychological phenomena, and they focused on the accuracy with which subjects made observations. As they distrusted methods that relied on familiar experiences or well-known stimuli, they studied what then was called the "muscular sense." They had their subjects swing their arms horizontally through a given distance, or with a given force, or at a given speed; as they noted, "common observation does not tell us what nervous or muscular mechanism is involved in movement, nor what sensory apparatus is used in its perception."[57] Rather than claiming to measure the magnitude of any sensation, they argued that their experiments measured their observers' "errors of observation" in using their "muscular sense" to try to replicate swings of previously set distances or forces or speeds. Their experiments recorded a total of 24,760 observations by ten different subjects; Fullerton, for example, swung his arm 4,400 times, through varying distances, with varying forces, and at varying speeds. Their final report exhibited the quantitative nature of Cattell's scientific ideology, and they claimed to have found a substitute for Weber's law, arguing that "the error of observation tends to increase as the square root of the magnitude" of the stimulus under observation.[58]

[55] William James, *Principles of Psychology*, 2 vols. (New York, 1890), 1:534, 546; Oswald Külpe, *Outlines of Psychology: Based Upon the Results of Experimental Observation*, trans. Edward B. Titchener (New York, 1895), 45.

[56] Fullerton and Cattell, "On the Perception of Small Differences," in Poffenberger, *James McKeen Cattell*, 1:152.

[57] Ibid., 1:152, 156–57.

[58] Ibid., 1:181–84, 245–46.

In some ways, Cattell and Fullerton did much to keep interest in psychophysics alive (especially at the University of Pennsylvania) through at least the first half of the twentieth century. Even today, psychophysicists look to them as important predecessors, and they still cite what they call the "Cattell formula" as one of several expressions of possible mathematical relations between a stimulus and a sensation.[59] In doing so, they ignore the objection from which Cattell and Fullerton started. But a late twentieth-century analysis of the field reports that psychophysicists ignore all expressions of this concern.[60]

Despite the success of these studies, Cattell's reputation in the history of psychology rests largely upon his work as a psychological tester, and—though he carried out most of this work in the 1890s, after he had left the University of Pennsylvania—he began to plan his tests and their execution as his third major scientific project in Philadelphia.[61] To be sure, all admit the failure of his testing program, since the results of none of his tests correlated well with the results of any other and none of his measurements correlated with any other measure of any of his subjects' traits: course grades, physical characteristics, health, and even class attendance. Nonetheless, modern psychologists often cite Cattell's work as an early example of what some call psychology's most lasting contribution to twenty-first-century American culture and look to him as a prophet of a utilitarian psychology.[62] However, such claims ignore that the goals and procedures of most current psychological tests do not have their roots in the techniques Cattell used or in his goals for his testing program. These

[59] See Joy P. Guilford, *Psychometric Methods*, 1st ed. (New York, 1936), 64–66, 201, 206; 2nd ed. (New York, 1954), 97–98, 145. See also Edwin G. Boring, "The Stimulus-Error," *American Journal of Psychology* 32 (1921): 449–71.

[60] Gail A. Hornstein, "Quantifying Psychological Phenomena: Debates, Dilemmas, and Implications," in *The Rise of Experimentation in American Psychology*, ed. Jill G. Morawski (New Haven, 1988), 1–34. An anonymous reviewer reports that modern "psychophysicists often ignore the quantity objection because they believe S. S. Stevens answered it in the 1940s (other disagree but . . . [*sic*])." The referred-to article is most likely Stevens, "On the Theory of Scales of Measurement," *Science*, n.s., 103 (1946): 677–80.

[61] Michael M. Sokal, "James McKeen Cattell and the Failure of Anthropometric Mental Testing, 1890–1901," in *The Problematic Science: Psychology in Nineteenth-Century Thought*, ed. William R. Woodward and Mitchell G. Ash (New York, 1982), 322–45; Sokal, "James McKeen Cattell and Mental Anthropometry: Nineteenth-Century Science and Reform and the Origins of Psychological Testing," in *Psychological Testing and American Society, 1890–1930*, ed. Michael M. Sokal (New Brunswick, NJ, 1987), 21–45.

[62] The most complete and insightful history of psychological testing yet written is John Carson, *The Measure of Merit: Talents, Intelligence, and Inequality in the French and American Republics, 1750–1940* (Princeton, NJ, 2007). See also Raymond E. Fancher, *The Intelligence Men: Makers of the IQ Controversy* (New York, 1985).

are best understood by reference to the setting in which Cattell first began developing his tests—the University of Pennsylvania—and to another Philadelphia researcher, the eminent neurologist S. Weir Mitchell.

In England, Galton had led Cattell to an interest in individual psychological differences, but this interest remained vague until he came to Philadelphia. There he apparently talked often with Mitchell and began considering how he might apply his science, as his Baconian views demanded, in a way that would be useful in a neurological practice. By 1889, he explicitly envisioned using his reaction-time procedures as "tests [that] may be of use in diagnosis" and announced his plans to study "the alteration in the time of physiological processes in diseases of the nervous system." These statements—made to a reporter of the university's student newspaper—represent Cattell's first mention of the use of his techniques as tests and make clear that he saw them as procedures designed to help physicians serve individual patients.[63]

Soon afterward, Cattell began to plan to use a full range of laboratory procedures to test for "loss of sensation, power, and intelligence." In briefly describing a projected series of ten such tests, he went even further. With Galton's anthropometric laboratory in mind, Cattell hoped that he could test hundreds of individuals and that "the same tests will be made elsewhere, so that the results of a large number of observations may be compared and combined."[64] Cattell's interest in testing thus derived from both the continuing influence of his scientific ideology—with its emphasis on utility and, especially, the collection of large amounts of precise quantitative data—and the personal influence of Francis Galton and S. Weir Mitchell. Unfortunately, however, his hopes to work with Mitchell in Philadelphia never bore fruit. Nevertheless, Cattell's testing program set the stage for the more practically focused and successful clinical psychology—based largely on tests that identified what we in the early twenty-first century call learning disabilities and sensory deficits—that his student Lightner Witmer later developed at the university.[65]

[63] Cornelis Mellyn, "Curious Experiments: Studying the Mysteries of Mind and Nerve Force," *Philadelphia Public Ledger*, Nov. 28, 1889, stray clipping, Cattell Papers; James McKeen Cattell, "Psychology at the University of Pennsylvania," *American Journal of Psychology* 3 (1890): 281–83.

[64] James McKeen Cattell, "Mental Tests and Measurements," *Mind* 15 (1890): 373–81; reprinted in Poffenberger, *James McKeen Cattell*, 1:132–41.

[65] Paul McReynolds, *Lightner Witmer: His Life and Times* (Washington, DC, 1997).

Cattell and the University of Pennsylvania circa 1890 and Afterward

By 1891, Cattell could be proud of all he had accomplished in Philadelphia. Even earlier, in 1890, a survey entitled "Psychology in American Colleges and Universities" reviewed teaching and research programs at eleven institutions—including, for example, William James's at Harvard—and made clear that the University of Pennsylvania was not unique in transforming its activity in philosophy by expanding its offerings and research support into the new psychology. Within this general trend, careful readers of this survey, and especially of Cattell's report on his activities, could readily conclude that the University of Pennsylvania ranked among the two or three best known and most active programs in the country.[66] Cattell had also profited greatly from his work with (or at least the influence of) three important Philadelphia researchers: biologist Dolley, philosopher Fullerton, and neurologist Mitchell. More personally, he felt quite content in Philadelphia. His parents, with whom he remained as close as ever, had settled in the city, and he saw them regularly. He and his wife, however, had long believed that "life in a city is neither physically, mentally nor morally healthy," especially for children, and they built a house in Mount Nebo, a small town about sixty-five miles west of the city in Lancaster County. But the long commute never shook his ties with the university, and the birth of their first child in February 1890—named Eleth, a contraction of his mother's name Elizabeth—reinforced his familial closeness and thus his ties to Philadelphia.[67]

On the other hand, Cattell's salary apparently never rose above the $1,000 that Pepper had promised Cattell's father, and he began to feel limited in Philadelphia. He had grown up in an upper-middle-class home and had gotten used to its attendant comforts, and he and his wife (in part due to Galton's influence) planned a large family. The younger Cattells looked to his parents to pay the servants their household required. Cattell often stressed his "cordial relations" with his University of Pennsylvania colleagues, including Pepper, and he regularly hoped for a salary increase. But he and Pepper were never especially close, and the hoped-for raise never came—perhaps in part due to the university's limited financial resources,

[66] "Psychology in American Colleges and Universities," *American Journal of Psychology* 3 (1890): 275–86.

[67] James McKeen Cattell to "Mama and Papa," Jan. 8, 1885, Sept. 20, 1886, Apr. 30, 1887, Dec. 6, 1888, Cattell Papers; Elizabeth McKeen Cattell to "Jim and Jo," June 9, 1889, June 20, 1889, Sept. 8, 1890, Sept. 15, 1890, Cattell Papers.

at least when compared to those of other "modern" universities—and Cattell soon began to seek other sources of income.[68] The special moment of January 1889 in his and Pepper's lives had passed.

Others—notably the scientifically trained and well-respected journalist Edwin E. Slosson, an especially astute and almost contemporaneous observer—later suggested that the analogous special moment in the university's own development passed soon afterward. Indeed, Slosson argued in 1910 that by the end of the 1890s, and perhaps earlier, the University of Pennsylvania had begun to slight (or even abandon) Pepper's vision of what a modern university should be.[69] Slosson was best known as the literary editor of the *Independent*, a leading cultural journal, and he drew on his University of Chicago PhD and journalistic experience to investigate American intellectual trends in the early twentieth century.[70] One study led to a series of articles and an impactful book, *Great American Universities*, which profiled the histories and current conditions of fourteen major institutions that claimed to be among the country's most important, including the University of Pennsylvania. His report derived much of its authority from its comparative perspective and its concern for each institution's recent past. Slosson never claimed it was a definitive study, but it provides many interesting insights.

For example, despite the continued distinguished work in Philadelphia of Semiticist Morris Jastrow Jr. and chemist Edgar Fahs Smith (cited earlier), Slosson reported that, at the University of Pennsylvania, not all professors shared Pepper's desire to promote research. Pepper had retired in 1895—he lived another three years—and Slosson concluded that "many of the professors taught [simply] for the fun of the thing."[71] More seriously, he noted the long-standing "strong . . . centrifugal forces" at the university that for years fostered the growth of specialized schools, such as those of dentistry (founded in 1878, not by the university itself but by the medical school) and veterinary medicine (founded 1884). Once founded, Slosson wrote, each of these schools then tended to act "like a Balkan province"

[68] James McKeen Cattell to Seth Low, Sept. 20, 1890, James McKeen Cattell Papers, Rare Book and Manuscript Library, Columbia University Library; Slosson, "University of Pennsylvania," in *Great American Universities*, 344–72.

[69] A late twentieth-century history of the university by one of its former presidents disputes this view. See Meyerson and Winegrad, *Gladly Learn and Gladly Teach*. But see also Geiger, *History of American Higher Education*, 350–54.

[70] David J. Rhees, "Edwin E. Slosson," in Garraty and Carnes, *American National Biography*, 20:108–9.

[71] Slosson, "University of Pennsylvania," 371.

and "agitate[d] for autonomy," such as that long enjoyed by the medical school. Slosson feared that as this trend continued, "There will be left only a flock of studies which nobody has any particular use for." To be sure, he noted that other "modern" universities faced similar problems and that their administrations and faculties were "worrying about this a good deal." Damningly, however, he concluded that "nobody seems to worry in the University of Pennsylvania about anything."[72]

As Slosson noted, the prime beneficiaries of these "centrifugal forces" were those areas that promised immediate and obvious practicability. For example, Pennsylvania's Wharton School of Finance and Commerce (founded in 1881) flourished. An early Wharton dean—Edward James, with a PhD from University of Halle—did try to create within the school an academically oriented School of Political and Social Sciences. But Pepper's successor, Charles C. Harrison, demanded James's resignation during his first day as provost. No wonder, then, that a later observer equated Wharton's role at the University of Pennsylvania with that of agricultural schools at state universities.[73]

The university's academic aspirations faced other problems. For example, many Philadelphians also supported construction before scholarship, and though some professors at other institutions envied the university's splendid buildings, others retorted that "they need men more than marble down in Philadelphia."[74] These attitudes suggested to Slosson that the "flock of studies which nobody has any particular use for"—including even programs such as Cattell's, with its potential applicability—faced real difficulties at the university. Cattell's stagnant salary reinforces this conclusion.

That said, Lightner Witmer's psychological clinic continued to thrive in this setting, apparently because it offered immediately practical diagnostic services to Philadelphia schoolchildren. Even the university's critics praised its testing and remedial programs that identified and ameliorated specific problems and that, with "some hygiene, and a great deal of patience," transformed "open-mouthed, dull-eyed, and logy children" into engaged students "doing sums on the blackboard and cutting up between times."[75]

[72] Ibid., 356.

[73] Geiger, *History of American Higher Education*, 353–54; Veysey, *Emergence of the American University*, 112.

[74] Baltzell, *Puritan Boston and Quaker Philadelphia*, 260–62; Slosson, "University of Pennsylvania," 358–60.

[75] Slosson, "University of Pennsylvania," 370–71; Robert I. Watson, "Lightner Witmer: 1867–1956," *American Journal of Psychology* 69 (1956): 680–82; John M. O'Donnell, "The Clinical Psychology

Columbia University and Cattell

Meanwhile, even as Pepper's vision blossomed and then faded at the University of Pennsylvania, another American college began to wake from its doldrums and transform itself. In 1878, Henry Adams had the New Yorker protagonist of his novel *Democracy* ridicule Columbia College of her home city. As she told a friend, "Do you know . . . that we have in New York already the richest university in America, and that its only trouble has always been that it can get no scholars even by paying for them?" But the 1890 appointment as its president of Seth Low, a former mayor of the then-independent city of Brooklyn and a well-respected public citizen and reformer, soon changed things.

With Low as president, the college set out to alter its situation. Early in 1890, faculty leader Nicholas Murray Butler announced "hopes to secure within a few months not only a specialist in Experimental Psychology, but also a well-arranged laboratory and a fair stock of apparatus."[76] By that spring, he and Low had arranged for Cattell to lecture one day a week at Columbia, paying him $1,000 for this service, the equivalent of his entire University of Pennsylvania salary. After a year's commuting, he moved to New York as Columbia's professor of experimental psychology, with a salary of $2,500.[77] In 1902, when Low was elected mayor of the now-unified city of New York, Butler became Columbia's president, and one later observer claimed that his and his administration's activity levels made those of Pepper and his contemporaries seem old-fashioned. Indeed, a just-published early twenty-first-century analysis of the two historically and geographically similar institutions concluded that "Columbia emerged a stronger university, benefitting from more effective leadership, greater wealth, support from local elites, and a stronger commitment to academic excellence."[78]

Columbia flourished through the 1890s and long afterward—in 1896 it officially took the name Columbia University in the City of New York—as

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of Lightner Witmer: A Case Study of Institutional Innovation and Intellectual Change," *Journal of the History of the Behavioral Sciences* 15 (1979): 3–17.

[76] Nicholas Murray Butler, "Psychology at Columbia College," *American Journal of Psychology* 3 (1890): 277–78.

[77] Seth Low to Nicholas Murray Butler, Dec. 17, 1890, Butler to Low, Dec. 17, 1890, Low to James McKeen Cattell, Dec. 18, 1890, Cattell to Low, Dec. 20, 1890, James McKeen Cattell Papers, Rare Book and Manuscript Library, Columbia University Library.

[78] Veysey, *Emergence of the American University*, 305–6; Geiger, "Columbia College and the University of Pennsylvania," in *History of American Higher Education*, 350–54.

did Cattell for many years. At Columbia he completed all three projects he had originated in Philadelphia. Most notably, through the 1890s, he implemented the testing program he had sketched in Philadelphia. This effort brought him attention, both from his fellow psychologists and from the public at large.[79] He remained at Columbia until 1917, when he was dismissed from his professorship, largely due to an antagonistic relationships with Butler and his faculty colleagues, but ostensibly (as many still believe) because of his opposition to US Army conscription policies during World War I.[80]

In the meantime, Cattell had established a journalistic empire, as he owned and edited some of America's most important scientific periodicals, most significantly the weekly journal *Science*, which he took control of in 1895.[81] He was also a longtime leader of the American Association for the Advancement of Science—from 1920, he chaired its executive committee for over twenty years—and other American scientific organizations.[82] He died in 1944, and the positive editorial commentary that his lifetime achievement then attracted—in the scientific and even the popular press—suggests that many recognized his major significance for twentieth-century American science, and for American culture in general.[83] None of this commentary, however, noted the role played by William Pepper of the University of Pennsylvania in providing the initial spark for Cattell's professional career in America.

Psychology at the University of Pennsylvania after Cattell

Psychology at the University of Pennsylvania did not disappear with Cattell's 1891 departure.[84] The university's psychological clinic contin-

[79] James McKeen Cattell and Livingston Farrand, "Physical and Mental Measurements of the Student of Columbia University," *Psychological Review* 3 (1896): 618–48; reprinted in Poffenberger, *James McKeen Cattell*, 1:305–30; Sokal, "James McKeen Cattell and the Failure of Anthropometric Mental Testing."

[80] Michael M. Sokal, "James McKeen Cattell, Columbia University, and Academic Freedom at Columbia University, 1902–1923," *History of Psychology* 12 (2009): 87–122.

[81] For example, see Michael M. Sokal, "*Science* and James McKeen Cattell," *Science*, n.s., 209 (1980): 43–52; Sokal, "Baldwin, Cattell, and the *Psychological Review*: A Collaboration and Its Discontents," *History of the Human Sciences* 10 (1997): 57–89; and Sokal, "Star-Gazing: James McKeen Cattell, *American Men of Science*, and the Reward Structure of the American Scientific Community, 1906–44," in *Psychology, Science, and Human Affairs: Essays in Honor of William Bevan*, ed. Frank Kessel (Boulder, CO, 1995), 64–86.

[82] Sally Gregory Kohlstedt, Michael M. Sokal, and Bruce V. Lewenstein, *The Establishment of Science in America: 150 Years of the American Association for the Advancement of Science* (New Brunswick, NJ, 1999).

[83] "Dr. Cattell Dead: Scientist, Editor," *New York Times*, Jan. 21, 1944, 17; "Death of an Editor," *Time*, Jan. 31, 1944, 61.

[84] See Jonathan Baron, "History of Psychology at Penn," last modified Mar. 7, 2008, accessed Feb. 3, 2015, http://www.psych.upenn.edu/history/history.htm.

ued under Lightner Witmer's direction until he retired in 1937, and for years he continued to emphasize "Practical Work in Psychology."[85] In the 1920s one member of his staff, Morris Viteles, even extended such "practical work" into vocational guidance, which soon became a major focus for the clinic.[86] Meanwhile, at least into the 1940s, the university's psychological laboratory emphasized research in psychophysics and remained a leader in this experimental field. In this way, such eminent Pennsylvania psychophysicists as Friedrich Maria Urban, Samuel W. Fernberger, and Francis W. Irwin successively continued for many years the tradition initiated by Cattell and Fullerton in the early 1890s, even as other university departments devoted less and less attention to this area.[87] According to the current department's own historical sketch, however, psychology at the university did not really change until 1958, when mathematical psychologist Robert Bush became its chair, with "a mandate to re-build the department."[88] Through the 1960s and 1970s, the department gradually earned an international reputation for its members' development of what soon became known as cognitive science. In 1991 the Institute for Research in Cognitive Science emerged and, concurrently, faculty with other psychological interests established thriving teaching and research programs.

By the 1980s, few could doubt that the University of Pennsylvania was the site of cutting-edge research in psychological cognitive science. As this article demonstrates, however, the path it took to achieve this status proved to be anything but smooth, even as Pepper's and Cattell's professional goals resonated with each other. As noted, the two men differed significantly—in age, if nothing else—and since (as noted) Cattell was only one of the provost's new faculty appointments, they never shared an intense personal relationship. More generally, as Slosson's 1910 observations suggest, for many years the powers-that-were at the university seem to

[85] Lightner Witmer, "The Organization of Practical Work in Psychology," *Psychological Review* 4 (1897): 116–17; Lightner Witmer, "Practical Work in Psychology," *Pediatrics* 2 (1896): 462–71.

[86] Morris S. Viteles, in *A History of Psychology in Autobiography*, vol. 5, ed. Edwin G. Boring and Gardner Lindzey (New York, 1967), 417–500. See also Michael M. Sokal, "James McKeen Cattell and American Psychology in the 1920s," in *Explorations in the History of Psychology in the United States*, ed. Josef Brozek (Lewisburg, PA, 1984), 273–323.

[87] Jutta E. Ertle, Roger C. Bushong, and William A. Hillix, "The Real F. M. Urban," *Journal of the History of the Behavioral Sciences* 13 (1977): 379–83; Michael M. Sokal, "F. M. Urban and the Value of Archival Material," *Journal of the History of the Behavioral Sciences* 14 (1978): 170–72; Francis W. Irwin, "Samuel Weiller Fernberger: 1887–1956," *American Journal of Psychology* 69 (1956): 676–80; Julius Wishner and Richard L. Solomon, "Francis W. Irwin (1905–1985)," *American Psychologist* 42 (1987): 400–401.

[88] See Jonathan Baron, "History of Psychology at Penn."

have slighted Pepper's broader goal of establishing a "modern university" in the city, and by 1891 Cattell's personal situation left him no real choice but to accept Columbia's offer.

Meanwhile, in addressing the late nineteenth-century revolution in American higher education, historians seem too often to have focused on what some see as the unqualified success of the creations of Johns Hopkins (under its founding president Gilman) and the University of Chicago (Harper) and the positive transformations of Harvard (Eliot) and Columbia (Low and Butler). To be sure, all recognize that not all the presidents of these new or reformed universities provided the same unmixed positive leadership. Perhaps most notably, all recognize the damage that Butler's dictatorial policies and practices caused at Columbia, and all admit that G. Stanley Hall's continued mendacious despotism did almost irreparable harm to Clark.[89] But with the exception of a just-published book, *The History of American Higher Education: Learning and Culture from the Founding to World War II*, few seem fully aware of William Pepper's contemporaneous efforts and his partially realized vision for the University of Pennsylvania. This article, then, helps illuminate another side of this revolution.

Worcester Polytechnic Institute, Emeritus MICHAEL M. SOKAL

[89] William A. Koelsch, *Clark University, 1887-1987: A Narrative History* (Worcester, MA: 1987).

NOTES AND DOCUMENTS

The Mason-Dixon Survey at 250 Years: Recent Investigations

Abstract: The year 2013 marked the 250th anniversary of the 1763 start to the iconic land survey by Jeremiah Dixon and Charles Mason. This survey culminated in the border along the southern edge of Pennsylvania, now known as the Mason-Dixon Line. There has been little to report in the way of new information about the Mason-Dixon Survey—that is, until recently, when the exact location of the first survey point was re-established. Research involving the original 1700s property deeds, insurance surveys, journal entries by Charles Mason, and City of Philadelphia Commissioners Reports, along with modern re-surveying of the area by professional surveyors, mathematical calculations by these same surveyors, and global positioning satellite (GPS) technology, combined to allow the recovery of the first survey point calculated by Mason and Dixon. It was from this point that they proceeded to establish the Mason-Dixon Survey.

The year 2013 marked the 250th anniversary of the 1763 start to the iconic land survey by Jeremiah Dixon and Charles Mason. This survey culminated in the border along the southern edge of Pennsylvania, now known as the Mason-Dixon Line. While there has been an occasional rekindling of interest in the Mason and Dixon Line, exemplified by Edwin Danson's book *Drawing the Line: How Mason and Dixon Surveyed the Most Famous Border in America,* Thomas Pynchon's postmodernist novel *Mason and Dixon*, Mark Knopfler's popular song "Sailing to Philadelphia," and, most recently, Sally Walker's *Boundaries: How the Mason-Dixon Line Settled a Family Feud and Divided a Nation*, there has been little to report in the way of new information about the Mason-Dixon Survey—that is, until recently, when the exact location of the first survey point was re-established.[1]

[1] Edwin Danson, *Drawing the Line: How Mason and Dixon Surveyed the Most Famous Border in America* (New York, 2001); Thomas Pynchon, *Mason and Dixon* (New York, 1997); Sally Walker,

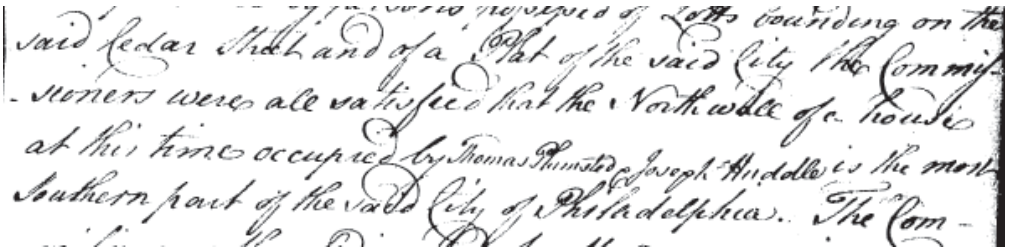
said Cedar Hill and of a Plat of the said City the Commis-
sioners were all satisfied that the North wall of a house
at this time occupied by Thomas Plumsted & Joseph Huddle is the most
Southern part of the said City of Philadelphia. The Com-

Fig. 1. Description from the city commissioners' report of the north wall of the Plumstead-Huddle house at the southernmost point in Philadelphia. Dec. 3, 1763, County Commissioners Minutes, 1718–1766, RG1-1.1, Philadelphia City Archives and Records, photo by J. Black. Courtesy of the Philadelphia City Archives and Records.

Historical Context

November 1763 offered a gray and chilly welcome to Charles Mason and Jeremiah Dixon, representatives of the British Royal Society, when they disembarked at the seaport of Philadelphia.[2] These highly skilled surveyors would face nearly five years of working and sleeping in the elements as they traversed farmland and woodland westward from Newcastle, Delaware, in what would become the longest, straightest east-west line surveyed in the colonies. Their charge, given to them by King George II of England, was to establish a border to settle the long-running land dispute between two respected families: the Calverts and the Penns.

In preparation for Mason and Dixon's survey activities, the commissioners of the city of Philadelphia officially determined the southernmost point of Philadelphia, as this location would become the initial survey point and basis for establishing the border between the land governed by the descendants of Lord Baltimore and of William Penn. According to the commissioners' documents, several of the councilmen subsequently walked together to the southern border of the city to legally establish the southernmost point. They agreed that the north face of a wall at the home of Thomas Plumsted and Joseph Huddle would satisfy the requirements of the southernmost point of Philadelphia (Fig. 1). The house was located in neighboring Southwark, an area filled with wharves, piers, warehouses, and seafaring trades. As the front wall abutted the street,

Boundaries: How the Mason-Dixon Line Settled a Family Feud and Divided a Nation (Somerville, MA, 2014); Mark Knopfler, "Sailing to Philadelphia," on *Sailing to Philadelphia*, Warner Brothers Records, 2000.

[2] Danson, *Drawing the Line*, 2.

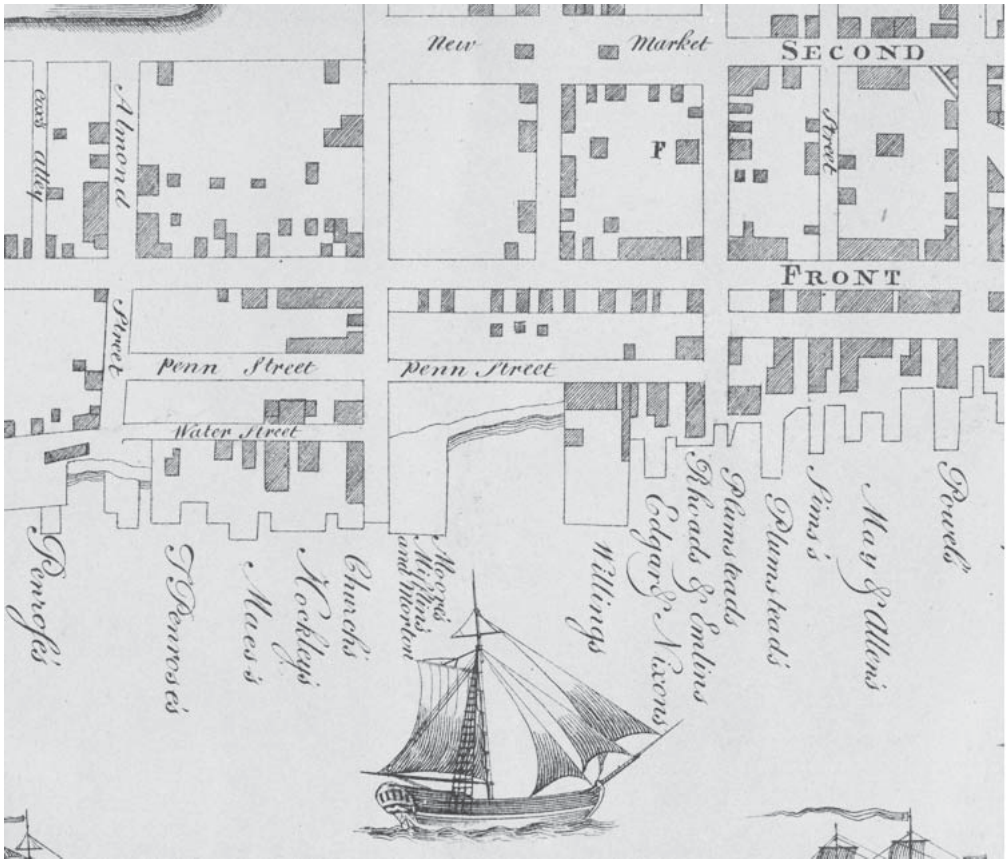

Fig. 2. 1762 Clarkson-Biddle map, section of neighborhood of the southernmost point in Philadelphia. Print Department, flat 2 x 3, Philadelphia, 1762 [14M], Library Company of Philadelphia. Courtesy of the Library Company of Philadelphia.

serving as the border of Philadelphia, the north wall of the house lay on the city border.[3]

Mason and Dixon went on to survey the eventual borders between what are now the states of Delaware, Maryland, and West Virginia to the south and Pennsylvania to the north. The survey would have significant historical, political, and technological impact. Ironically, over the intervening 250 years, the exact location of the front wall of the Plumsted-Huddle house was lost. In a contemporary context, the political consequences of the border can be understood without reference to the initial survey point, but an appreciation of Mason and Dixon's technological achievement cannot be fully understood without knowing this exact point.

[3] December 3, 1763, County Commissioners Minutes, 1718–1766, RG1-1.1, Philadelphia City Archives and Records.

When William Penn accepted Thomas Holme's plan for the city of Philadelphia, the layout reflected a grid of generally north-south and east-west streets, with several square green commons throughout the city. The streets were named for the trees that were found there at the time of settlement.[4] The southernmost street was named Cedar Street, later to be called South Street, the southern border between the city of Philadelphia and the neighboring town of Southwark. As the street angles somewhat southward as one travels east along it, the southernmost point of the city should be where the street meets the Delaware River at the southeast corner of the city.

Ed Danson, a highly experienced surveyor from England, used Mason's journal information to re-create the calculations for the coordinates of the first survey point and placed this point at what is now the intersection of Second and South Streets.[5] This may seem like an obvious error at first, as it is not currently close to the river, but over the centuries the river has changed its course and been dredged several times to make it deeper for seagoing vessels. Dredging forced the river to recede significantly and therefore extended the southernmost point of Philadelphia. Even so, the Clarkson-Biddle map (1762) clearly shows that the banks of the river were several blocks east of Second and South Streets when Mason and Dixon embarked on their survey (Fig. 2).

Physical evidence, not only of the banks of the river, but also of the original streets and structures, is no longer visible. No historic structures remain in the immediate area of the Plumsted-Huddle house, as even traces were eradicated during the construction of Interstate 95. In the interests of historical accuracy and to better frame Mason and Dixon's accomplishments, researchers have undertaken a contemporary effort to determine where the southernmost point of Philadelphia lay in 1763.

Mason wrote in his journal that he set up a tent and observatory near the southernmost point and left us with a detailed map of the observatory's location in relation to this point. If these coordinates were known exactly, researchers could re-create calculations from Mason's journal notes to determine the location of another observatory, built near Independence Hall between Fifth and Sixth Streets and along Chestnut Street. Mason's journal also notes that the builders laid a substantial wood foundation to support the surveying instruments and buffer them from the vibrations

[4] John F. Watson, *Annals of Philadelphia, and Pennsylvania, in the Olden Time* (Philadelphia, 1857, 1900).

[5] Charles Mason and Jeremiah Dixon Journal, 1763–1768, National Archives, Washington, DC, Record Group 59, General Records of the Department of State.

and influences of the city. This foundation likely remains hidden within the grounds of Independence Hall, waiting to be found, potentially with noninvasive underground radar.

The political importance of the Mason-Dixon Line is well known. The line represented not only a resolution to a family feud between the Penns and Calverts but also, later, a symbolic division of a nation between the slave South and the free North, whose disagreements came to a head in the Civil War of 1861–65. Sally Walker captured this aspect of the line well in the title of her 2014 book, *Boundaries: How the Mason-Dixon Line Settled a Family Feud and Divided a Nation*.

The border dispute involving William Penn, Cecilius Calvert (Lord Baltimore), and their scions began in the reign of Charles II and was not settled until approximately eighty years later. At one level, the politics of the feud involved conflicting land grants. For Penn, it meant access to the port of Philadelphia (latitude 39°56′ N), eventually defined as south of the 40° boundary granted to Calvert. At another level, both families wanted to maximize revenues from taxation of residents within the area of conflict. Both the Calvert and Penn families demanded these revenues, but neither was able to claim or convey clear title (Fig. 3).[6] When one party sent its tax collectors into the disputed territory, the other party sent representatives to deter them. Both sides were frustrated by the inability to collect taxes from what each considered its own property. These tax collection skirmishes threatened to escalate in intensity. Because different monarchs had granted land to each family, and because the boundaries of these grants were not clearly defined, some of the responsibility to resolve the conflict lay with the crown.

Cresap's War (1730) was a relatively small, but violent, incident that resulted from this conflict. In one version of the event, Thomas Cresap, a ferry boat operator, was attacked on his boat and nearly drowned by two Pennsylvanians. The attackers carried off Cresap's workman, possibly due to debts the workman owed in the Lancaster region. Cresap had difficulty bringing his case to court, as the Pennsylvania magistrate claimed that Cresap was from Maryland. Further, Cresap felt that he could expect no justice in the Pennsylvania court. These events anticipated the next eight years of violence and prompted the crown to act.[7]

[6] Alan Tully, *William Penn's Legacy* (Baltimore, 1977), 6–12.

[7] Patrick Spero, "The Conojocular War: The Politics of Colonial Competition, 1732–1737," *Pennsylvania Magazine of History and Biography* 136 (2012): 365–403.

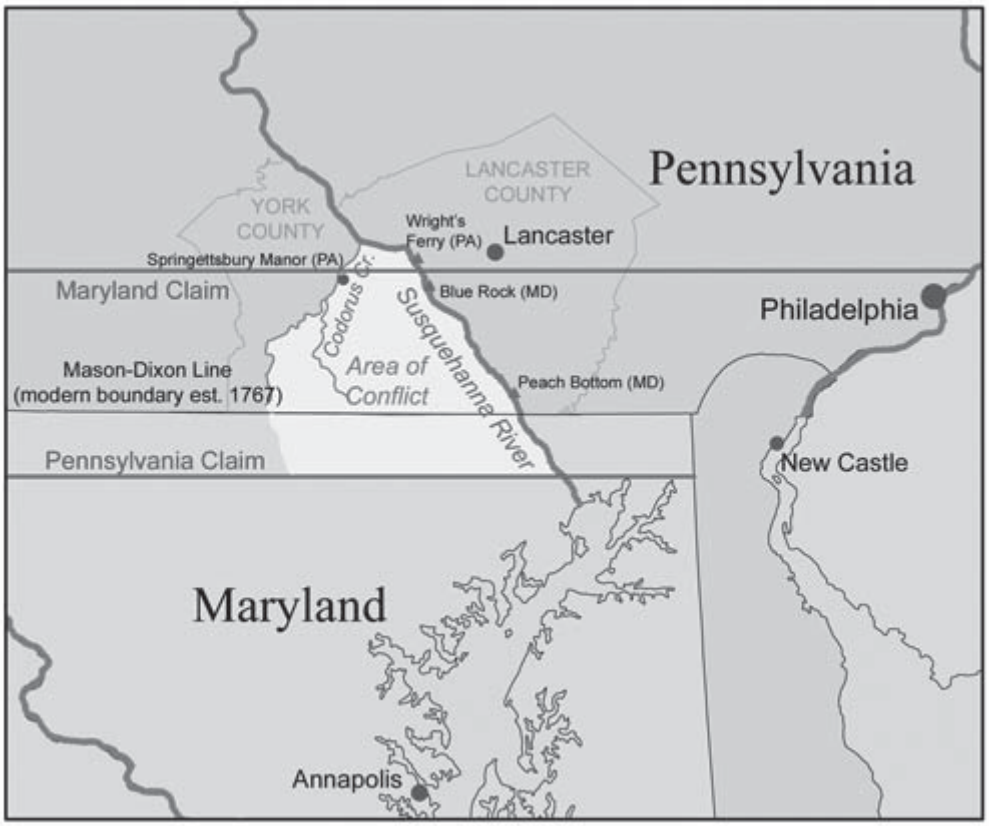

Fig. 3. Map illustrating area of conflict in Cresap's War. Kmusser, Wikimedia Commons, last modified September 11, 2007, https://commons.wikimedia.org/wiki/File:Cresapwarmap.png.

At times, the Calverts claimed land up to the fortieth parallel, including Philadelphia. Penn's understanding of his grant placed the border in the upper part of the Chesapeake Bay (Fig. 3). Impatient to resolve the longstanding feud between the two families, King George II brokered an agreement, signed by grandsons of Calvert and Penn. As part of the agreement, the Royal Society of England dispatched two expert surveyors to measure and mark the boundary between the lands of Penn and Calvert. The royal astronomer, James Bradley, recommended his assistant, astronomer Charles Mason, and a skilled surveyor, Jeremiah Dixon.

Both accomplished mathematicians, Mason and Dixon had recently completed a critical task for the seafaring empire of Great Britain: the measurement of the transit of Venus (the passage of the planet Venus across the face of the Sun as seen from Earth) in Cape Town, South Africa. The transit of Venus had not taken place in over one hundred years, and

improvements in astronomical and time measurement made the event one of unprecedented importance. By measuring the difference in angles of solar parallax from different points on the earth, Mason and Dixon more accurately determined the distance to the sun. Of greater strategic importance, this discovery improved geodesy, the understanding of the form, shape, and size of the earth, consequently improving the accuracy of global navigation and location coordinates.[8]

Mason and Dixon were charged with determining a latitude measurement at the southernmost point of the city of Philadelphia. From that point, they were to proceed west thirty to thirty-five miles to avoid a bend in the Delaware River, then south fifteen miles before starting to survey the actual boundary.[9] This would become the border between Pennsylvania and, eventually, the states of Maryland, Delaware, and West Virginia.

Mason and Dixon's survey, while important politically, was equally significant as a technological accomplishment.[10] Not only did it involve new techniques and equipment, but it also required meticulous attention to detail. For example, the surveyors took great care to ensure that the three-foot-long precision standard brass bar used for measurement remained within a tolerance of one thousandth of an inch. Mason and Dixon considered temperature effects on the expansion and contraction of the brass bar and compensated for these effects in their calculations. If they had assumed, as earlier surveyors had, that the bar was fixed in length, the southern boundary of Pennsylvania would have been measured almost a quarter of a mile longer in the summer than in the winter. In addition, they used a new zenith sector, recently perfected by English instrument maker John Bird. The zenith sector was accurate to two seconds of an arc (0.056 percent of a degree). Also included was a mariners' sextant, one of the earliest instruments fitted with a horizontal bubble level. By using technology similar to a modified clock pendulum, Mason and Dixon were able to observe how topographical features such as the Appalachian Mountains exerted gravitational influences on their measurements. This combination of meticulous observation, advanced instrumentation, and computational correction had no precedent in boundary surveys.[11]

[8] Danson, *Drawing the Line*, 47–59.

[9] Charles Mason to Thomas Penn, Dec. 14, 1763, in ibid., 85.

[10] Ibid., 204.

[11] Ibid. A reassessment by surveyor Todd Babcock of the markers on the Mason-Dixon Line on March 31, 2011, using GPS technology, testifies to the meticulous efforts of Mason and Dixon but also shows that the greatest inaccuracies of marker placement—the largest being a 900′ deviation from

Length of a Degree of Latitude in America. 567

At the period when this eminent performer enjoyed a ſalary of twelve pounds per week for his theatrical labours (which, reckoning according to playhouſe pay, amounted to about 400l. in the ſeaſon) and was in the heighth of his reputation; he was ſuddenly ſeized with the Small pox, for which his acquaintance had frequently perſuaded him, in vain, to undergo inoculation. The diſorder at firſt put on a mild appearance, but ſoon after turned out of the confluent kind; when perceiving that the gentlemen who attended him, Dr Schomberg and Dr Kehlan had but little hopes of his recovery, he reſigned himſelf to his fate with uncommon reſolution, and died with great compoſure after twelve days illneis on the 7th of December 1769, in the 36th year of his age.

A few days before his death, Mr Holland received the ſacrament, and dictated his laſt will, by which, after bequeathing to Mr Garrick his diamond ring; to Mr Foote his golden-head cane; the ſum of two hundred pounds to a child who was nearly related to him, and a few trifles to ſome of his acquaintance, he left his whole fortune, upwards of 5000l. to his mother and his two brothers, at Chiſwick, where he was buried.

An extraordinary circumſtance has been told of this gentleman, which tho' we hope for many reaſons has no foundation in truth, yet, from the poſitive manner in which it has been repeatedly aſſerted, it ought not to be omitted in this place: It is affirmed that on the morning of his diſſolution, Mr A——, the apothecary, called at his houſe, and was told he was dead, but that on Mr A—— going into his chamber where the nurſe had laid him out, as it is commonly phraſed, in order to take a laſt look at his departed friend, he ſhewed ſome ſigns of life; on which Mr A—— ordered him to be placed in a warm bed, where he revived for a ſhort time, and even called for ſomething to drink, not a little to the aſtoniſhment and ſhame of his attendants, who were ſeverely rebuked by Mr A—— for ſuch an unpardonable inſtance of neglect.

The characters Mr Holland obtained the moſt reputation in were Richard III. Brutus, Hamlet, Pierre, Timur in Zingis, Manly in the Plain-Dealer, and ſome other parts of weight in comedy. He was not fond of letters, though he applied with uncommon aſſiduity to his profeſſion, and was ſo accurate in repeating the words of his author, that he was rarely known to make the moſt trifling alteration in the language of the characters he repreſented. As a private man, he was open, affable and honeſt; very frugal yet of a convivial turn, and by no means backward in performing acts of generoſity; and his converſation, except ſometimes in his careleſs moments, when he miſtook impudence for wit, and rudeneſs for ſincerity, was ſenſible and entertaining.

The Length of a Degree of Latitude in the provinces of Maryland *and* Pennſylvania, *determined from the Obſervations of Meſſrs* Charles Maſon *and* Jeremiah Dixon, *appointed by the Royal Society.*

THE difference of latitude of the points N and A, or the amplitude of the celeſtial arch, anſwering to the diſtance between the parallels of latitude paſſing through N and A was found, by an excellent inſtrument of ſix feet radius, to be 1° 28′ 45,0″. The terreſtrial diſtance of the ſaid parallels = N E + C D + B A, was by moſt accurate menſuration found to be 538067 Engliſh feet.

Then ſay, as 1° 28′45″; is to 1°:: ſo is 538067 feet, to 363763 Engliſh feet, which is the length of a degree of latitude in the provinces of Pennſylvania and Maryland. The latitude of the northernmoſt point N, was determined from the zenith diſtances of ſeveral ſtars = 39° 56′ 19″, and that of the ſouthernmoſt point A = 38° 27′ 34″. Therefore the mean latitude, expreſſed in degrees and minutes = 39° 12′.

To reduce this meaſure of a degree to the meaſure of the Paris Toiſe, it muſt be premiſed that the meaſure of the French foot was found upon a very accurate compariſon, made by the late Mr Graham, of the toiſe of the Royal Academy of Sciences at Paris, with our Royal Society's Braſs ſtandard, to be to the Engliſh foot, as 114 to 107 (See Philoſ. Tranſact. vol. XLII. p. 185.) therefore ſay, as 114 : is to 107 : : ſo is 363763, the meaſure of the degree in Engliſh feet, to 341427, the meaſure of the degree in French feet, which divided by 6, the number of feet in a Toiſe, gives the length of the degree = 56904½ Paris Toiſes in the latitude of 39° 12′ north.

Such is the length of a degree in this latitude, ſuppoſing the five feet braſs ſtandard made uſe of in this meaſure to have been exactly adjuſted to the length of

Fig. 4A. First page of "The Length of a Degree of Latitude in the Provinces of Maryland and Pennsylvania, Determined from the Observations of Messrs Charles Mason and Jeremiah Dixon, Appointed by the Royal Society," *Gentleman's Magazine*, Dec. 1769, 567, private collection.

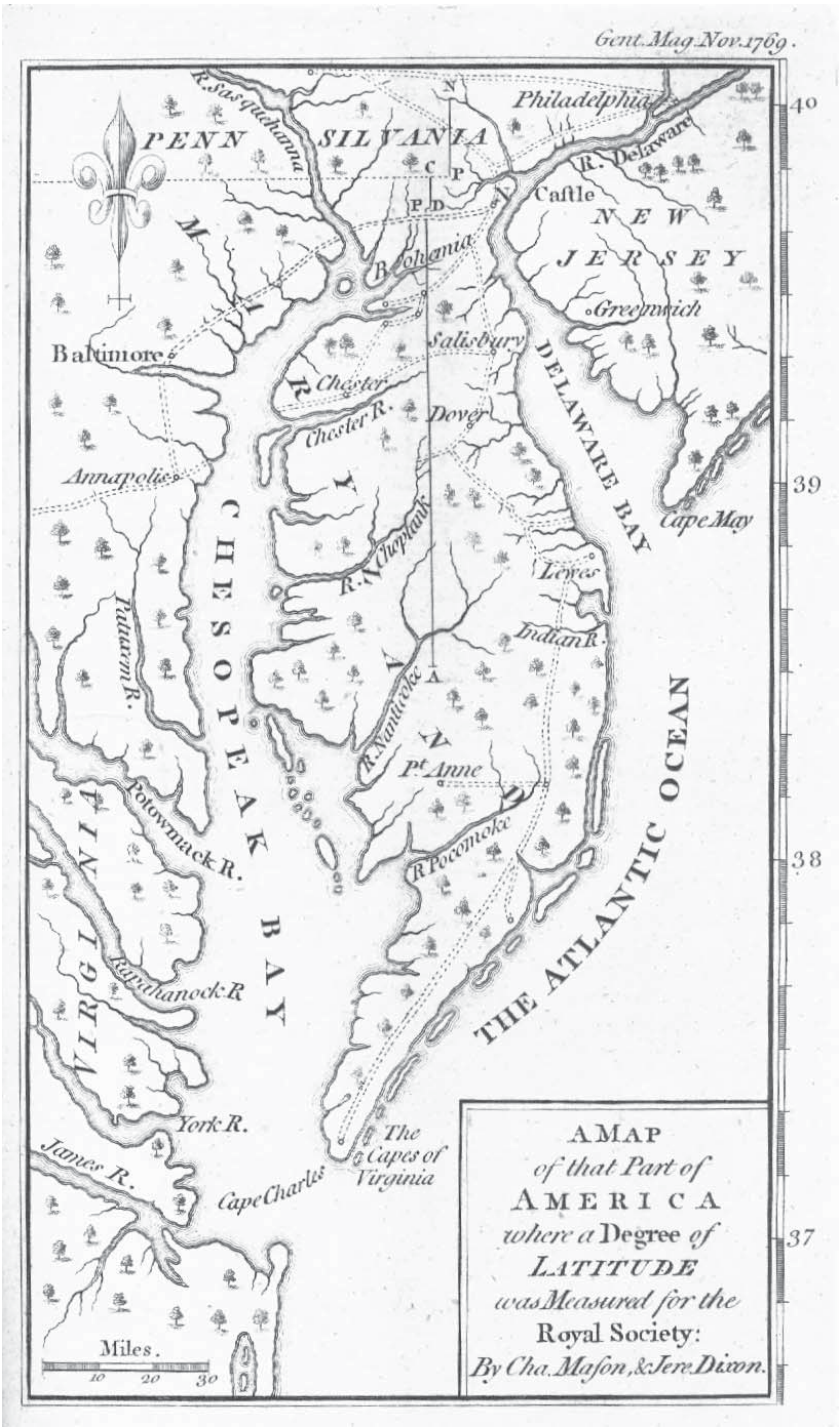

Fig. 4B. "A Map of that Part of America where a Degree of Latitude was Measured for the Royal Society: By Cha. Mason & Jere. Dixon," *Gentleman's Magazine*, Dec. 1769, private collection.

Using astronomical observations, gravitational considerations, and standards of measure adjusted for fluctuation of temperature, Mason and Dixon made the first scientific determination of a degree of latitude in the colonies. Even at the time, members of the general public recognized this feat as a significant technological achievement (Figs. 4A and 4B).[12] The survey included the determination of a tangent to the only circular curved arc in the West (west of England) that serves as a radius border (a twelve-mile radius at the northern part of Newcastle, Delaware)—and then the creation of the longest east-west line in the colonies, with an average latitude measurement of 39°43′20″ N.[13] At the time, it was the most precise, ambitious, and largest geodetic measurement ever made. It set a precedent that became the standard for a nation in the making.

The survey conditions were not without considerable risk. Mason and Dixon began their work in the aftermath of the French and Indian War. Savage retaliations against innocent Indians, including those committed by the "Paxton Boys," had reignited tensions in the western part of Pennsylvania. The threat of violence ultimately stopped Mason and Dixon from completing the survey along the full length of Pennsylvania; their journey ended 233 miles from their starting point.

Recovering the Past

It is ironic that the starting point and coordinates for what was a transformative approach to surveying and boundary delineation has been, if not entirely lost, certainly long misidentified. While Philadelphia city commissioners' documentation recorded the north wall of the Plumsted-Huddle house as the southernmost point in Philadelphia, the exact location of the house was lost.[14] Many obstacles prevented finding it. Two studies, published in 1962 and 2001, improperly identified the Plumsted-Huddle house as having been located at, respectively, Second and Cedar (now South) Streets and Penn and Cedar Streets.[15] An address of 30 Cedar

latitude—were probably associated with the difficulties in compensating for gravitational variation. Todd Babcock, personal communication with author, 2013.

[12] "The Length of a Degree of Latitude in the provinces of Maryland and Pennsylvania, determined from the Observations of Messrs. Charles Mason and Jeremiah Dixon, appointed by the Royal Society," *Gentleman's Magazine*, Dec. 1769, 567, private collection.

[13] Danson, *Drawing the Line*, 204.

[14] City of Philadelphia Commissioners Meeting Minutes, Dec. 3, 1763.

[15] Hubertis M. Cummings, *The Mason Dixon Line: Story for a Bicentenary, 1763–1963* (Harrisburg, PA, 1962), 12; Danson, *Drawing the Line*, 84.

Fig. 5. Image of 30 Cedar Street House. "S.W. corner Penn and South Sts., Phila.," New York Public Library Digital Collections, accessed December 7, 2015, http://digitalcollections.nypl.org/items/510d47da-fed3-a3d9-e040-e00a18064a99.

Street was entered into accounts relating to Mason and Dixon's survey at some unknown time, along with a putative sketch of the Plumsted-Huddle house (Fig. 5). Thirty Cedar Street was not considered to be the southernmost point of Philadelphia, as Cedar Street extended slightly further eastward and southward among the wharves along the Delaware River.[16] An undated sketch of the house is not representative of a mid-1700s home, which likely would have been two to three stories tall, not four stories tall with a roof deck. Furthermore, maps of the era indicate that the southern-

[16] South Street slants slightly to the south as one travels east toward the Delaware River. Logically, the southernmost part of the city would be found near the intersection of South Street and the original banks of the Delaware.

most occupied portion of Philadelphia was more likely located closer to Penn or Water Streets.[17]

Due to the difficulties in finding the original house's location, Todd Babcock, surveyor and president of the Mason and Dixon Line Preservation Partnership, determined that the only way to find the first survey point was to research property deeds in the Philadelphia Archives and track down house ownership records for the time in question.[18] A search of this sort meant reviewing deed books from the 1600s and 1700s, then finding the specific deed on microfilm reels. Todd approached the authors, Barry Arkles and Janine Black, with the problem. Black formed a team of Pennsylvania State University students, including Matt McDermott, Indiah Fortune, and Amanda Veloz, to find the original deed to the Plumsted-Huddle house. Arkles, having spent the earliest part of his life at Second Street and Elfreth's Alley, was familiar with the history of Philadelphia and provided a perspective on the urban terrain before the construction of I-95 and the 1950s and '60s urban renewal of the Society Hill area.

There were a number of reasons that a deed for the dwelling was difficult to identify. The Huddle and Plumsted families owned numerous properties in the area at the time. Apart from several changes in street names, in 1856 the official house numbering system for Philadelphia also changed. House numbers initially followed a chronological system, referring to when a house was built, and transitioned to a system that started at the eastern end of the street and systematically numbered the houses westward along each city block.[19] To add to the confusion, the Delaware River banks changed their locations during several dredging operations. Between 1959 and 1979, the waterfront area of Philadelphia, including the historic starting point of the survey, was razed to clear the way for the construction of Interstate 95.

[17] Clarkson-Biddle map, Print Department, flat 2 x 3, Philadelphia, 1762 [14M], Library Company of Philadelphia.

[18] Todd shared this idea with Torben Jenk, who independently confirmed the same conclusions our team reached.

[19] Following the 1856 changes to the Philadelphia street numbering system, each block that was at least 350 feet long had numbers between 0 and 100. From the Delaware River to Front Street was numbered 0–100, from Front to Second Street was numbered 100–199, etc. The currently speculated 30 Cedar Street location of the Plumsted-Huddle house, or the southernmost point of Philadelphia, fits with the more recent numbering system. There is no conversion table for the older addresses to the newer addresses. This information still exists but is not tabulated.

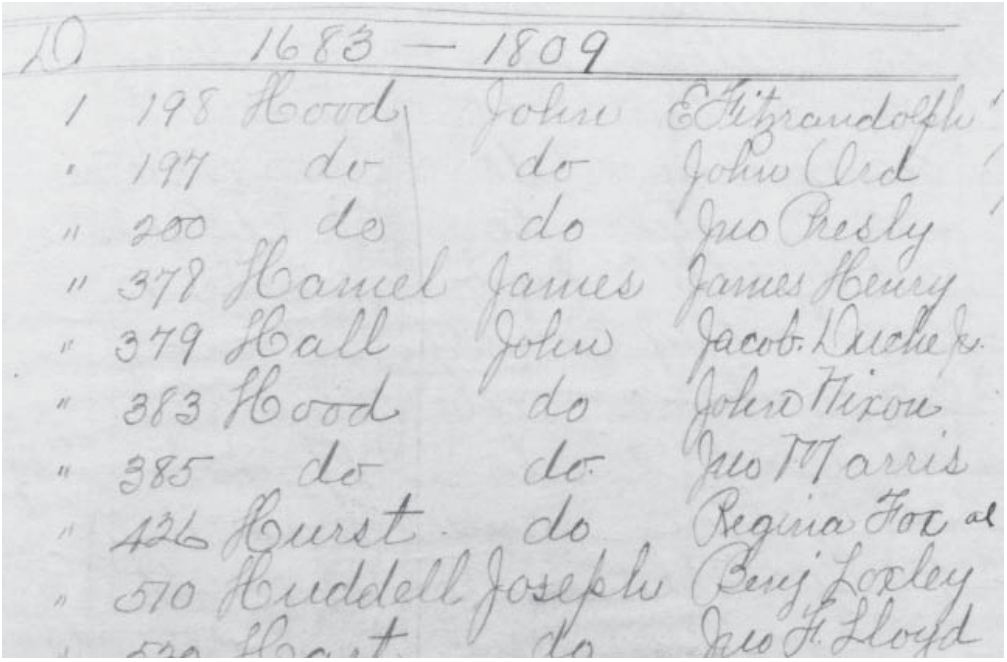
D 1683 — 1809
1 198 Hood John E Fitzrandolph
" 197 do do John Ord
" 200 do do Jno Presly
" 378 Hamel James James Henry
" 379 Hall John Jacob Duche Jr.
" 383 Hood do John Nixon
" 385 do do Jno Morris
" 426 Hurst do Regina Fox al
" 570 Huddell Joseph Benj Loxley
Jno F. Lloyd

Fig. 6. Property Purchase Record from the 1683–1809 Deed Transfer Book. This record references the transfer of property ownership to Joseph Huddell from Benjamin Loxley. The surprise with this record that made it difficult to find was that the apparent page number was easily misread as page 570, but the actual deed record was found on page 510. Indiah Fortune, a Penn State student, was able to find the desired deed by paging through the entire deed book, thus resolving the issue. Microfiche, Roll 37, Deed Book D–1, 1683–1809, Philadelphia City Archives and Records, photo by J. Black. Courtesy of the Philadelphia City Archives and Records.

Student researchers McDermott, Fortune, and Veloz identified all of the properties owned by the Huddle and Plumsted families using the Philadelphia Archives' collection of deed books dating back to the 1600s.[20] All spellings of each family's name were included in the search. The students identified a deed for the southernmost property and were able to eliminate from consideration all other Huddle and Plumsted properties (Fig. 6). The house identified was located on the southwest corner at the intersection of Cedar and Water Streets. A 1763 insurance survey verified that the property was owned by Joseph Huddell and occupied by Thomas Plumstet [*sic*] (Fig. 7).[21]

[20] Ron Givens, "Penn State Students Solve Mason-Dixon Line Puzzle," *American History*, Aug. 2011, 8.

[21] An inquiry to the Contributionship, the insurance company founded by Benjamin Franklin in the 1700s and still in business today, revealed an insurance survey of the property was made on

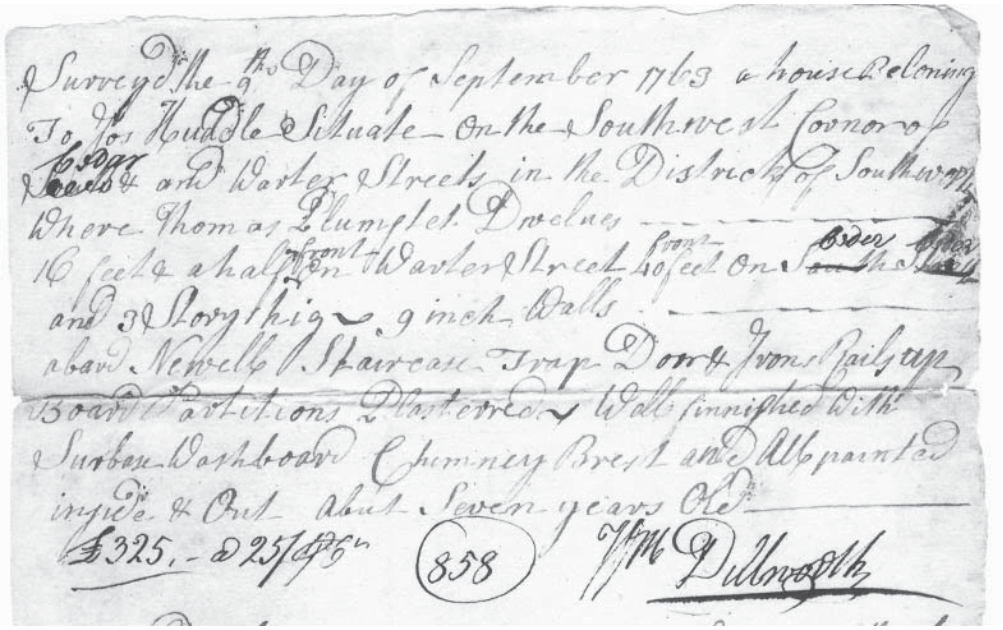
Surveyed the 9th Day of September 1763 a house Belonging
To Jos Huddle Situate On the Southwest Cornor of
Cedar and Water Streets in the District of Southwark
Where Thomas Plumstet Dwelles
16 feet & a half front on Water Street 40 feet on Cedar
and 3 Storyhig 9 inch Walls
board Newell Staircase Trap Door & Iron Railing up
Board Partitions Plastered Walls finnished with
Surbase Washboard Chimney Brest and All painted
in side & Out about Seven years Old
£325. - 0 25/4 96
858
Wm Dilworth

Fig.7. Contributionship Insurance Survey of the Huddle Plumstet house, Sept. 9, 1763, The Philadelphia Contributionship. Courtesy of The Philadelphia Contributionship.

With the location of the building determined, surveyors James Shomper, from the City of Philadelphia, and Todd Babcock, both members of the Surveyors Historical Society and the Mason and Dixon Line Preservation Partnership, then used modern surveying techniques to correlate the building's northeast corner to GPS coordinates. Those coordinates in decimal degrees are latitude 39.940785401, longitude 75.143047349, or, in degrees-minutes-seconds, N 39°56′26.827″, W 75°08′34.970″. This location, although unfortunately under the northbound lane of I-95, is still visible looking south from the South Street pedestrian bridge (Figs. 8A and 8B).[22]

September 9, 1763. The survey described the three-story house as "Belonging to Jos. Huddle and Situated on the Southwest Corner of Cedar and Water Streets in the District of Southwark Where Thomas Plumstet Dwells" with a 16½-foot frontage on Water Street and a 40-foot frontage along Cedar (South) Street. Contributorship Insurance Survey of the Huddle Plumstet house, Sept. 9, 1763, The Philadelphia Contributorship. Further east and south of this point appeared to be a church's wharf with a building, likely a warehouse, on the pier. See the 1762 Clarkson-Biddle map at the Library Company of Philadelphia.

[22] In 1861, a newspaper report cited the Huddle and Plumsted home as having a latitude of 39°56′29″, or 39.941389. This is approximately 220 feet north of the latitude reported herein and would place the north wall of the property north of Cedar (South) Street. M. McDermott, personal communication with author, Jan. 2010.

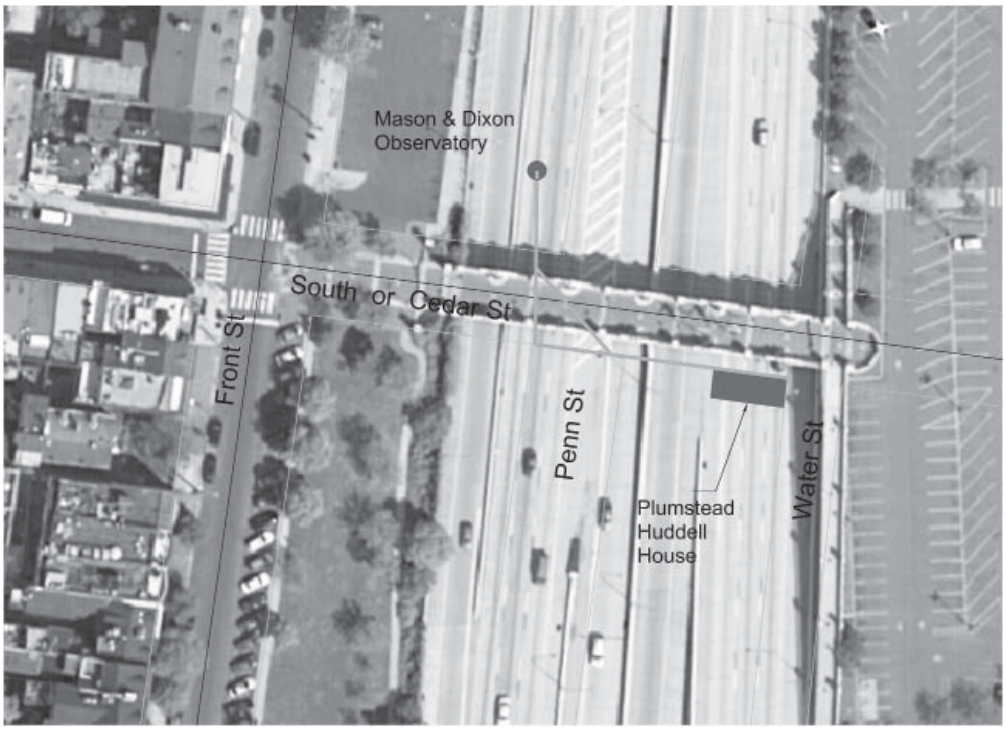

Fig. 8A. Satellite view over South Street Pedestrian Bridge showing initial point of the Mason and Dixon survey, with overlay of calculated location. Courtesy of James Shomper.

Mason and Dixon at 250 Years: 2014 Retrospective and Activities

Jeremiah Dixon, the more practical of the two men, continued as a successful surveyor, while Charles Mason, the more brilliant mathematician, had difficulty deriving income from his skills. He died penniless in Philadelphia. Benjamin Franklin, who appreciated Mason's work on both the transit of Venus and the Mason-Dixon Line, paid for his burial at Christ Church's cemetery but did not pay for the marking of the gravesite. John Hopkins, historian and burial ground coordinator for Christ Church, determined that Mason and his wife were buried within the cemetery located at Fifth and Arch Streets rather than the cemetery adjacent to the church, where the graves are fewer and better identified. Although the original grave site has been lost, Hopkins designated a symbolic burial site within the cemetery at Fifth and Arch Streets.

Anticipation of the 250th anniversary of the Maxon-Dixon Survey prompted new investigations of the survey and the surveyors. With the exact location of the survey's starting point identified and the GPS coordi-

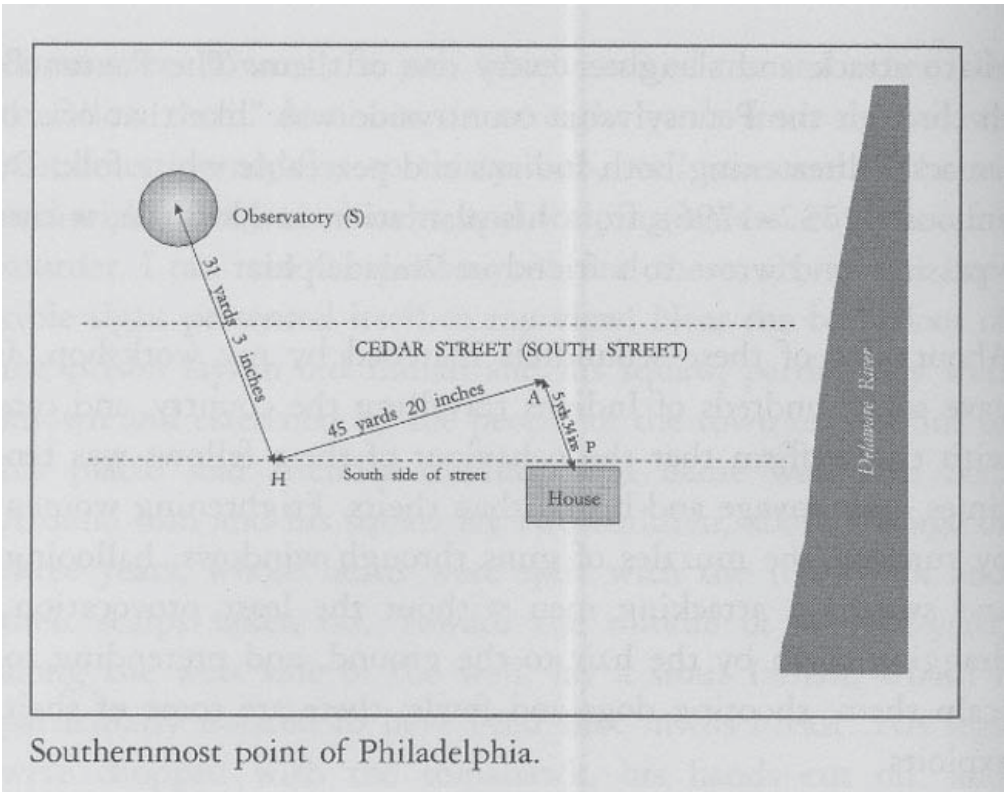

Fig. 8B. Edwin Danson's drawing of the observatory in relation to the southernmost point of Philadelphia as shown in Mason and Dixon's journals. Edwin Danson, *Drawing the Line: How Mason and Dixon Surveyed the Most Famous Border in America* (New York, 2001), 92. Figure courtesy of John Wiley and Sons, Copyright 2001.

nates determined, an invigorated celebration took place. The Pennsylvania Historical and Museum Commission accepted Black and Arkles's recommendation to erect a memorial plaque commemorating the surveyors' achievements (Fig. 9).[23] The historical plaque, located at the approach to the South Street pedestrian bridge, was unveiled on August 30, 2013. In addition, the approximate final resting place of Charles Mason was marked with an original stone marker from the Mason-Dixon Line, presented by Todd Babcock on behalf of the Mason and Dixon Line Preservation Partnership, in the cemetery of Christ Church, Philadelphia, on August

[23] The historical marker application was accepted by the Commonwealth of Pennsylvania (Pennsylvania Historical and Museum Commission) on March 18, 2011. The original submission date was December 26, 2009. For more information on this historic marker, see "Mason-Dixon Survey," Pennsylvania Historical and Museum Commission, http://search.pahistoricalmarkers.com.

Fig. 9. Penn State University student researcher Indiah Fortune beside the Mason-Dixon Survey historical marker approved by the Pennsylvania Museum and Historical Commission. Annual Surveyors Historical Society Rendezvous, August 30, 2013, photo by J. Black.

Fig. 10. Site of cemetery marker for Charles Mason. Actors in colonial garb are posing by actual 1766 Maryland-Pennsylvania border boundary stone used to memorialize Charles Mason, who was buried in the cemetery of Christ Church, Philadelphia, in an unmarked grave. Annual Surveyors Historical Society Rendezvous, August 31, 2013, photo by J. Black.

31, 2013 (Fig. 10). Both events were coincident with the Surveyors Rendezvous 2013, sponsored by the Surveyors Historical Society and the Mason and Dixon Line Preservation Partnership. Attendees included James Shomper and Richard Leu on behalf of the Surveyors Historical Society, Todd Babcock on behalf of the Mason and Dixon Preservation Partnership, Chas Langelan on behalf of the Maryland Society of Surveyors, William Lewis on behalf of the Pennsylvania Historical and Museum Commission, and Mike Harris on behalf of the South Street Headhouse District. Approximately one hundred members of the Surveyors Historical Society were present at the dedication, along with members of the public. The interest in the event demonstrates that, after 250 years, the Mason-Dixon Line is well known. However, both scholars and members of the public most frequently cite its political importance.

In addressing its technological and physical significance, this report sheds light on one more way in which the Mason-Dixon Line has become part of the fabric of what is now the United States.

Kean University JANINE BLACK
Gelest, Inc. BARRY ARKLES

Newly Available and Processed Collections at the Historical Society of Pennsylvania

What follows are descriptions of some of the collections at the Historical Society of Pennsylvania that have either been acquired within the past year or more fully processed and therefore made more available and accessible to researchers. Full finding aids and catalog records for these processed collections, and many others, can be found online at http://hsp.org/collections/catalogs-research-tools/finding-aids and http://discover.hsp.org.

Newbold, Griscom, and Wysong Families Papers, 1727–1983
15 boxes, 1 flat file
Collection 3448

This collection includes family history materials representing many interconnected families with roots in Philadelphia. The collection includes both original documents going back to the eighteenth century as well as documentation of several efforts to trace the family histories. Materials include scrapbooks, photographs, clippings, correspondence, reminiscences, genealogical charts and notes, programs, books and pamphlets, floor plans, recipe and commonplace books, diaries, and other items. Newbold is the family most heavily represented; it is connected by marriage with the Wysong family, as are the Griscoms. Other families represented include Mitchell, Morgan, Lawrie, Rhodes, Cooper, Shirley, Hazard, and Barlow, among others. There are extensive notes by Helen Van Uxem Cubberley connected with her books about the Newbold family and its mansion, Bloomsdale, as well as Newbold family typescripts by Francis Van Uxem. There is a diary that Sarah M. Cooper started in 1856 and continued in 1885, a travel diary by Rebecca Newbold Wysong from transatlantic voyages in 1926, and two books by Arthur E. Morgan, who served as president of Antioch College and then first president of the Tennessee Valley Authority. There are also materials related to Caroline Hazard, who was president of Wellesley College.

Hires Family Papers, 1832–2005
6 boxes, 2 rolled items
Collection 3932

At the Centennial Exposition of 1876, which opened in Philadelphia in May 1876, root beer was first introduced to the nation by Philadelphia druggist Charles E. Hires (1851–1937). Hires moved to Philadelphia as a teenager and worked in a local pharmacy until he had enough money to open his own business at Sixth and Spruce Streets. The Hires family papers primarily include family history records and genealogical documentation of the family. There are two boxes of files divided by Hires and other family members; among these are several files on the Hires Root Beer Company that contain correspondence, advertisements, clippings, programs, and informational booklets. Additionally, there are several family trees; photograph albums (containing mostly cabinet cards and cartes de visite); scrapbooks of clippings; marriage certificates; printed matter, including essays by Charles E. Hires and other volumes, as well as facsimiles of maps of early Philadelphia and Pennsylvania; and images and ephemera relating to the Hires Company.

Gibbon Family Correspondence, 1808–1987
16 boxes
Collection 3272

The Gibbon family correspondence dates from 1808 to 1987, with bulk dates of 1890 to 1930, and contains the letters, postcards, and other associated material of the family of Dr. John Heysham Gibbon. Gibbon was a Philadelphia surgeon and professor at Jefferson Medical College who also served as an Army surgeon in France during World War I. He was the son of Dr. Robert Gibbon of Charlotte, North Carolina, and the grandson of John Heysham Gibbon and Catherine Lardner Gibbon, originally of Philadelphia. Through Catherine, the Gibbon family was related to the Biddle family of Philadelphia. Dr. John Gibbon was also the nephew of Civil War general John Gibbon and the son-in-law of another, Samuel Baldwin Marks Young. The majority of the collection consists of loose handwritten correspondence to and from the immediate Gibbon family as well as some of their extended relations. Included with

these letters are a number of photographs, postcards, pencil drawings, and other assorted ephemera. This collection documents several important historical events and American social history of the late nineteenth and early twentieth centuries as well as the interpersonal relationships of the Gibbon family. Highlights include the World War I letters of Dr. John Gibbon to and from his wife and children, a series of letters from Theodore Roosevelt to General Samuel B. M. Young, and the Civil War-era letters of Catherine Lardner Gibbon to and from her sister Frances Lardner. Most of the correspondence in this collection is written by Dr. Gibbon and his wife, Marjorie Young Gibbon. However, other significant portions of the collection consist of material originating with their daughter, Marjorie Young Gibbon Battles; Marjorie Young Gibbon's father, General Samuel Baldwin Marks Young; and Dr. Gibbon's grandmother, Catherine Lardner Gibbon.

Balch Institute Ethnic Images in Advertising Collection, 1891–1999
2 boxes, 1 flat file
Collection 3238

In 1999, the Balch Institute for Ethnic Studies created an exhibition on the depictions of various ethnic groups in local, regional, and national advertisements and mass media. This artificial collection of graphics resulted from staff culling items for that exhibition. The materials in the collection date from the 1890s to the late 1990s. The bulk of the images in the collection contain caricatured and stereotypical representations of individuals that were used widely in advertising and merchandizing in the early to mid-twentieth century. In the collection researchers will find magazine and newspaper advertisements, produce labels, pamphlets and small publications, cards and postcards, clipart, menus, placemats, and ephemera, some of which was targeted at a specific ethnic group, such as fans from African American riding academies. There is also an illustrated promotional booklet from Fischer's Coffee entitled *How to Ask for A Cup of Coffee in 32 Languages*. Among the many ethnic groups represented in the collection are African American, Arab, Dutch, Eskimo, English, Chinese, North American Indian, Italian, Irish, Hawaiian, Hispanic, German, Jewish, Japanese, Scottish, Russian, Swiss, and Pennsylvania Dutch. There are also items that depict multiethnic groups, and at least one item does not appear

to be connected to any group. In addition, some items have been separated into non-ethnic categories, such as "Immigrant" and "Appalachian."

Philadelphia Water Color Society Records, 1912–2012
6 boxes, 1 flat file
Collection 3967

The Philadelphia Water Color Club was founded in 1900 to offset the then common exhibition prejudice against watercolor and was chartered as a corporation in 1922. It has sponsored annual exhibitions and presented a collection of over 175 works by members to the Philadelphia Museum of Art. The organization changed its name to the Philadelphia Water Color Society in 2000. Today the organization's members include over five hundred international artists working in a broad variety of media on paper. The Philadelphia Water Color Society records span one hundred years of organizational history and include articles of incorporation, the 1922 charter, bylaws and other administrative materials, meeting minutes, financial records, correspondence, information about exhibitions and awards, member directories, lists of board members and officers, a scrapbook, programs, newsletters, photo prints and negatives, slides, a VHS cassette, a DVD, and other items.

US Army Ambulance Service Records, 1918–19
1 box
Collection 3976

This collection consists of between approximately eight hundred and one thousand index cards with information on enlisted men in the US Army Ambulance Corps, including home address, military rank and section, places and dates of deployment, and other information. The cards are from an alphabetical file and span the initial letters A to G. Many of the personnel represented are from Pennsylvania, and most of them were stationed in Italy.

Keystone View Stereocards and Viewers, circa 1920
2 cartons
Collection 3839

The Keystone View Company was founded in Meadville, Pennsylvania, in 1892 by B. L. Singley, an amateur photographer who began by selling glass slides of local interest. The company became a major publisher of stereocards in the early twentieth century. From 1892 to 1963, Keystone View produced thousands of images of people and places from the United States and around the world. In 1898 Keystone began producing boxed sets of stereocards for schools that depicted people, landmarks, and industries from around the world. The Keystone View Stereocards and Viewers Collection contains several of these boxed sets. Each box is marked with a certain destination, such as Norway, Mexico, Canada, "Arctic Lands," Central America, and Australia, and the cards depict a variety of different scenes relating to each locale. In addition to fifteen boxes of cards, the collection also includes an envelope with six loose cards and seven modern stereocard viewers.

Philadelphia Record Photograph Morgue, circa 1900–1947
936 boxes
Collection V07

The *Philadelphia Record* newspaper was established in 1877 by William M. Singerley after his acquisition and renaming of the former *Public Record* newspaper. Seven years later, in 1894, the *New York Times* praised the *Record* as "one of the best and most widely circulated newspapers in the United States." After Singerley's death in 1898, the *Record* was acquired by the prominent Wanamaker family of Philadelphia. By the time of Rodman Wanamaker's death in 1928, readership had begun to decline, but its purchase by J. David Stern again raised readership to 315,000 by the early 1930s. Over the next decade, however, various factors arose that led to the paper's eventual demise. The economic climate of the Great Depression, an ongoing and increasingly antagonistic competition with the *Philadelphia Inquirer*, and the *Record*'s association as a

Democratic Party-aligned publication were all instrumental in leading to its final closure in 1947. This collection consists of tens of thousands of black-and-white photographs published by the *Record* between circa 1900 and 1947. Photographs are arranged into two series. The subject series, which comprises about 20 percent of the collection, is described to the box level and is more general in scope, covering events both domestic and global. A more detailed description of the subject series is available through the Historical Society of Pennsylvania's online catalog, Discover (http://discover.hsp.org). The alphabetical series, which comprises about 80 percent of the collection, is described to the folder level, with each folder representing an individual or family. Persons range from locals such as Connie Mack and John Wanamaker to national names such as Herbert Hoover and Charles Lindbergh.

Frank McGlinn Collection, 1835–1993
54 boxes, 10 flat files
Collection 3314

The Frank McGlinn collection consists of the ephemera collection and professional materials of Frank Cresson Potts McGlinn (1914–2000), a Philadelphia lawyer, corporate executive, humanitarian, museum trustee, and patron of the performing arts. He earned degrees from the University of North Carolina and the University of Pennsylvania Law School. During World War II, he served as a naval officer on a minesweeper and was awarded the Purple Heart in 1944. After the war, he worked as a legal counselor, a marketing executive for several banks, and a consultant for over forty years. Outside of his career, McGlinn was a prominent fundraiser for the Republican Party, serving on the executive committee of the Republican National Finance Committee. He was also active in various community organizations, especially those associated with theater, throughout southeastern Pennsylvania. Among other institutions, he served on the boards for Walnut Street Theatre, Theatre of the Living Arts, Philadelphia Free Library, William Penn Foundation, Temple University, and Afro-American Historical and Cultural Museum (African American Museum in Philadelphia). The collection contains McGlinn's

personal collection of theater and performing arts ephemera as well as his professional papers. The ephemera series comprises the first seven boxes of the collection and consists of handbills, programs, broadsides, posters, and other materials from a variety of Philadelphia theaters as well as sporting events. The second, much larger, series consists of administrative papers and correspondence relating to McGlinn's positions on a number of executive boards, including the Bicentennial Planning Commission, the Republican National Finance Committee, and the Walnut Street Theatre. Much of this material remains unsorted with various letters, invitations, promotional mailers, and clippings.

Child Abuse Prevention Effort Records, 1973–2014
4 cartons
Collection 3935

The Child Abuse Prevention Effort (CAPE) is a Philadelphia nonprofit organization that offers programs to help reduce the likelihood of child abuse and neglect. CAPE offers a variety of workshops for parents, professionals, and children. Starting in 1976, CAPE contracted with the City of Philadelphia's Department of Human Services to provide direct intervention to families at rise of abuse or neglect. In 2009 CAPE became an affiliate of, and in 2014 it merged with, NorthEast Treatment Centers, one of the oldest and largest behavioral health and social services agencies in the Philadelphia region. The Child Abuse Prevention Effort Records include bylaws; board materials; reports; financial records; orientation, education, and hotline materials; log books; volunteers' address lists; newsletters; clippings; grant proposals; photographs; video and audiocassettes; and other items.

BOOK REVIEWS

Our Lives, Our Fortunes, and Our Sacred Honor: The Forging of American Independence, 1774–1776. By Richard R. Beeman. (New York: Basic Books, 2013. 528 pp. Notes, index. $29.99.)

The Continental Congress first met in September of 1774 in what John Adams described as "a gathering of strangers." It would be almost two years before Thomas Jefferson wrote the last sentence of the Declaration of Independence. "And for the support of this declaration," it reads, "we mutually pledge to each other our lives, our fortunes, and our sacred honor." Here is the inspiration for the title of Richard R. Beeman's new work, which explores how residents of the thirteen distinct colonies, all of whom looked more toward Britain than to one another and at first had no sense of themselves as Americans, became one. He traces the processes by which their chosen legislative body of representatives gained enough cohesion to declare independence. The actions of the Continental Congress, however, were only made possible by the people who composed it. Beeman brings to life this group of politically diverse characters, who fought fiercely among themselves until they agreed to fight together for a common cause.

Beeman first outlines how the relationship between Britain and the American colonies shifted as a result of the Seven Years' War, as a decade of British attempts to tax the American colonies began. But these were not thirteen identical colonies; each had a unique relationship with its mother country, as well as a culture and economy that often reflected its place within the larger mercantile system of the British Empire. Each then reacted in its own way to the British attempts at taxation. Virginia and Massachusetts, for example, became more radical. As a result, these colonies sent such representatives as Patrick Henry, George Washington, Thomas Jefferson, John Hancock, and the two cousins Samuel and John Adams, all of whom were more inclined to support independence, to the Continental Congress. By contrast, colonies such as New York and Pennsylvania sought reconciliation over revolution and sent representatives that were less inclined toward independence. Consequently, many of their names have been lost to history.

Some representatives from these colonies did become well known. John Dickinson of Pennsylvania, author of *Letters from a Farmer in Pennsylvania*, challenged the right of Parliament to tax the colonies and had a reputation as a bold defender of American liberties. Nonetheless, he chose not to sign the Declaration of Independence. Beeman's strength lies in helping readers see how such a seeming

contradiction was possible. His focus on Dickinson's moderate perspective reveals both the varied currents of thought in the debate that led to the Declaration of Independence and the risks involved in participating. The act of signing was both a measure of patriotic brotherhood and an act of treason punishable by death and confiscation of all property. In this context, the gravity of Jefferson's last sentence becomes clear: it contained the last words signers read before pledging to one another "our lives, our fortunes, and our sacred honor."

Jagiellonian University JIM BLACKBURN

The Marquis: Lafayette Reconsidered. By LAURA AURICCHIO. (New York: Alfred A. Knopf, 2015. 409 pp. Illustrations, notes, bibliography, index. $30.)

The Marquis: Lafayette Reconsidered is a fascinating biography about the prominent transatlantic military leader, the Marquis de Lafayette. Author Laura Auricchio's major purpose is to describe and assess Lafayette's contributions to the American and French Revolutions. She superbly accentuates significant themes of Lafayette's career: he became an ardent proponent of American republican tenets and later an active supporter of constitutional monarchy and liberal sociopolitical and economic reforms for France. Auricchio, who is an eighteenth-century specialist, investigates Lafayette's involvement in the Enlightenment's republic of letters and explains his transatlantic dialogues with other reformers and revolutionaries. Highly attuned to the pertinent issues of the day, the eminent general was also aggressive, shrewd, reasonable, and talkative. Chronologically and topically arranged, this biography contains four sections and eighteen interesting chapters that reveal penetrating insights into his thinking and his revolutionary activities.

Chapters in the book's first part illustrate both the frustrations and successes of his early life. The son of Julie and Gilbert du Motier, Lafayette was born on September 6, 1757, in the family's eighteen-room Chavaniac Castle. The child, who first assumed the name of Gilbert, experienced problems: his father fought in the Seven Years' War and was killed at the Battle of Minden (1759). Lafayette's mother exhibited minimal interest in him, and his grandmother reared him in Paris. After his mother's death in 1770, he became one of the wealthiest aristocrats in France. Lafayette was well educated, developing interests in history and the physical sciences. In 1772, he graduated from the Parisian College du Plèssis. Two years later, his arranged marriage to Adrienne de Noailles made him a member of one of the most influential families in France. He cultivated connections in leading French military, social, and cultural groups.

After Lafayette's marriage, other developments shaped his life. He fought in the Noailles Dragoons and spent time at the court of Versailles, where he cultivated friendships with ranking nobles. Auricchio also suggests that the

Enlightenment ritualism of Freemasonry and Lafayette's friendships in the order explain his desire to be admitted to the Parisian lodge of Saint-Jean de la Candeur in December of 1775. Auricchio also describes his friendships with Benjamin Franklin, Silas Deane, and other American revolutionaries in Paris, maintaining that, by 1776, Lafayette supported the cause of republicanism.

Section two is the book's strongest, for its chapters describe Lafayette's activities during the American Revolutionary War. He used his own monies to come to America in 1777, then served under General George Washington. The two developed an enduring friendship. Lafayette aggressively participated in and was injured during the Battle of Brandywine (1777), then rendered help to American soldiers at Valley Forge (1777–78). Auricchio provides vivid accounts of his involvement in the battles of Monmouth (1778) and Yorktown (1781).

Auricchio also discusses how Lafayette was involved with America after 1781. During negotiations over the Paris Peace Treaty (1783), he persuaded France's foreign minister, the comte de Vergennes, to endorse the proposals of Benjamin Franklin and John Adams. Lafayette thus contributed to the creation and recognition of the new American republic. He stayed active in American cultural life, participating in the American Philosophical Society and the Society of the Cincinnati.

As discussed in sections three and four, this transatlantic revolutionary general was also involved in the French Revolution. He failed during the 1787 Assembly of Notables to convince French nobles to cede their tax-exempt privileges. Auricchio details Lafayette's work with the National Guard and in favor of citizenship rights, natural liberties, and constitutional monarchy. As power shifted from moderate to radical leaders, Lafayette left France, only to be arrested and imprisoned until Napoleon secured his release in 1797.

Last, the author describes Lafayette's career in the nineteenth century. Lafayette continued to correspond with John Adams and other American revolutionaries. He was lauded during his 1824 trip to America, which included a visit to Easton, Pennsylvania, where two years later a college bearing his name was established. In 1830, he supported Louis-Philippe as the new French monarch. Thereafter, he backed republican revolutions in Belgium, Poland, and Latin America until his death in 1834.

The Marquis is an imaginative and synthetic biography of a transatlantic revolutionary. Auricchio's themes are lucidly explained and supported with extensive evidence. This incisive biography incorporates primary sources found in American and European archives and libraries. It also has detailed endnotes and a comprehensive bibliography. Along with Louis Gottschalk's and Lloyd Kramer's studies regarding Lafayette, this splendidly written work will be recognized as a classic in the field.

Butler County Community College R. William Weisberger

Guyasuta and the Fall of Indian America. By Brady J. Crytzer. (Yardley, PA: Westholme Publishing, 2013. 352 pp. Illustrations, maps, notes, bibliography, index. $29.95.)

In *Guyasuta and the Fall of Indian America*, author Brady J. Crytzer offers a general study of the Indian wars that swept throughout the Ohio and Great Lakes borderlands during the eighteenth century. In telling this familiar story, Crytzer mostly synthesizes the current works of historians Fred Anderson, Colin Calloway, Daniel Barr, and David Dixon, as well as older studies by C. Hale Sipe, Randolph C. Downes, and Paul Kopperman, to recount the epic struggle of Indian nations to survive imperial wars, an American Revolution, and the territorial expansion of the new United States. Topics including George Washington's travels to the Ohio Valley, Edward Braddock's catastrophic defeat in 1755, racial strife in the Pennsylvania backcountry, the Iroquois civil war, and the Indian wars of the 1790s are handled with competency, clarity, and flair.

While Crytzer does a superb job of keeping the pace of his narrative fast and exciting, the overall concept of *Guyasuta and the Fall of Indian America* is problematic at times. The author attempts to use the life of the western Seneca leader Guyasuta as the backdrop for the historical events presented. Crytzer presents Guyasuta, a notable Seneca of the Allegheny country, as a messenger, war leader, or diplomat. The author traces Guyasuta's role in a series of historical events, including his first meeting with George Washington (1753), his role as a leader of the Ohio Indian nations during Pontiac's War (1763), and his meeting as an aged diplomat with General Anthony Wayne on the eve of Wayne's victory over the Northwest Indian coalition at Fallen Timbers (1794). Guyasuta's life, however, is poorly documented. This fact forces Crytzer to contemplate or reconstruct scenarios that might or might not have taken place. From a scholarly perspective, the primary research is at times sparse and fails to give Guyasuta a substantial presence in these events.

Crytzer ably demonstrates Guyasuta's role as the "primary orator" during the Bouquet peace talks in November 1764. Through his use of *The Papers of Henry Bouquet*, Crytzer demonstrates Guyasuta's diplomatic skill, authority, and elegance as a spokesman for the Indians of the Ohio (135–40). In other instances, however, he speculates on Guyasuta's thoughts and actions without offering primary sources to support these speculations. Guyasuta's meeting with Wayne is interesting, but Crytzer must look to the much-documented rhetoric of Seneca leader Cornplanter to give substance to the meeting (246–50). The interaction between Guyasuta and Wayne is established only through Thomas Abler's biography of Cornplanter. Readers may wish to know Guyasuta better through his own words. In these instances a closer inspection of primary sources, *The Papers of Sir William Johnson* in particular, might have better anchored the Seneca leader to the historical narrative. The lack of primary sources on Guyasuta also predisposes the author

to introduce his subject into a chapter only to have him quickly disappear, not to turn up again until midchapter. An example of this pattern occurs in Crytzer's discussion of Guyasuta's role in the Battle of the Monongahela (1755).

What this book lacks in its primary source investigation, Crytzer makes up for by giving readers an entertaining, lively, and engaging story. This book will serve as an indispensable introduction for members of the general public unfamiliar with this era of Native American and colonial history, and it will perhaps become a companion piece for such classic works on Pennsylvania history as Walter O'Meara's *Guns at the Forks* and Paul A. W. Wallace's *Indians in Pennsylvania*. Finally, with the publication of *Guyasuta and the Fall of Indian America*, Crytzer has also paid an enduring homage to his distinguished teacher, the late David Dixon.

La Roche College RICHARD S. GRIMES

Robert Morris's Folly: The Architectural and Financial Failures of an American Founder. By RYAN K. SMITH. (New Haven, CT: Yale University Press, 2014. 368 pp. Illustrations, maps, notes, index. $40.)

By all rights, Robert Morris of Philadelphia should occupy a central place in the pantheon of founding fathers. One of only a handful of men who signed both the Declaration of Independence and the Constitution, Morris earned his title as "financier of the American Revolution" by using his personal wealth to secure loans to pay George Washington's troops in the later years of the war, when Congress had difficulties supporting them. As a backroom power broker, Morris was instrumental in strengthening the national government at the Constitutional Convention and actively participated in shaping its early direction as a senator from Pennsylvania. He even moved out of his own house in order that his close friend Washington could occupy a suitable dwelling when the federal government moved to Philadelphia. Yet, this well-earned reputation was sullied when his extensive business schemes turned sour in the 1790s. Despite warnings about his overextended commitments, Morris failed to rein in his affairs, believing that the next deal would turn his way and restore his financial equilibrium. He continued to speculate heavily in land, currency, and other ventures before sinking inextricably into a morass of debt.

Despite his business misfortunes, Morris did little to trim his family's extravagant living standards. Just before his creditors forced him into bankruptcy, the merchant hired Pierre L'Enfant to design one of the most extraordinary houses ever to be built in the city. Not content with a rowhouse typical of the city's housing stock, Morris commissioned the architect to erect a freestanding mansion that encompassed an entire city square on Chestnut Street, two blocks west of

Congress Hall. With its columns, stone-clad walls, marble bas-relief sculpture, Mansard roof, and eccentric plan devised by a man who paid little heed to costs, there was nothing demure or retiring about this new residence as it slowly took shape in 1796. By the following year, Morris realized that L'Enfant had overspent his budget tenfold and showed no prospect of finishing the house. Given his bleak circumstances, he recognized the folly of continuing and stopped its construction. A few months later, he moved into new accommodations in the nearby Prune Street debtors' prison. The unfinished shell became the cynosure of Morris's precipitous decline.

In nine well-researched chapters, Ryan K. Smith carefully chronicles a tragic story of how the overweening ambitions of a founding father drove his family to financial ruin. He has written a compelling morality tale that exposes many of the economic and social anxieties that affected public and domestic life in the early American republic. In this tightly focused narrative, the author explains the murky late eighteenth-century tricks used to fend off creditors, describes the composition and political pecking order of Philadelphia's social clubs, and explores the furnishings of the city's elite residences. Although the building that came to symbolize Robert Morris's demise was quickly demolished to make way for a series of more prosaic rowhouses, many of its peculiar features survived and were reused in houses and gardens in the city and further afield, keeping the story of this extraordinary folly in the public imagination for more than two centuries. Smith has done a masterful job of telling it anew.

Colonial Williamsburg Foundation CARL R. LOUNSBURY

Gathering Together: The Shawnee People through Diaspora and Nationhood, 1600–1870. By SAMI LAKOMÄKI. (New Haven, CT: Yale University Press, 2014. 344 pp. Illustrations, maps, notes, bibliography, index. $40.)

Gathering Together is a well-researched academic work that looks in great detail at the Shawnee nation's geographic movements, political strategies, and national identities during an intense period of European colonization in the Northeast. Lakomäki's research demonstrates that the Shawnee, perceived historically as "the greatest travelers in America," nevertheless conceptualized themselves during this era as a spiritually bonded nation connected by a common cultural identity.

Throughout the work, Lakomäki discusses what he astutely terms Indigenous and Eurocolonial "shatter zones" of war and starvation that the Shawnee skillfully negotiated and survived by relying on the cultural value of communal ethics. He does not downplay Eurocolonial treachery against Indigenous populations, rightly referred to as "American aggression," as he recounts Euro-Americans looting Shawnee homes, pressing them westward, and ignoring their legal petitions in

American courts of law. The book is dense but readable, and its primary strength lies in Lakomäki's keen understanding of many aspects of Shawnee culture.

Lakomäki is well aware of how the Shawnee, and Indigenous peoples overall, are presented as artifacts in Euro-American writings about them, and he intentionally writes to dismantle Eurocentric perspectives. One important example is his wise interrogation of the anthropological notion of "cultural evolution" that demotes Native peoples to the bottom rung of human civilization, as signaled by use of the academic misnomer "tribes" (226–27). Overall, Lakomäki dismantles outdated views of the Shawnee quite well, and he offers significant primary source evidence to demonstrate his arguments. *Gathering Together* also includes terminology that reflects important Indigenous cultural concepts, such as reciprocal obligations, ceremonial kinship relations, and spiritual power that holds Native nations together.

A criticism of the work is that it is written in the "great history tradition" of western culture that uses chronological ordering of events and compilations of dates, names, and military battles, concluding in theoretical analysis. This style is the bulwark of texts for academics and public historians, but it is an entirely western-academic method that asserts by default that this is the Indigenous way of recording history as well. To the contrary, Native American nations originating in the Eastern Woodlands use Epochs as their concept of time, and their historic records include far more than information about military events. But as the back-cover endorsements of non-Indigenous academics signal, Lakomäki is thinking and writing within a specific tradition: Euro-American academic culture.

In *Gathering Together*, Lakomäki has significantly raised the bar of historic reporting and analysis about Native Americans. Regrettably, there are no endorsements or contributions by contemporary Eastern Woodland Indigenous scholars or Shawnee Tribal Councils. He notes in the acknowledgements section that he had conversations with four Shawnee people. With an American public that still strongly believes in the Vanished Indian trope and is overrun with films, books, and images that reinforce this belief, these omissions are significant.

Gettysburg College STEPHANIE A. SELLERS

The Ku Klux Klan in Western Pennsylvania, 1921–1928. By JOHN CRAIG. (Bethlehem, PA: Lehigh University Press, 2014. 246 pp. Notes, bibliography, index. $80.)

John Craig's *The Ku Klux Klan in Western Pennsylvania, 1921–1928* is an important contribution to the history of the 1920s Klan. Between 1921 and the group's collapse at mid-decade, as many as 200,000 Pennsylvanians in the twenty-five counties west of the Allegheny Mountains joined the resurgent Invisible Empire. Violence broke

out in the region between belligerent hooded knights and determined, mainly Catholic, opponents of the nativist order, most notably at Carnegie (1923) and the small railroad town of Lilly (1924). Yet, prior to Craig's work, the most thorough examination of the 1920s Pennsylvania Klan during its most dynamic phase was Emerson H. Loucks's *The Ku Klux Klan in Pennsylvania* (1936), a work based on interviews with former Klan members. Craig, by contrast, consulted dozens of local newspapers, testimony from court cases arising from Klan-provoked riots and internal Klan disputes, and Klan material from the state police archives to uncover more details of Klan activities in western Pennsylvania.

More deeply researched than older studies, Craig's book also challenges newer interpretations of the 1920s Klan. Recent scholarship has downplayed violence as a defining theme of the 1920s Invisible Empire. Prominent studies have examined the associational network of klaverns; emphasized civic engagement among activist Klansmen; and documented Klan efforts to reinforce white Protestant domination by controlling public schools, enforcing prohibition, and influencing local, state, and national politics. Craig boldly asserts that action, not ideology (hostility to Catholics, Jews, and African Americans), attracted prospective knights to western Pennsylvania klaverns. As he puts it, "violent conflict and vigilantism" were "central" to the Klan movement in the region (xiv). Grand Dragon Sam Rich promised "theater and thrills" with dramatic parades, church visitations, cross burnings, and vigilante missions (33). Klan recruiter D. C. Stephenson promoted massive open-air rallies that advertised the strength of the Invisible Empire. At the urging of both Rich and Imperial Wizard Hiram Evans, Klansmen armed themselves at some gatherings and confronted Catholic and immigrant communities in provocative nighttime marches that exploded into violence. Many historians recognize Klan provocations, but emphasize instead anti-Klan violence in the North. Craig uses court records to argue that western Pennsylvania Kluxers not only courted violence, but also used firearms to inflict most of the casualties at Carnegie and Lilly. Moreover, he contends that violence did not reduce Klan membership, which grew until administrative changes, higher membership costs, and a national political agenda led Evans to curtail provocative displays. As Rich stated, "it takes riots to swell the ranks of the Ku Klux Klan" (104). In their absence, Craig argues, western Pennsylvanians abandoned the Klan.

Craig sometimes overstates his case. Whereas Loucks concluded that each klavern harbored a minority of violence-minded hotheads, Craig contends that such thrill seekers constituted the majority of Klansmen. He suggests that the Pennsylvania State Police protected the Klan because the two groups worked together in prohibition enforcement, but evidence of this cooperation is slender. Yet, even when Craig's reading of the evidence is speculative, one cannot deny the unusual fixation on confrontation in western Pennsylvania's Klan movement.

Loyola University Maryland THOMAS R. PEGRAM

Building the Beloved Community: Philadelphia's Interracial Civil Rights Organizations and Race Relations, 1930–1970. By Stanley Keith Arnold. (Jackson: University Press of Mississippi, 2014. 190 pp. Illustrations, notes, bibliography, index. $60.)

Stanley Arnold's *Building the Beloved Community: Philadelphia's Interracial Civil Rights Organizations and Race Relations* examines the impact of Fellowship House, Fellowship Commission, and the Philadelphia Housing Association on race relations in Philadelphia and their relationships to the civil rights movement. According to Arnold, from World War II to the late sixties, all three organizations managed to educate Philadelphians about discrimination and pass legislation that created opportunities for African Americans.

The origins of the interracial movement in Philadelphia started after the first Great Migration. As the black population increased, white hostility intensified. Philadelphia had a history of anti-black violence. In 1918, one year before Red Summer, a race riot occurred. By the late 1920s, black and white leaders insisted that education was the key to improving race relations. The Great Depression and New Deal created opportunities to create progressive interracial organizations such as the Young People's Interracial Fellowship (YPIF). The YPIF created a Speakers Bureau that invited academics such as St. Clair Drake and activists such as Channing Tobias to Philadelphia to talk about racism and anti-Semitism.

By 1940, the YPIF had purchased buildings in downtown Philadelphia. These buildings became known as Fellowship House. In 1941, Maurice Fagan and others created the Fellowship Commission. Its role was to fight racial, religious, and ethnic tensions. In 1942, the Fellowship Commission used radio as a vehicle to educate people about race. Educating Philadelphians about the history of racial, ethnic, and religious intolerance was useful, but after World War II, these organizations expanded their role by fighting school and housing segregation and engaging local politics.

The Fellowship Commission fought for free higher education in Philadelphia and supported desegregating Girard College, a private school that was governed by elected officials and that excluded blacks. However, by the mid to late 1960s, school segregation remained in Philadelphia. Some black leaders believed that the interracial organizations had failed to address racism in public schools, and many started to support community schools. Black and white leaders understood that segregated education was a result of segregated housing and employment discrimination.

The final two chapters of the monograph examine the interracial movement's efforts to address housing segregation and employment discrimination. After World War II, affordable and decent housing emerged as a national issue. Blacks were segregated in less desirable sections of Philadelphia, and most whites resisted

integrated housing. In spite of new fair housing laws, housing segregation had increased. However, Blacks managed to impact the labor market by boycotting companies that refused to hire African Americans in skilled jobs. Organizations such as the Council on Equal Job Opportunities (CEJO) created training programs for unskilled African Americans and sponsored job fairs. Nonetheless, by the late 1960s, younger African Americans viewed the interracial movement leaders and organizations as obsolete because they failed to eradicate structural inequality.

Arnold's research adds to the growing body of work on the civil rights struggle in the North. The interracial work in Philadelphia was a northern version of Myles Horton's Highlander Folk School. The Great Depression, fascism, and World War II created opportunities for interracial cooperation, but, as Arnold notes, by the late 1960s it was clear that these interracial organizations had failed to address institutional racism.

Connecticut College D avid Canton

Angel Patriots: The Crash of United Flight 93 and the Myth of America. By Alexander T. Riley. (New York: New York University Press, 2015. 352 pp. Illustrations, notes, bibliography, index. $30.)

The tragic crash of United Flight 93 on September 11, 2001, was one of the many great shocks Americans experienced on that terrible day. The passengers' attempt to take back control of the plane from terrorists, resulting in its crash in a field near Shanksville, Pennsylvania, has evoked enormous interest and controversy. Alexander Riley's book, *Angel Patriots: The Crash of United Flight 93 and the Myth of America*, fills a gap in the literature by going beyond a simple retelling of the story of Flight 93, instead focusing on the "national myths" that have been created through the memorials and chapel built to commemorate the passengers and crew, as well as through media representations of the Flight 93 story.

Riley borrows Robert Bellah's notion of an American "civil religion" and applies it to the case of Flight 93. The phrase was coined by the Enlightenment philosopher Jean-Jacques Rousseau, but Riley notes that it is "not oriented around Jesus Christ, but rather around the Judeo-Christian lawgiver God described in the Old Testament" (9). He critiques a distinctly conservative "civil religion" in which the passengers and crew of Flight 93 function as righteous warrior heroes who accepted their fate and fought the Islamic terrorists, thwarting their evil plans. Such depictions, as Riley points out, are abundant in books on Flight 93 by the family members of the passengers, as well as in some of the films depicting the flight's demise. Connected with this view is the notion that the site of the crash, today part of a permanent memorial, is sacred ground, where only family members

of the crash victims are allowed to tread. Yet, to Riley's credit, he recognizes the "power" of this kind of "cultural mythology," which speaks to our shared American identity (282). One does not have to believe in all of the tenets of this mythology in order for it to be "moving and meaningful" (282). He takes leftist intellectual critics of the conservative mythology around Flight 93 to task because they do not recognize the myths of "their own academic lifeworlds" when criticizing a distinctly conservative worldview (282). This kind of interpretive balance is one of the book's strengths.

Another strength of *Angel Patriots* is its discussion of the controversies over the Flight 93 chapel and the design of the permanent memorial. The chapel's creation was controversial, with many Christian groups disagreeing over its function. Its pastor, Alphonse Mascherino, a Roman Catholic priest, ran the chapel as non-denominational and was subsequently excommunicated by the Catholic Church. Mascherino remained as pastor, eventually joining the Catholic Church of the East (CCE), only to die from cancer in 2013. The existence of the chapel is not well known to those outside of Shanksville, and its religious meaning and function remain contested. The permanent memorial, by contrast, is much better known, but just as controversial. Right-wing bloggers, among them Alec Rawls, accused the designers of the memorial, titled "The Crescent of Embrace," of secretly memorializing the hijackers. These critics argued that the crescent shaped design of the memorial was similar to the "crescent moon and star, a traditional symbol of the Islamic faith," and it apparently was oriented toward Mecca (172). Riley readily disproves such conspiracy theories, which continue to circulate in conservative blogs.

Riley's sophisticated interpretation of the myths surrounding Flight 93, coupled with his strong research at the chapel and memorial sites, makes this an easy book to recommend. There is little to criticize other than minor errors. For example, on page 110, Riley accidentally attributes Governor Tom Corbett's electoral victory and the Tea Party wave to the 2008 elections, when in fact it was the 2010 elections. Otherwise, this is an excellent book for scholars wishing to learn about the memorialization of Flight 93.

Mansfield University of Pennsylvania ANDREW GASKIEVICZ

Contributors

Barry Arkles is the chief technical officer of Gelest Inc. He has over two hundred publications and patents in the areas of applied materials science, surface chemistry, and biotechnology, with noted contributions to a variety of applications, including the NASA Space Shuttle, contact lenses, microchips, and gene chips for DNA array analysis. He is a Philadelphia native with a keen interest in local history. This publication is his first in a nontechnical area.

Janine Black is an assistant professor in global business at Kean University in Union, NJ, where she teaches strategy, management, and international management courses. While Janine's primary research stream involves corporate governance, she has always had an interest in local history. In addition to her publications on African American history and Mason and Dixon, she has successfully applied for and installed two historical markers in the city of Philadelphia.

Michael M. Sokal is professor of history, emeritus, in the Department of Humanities and Arts at Worcester Polytechnic Institute, Worcester, Massachusetts. Since 1968 he has written extensively on the history of American psychology and on the history of American science broadly conceived. He was the founding editor (1998–2005) of *History of Psychology*, a scholarly journal published quarterly by the American Psychological Association for the Society for the History of Psychology.

Joseph Waligore recently retired after teaching philosophy for over twenty years at the University of Wisconsin–Stevens Point. He currently resides in central Wisconsin.

Karol K. Weaver received her PhD from the Pennsylvania State University. She has written two books, *Medical Revolutionaries: The Enslaved Healers of Eighteenth-Century Saint Domingue* (University of Illinois Press) and *Medical Caregiving and Identity in Pennsylvania's Anthracite Region, 1880–2000* (Penn State Press). She is working on her third book project, titled "Powerful Grief: American Women and the Politics of Death."