

Robert Hare: Politics, Science, and Spiritualism in the Early Republic

ROBERT HARE (1781–1858), the foremost American chemist of his generation, assembled his colleagues at the University of Pennsylvania Medical School on Monday, May 10, 1847. When they met, Hare surprised the group by tendering his resignation as professor of chemistry at the medical school, a position he had held since 1818.¹ Following his retirement from teaching, Hare embarked on a number of new projects. In the 1840s, he assisted in the founding of the American Association for the Advancement of Science. He also continued his scientific investigations, and he became involved in a debate over the origin of storms.² He wrote and published two novels: *Standish the Puritan* and *Overing, or, The Heir of Wycherly*.³ Finally, in the 1850s, he converted to Spiritualism and became a vociferous advocate of it as a science and a religion.⁴

As the only well-known scientist of his time to take up Spiritualism, Hare became an important figure in the early Spiritualist movement, and Spiritualists touted his conversion as proof of the scientific and empirical

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¹ Edgar Fahs Smith, *The Life of Robert Hare: An American Chemist (1781–1858)* (Philadelphia, 1917), 438. Although outdated and somewhat unreliable, Smith's is the only extant full-length biography of Hare.

² Sally Gregory Kohlstedt, *The Formation of the American Scientific Community: The American Association for the Advancement of Science, 1848–60* (Urbana, IL, 1976), 108, 122, 183; Robert Hare, "On the Whirlwind Theory of Storms," *Proceedings of the American Association for the Advancement of Science, Fourth Meeting . . . 1850* (Washington, DC, 1851), 231–42. Hare claimed that electricity caused tornadoes.

³ Eldred Grayson, *Standish the Puritan: A Tale of the American Revolution* (New York, 1850); Eldred Grayson, *Overing, or, The Heir of Wycherly: A Historical Romance* (New York, 1852).

⁴ Modern American Spiritualism began in 1848 when the Fox sisters of Hydesville, New York, claimed that the rapping noises they heard in their home were caused by the spirit of a dead peddler. Within a decade, millions of Americans identified themselves as Spiritualists and attended séances and readings to "talk" with the dead. A good introduction to Spiritualism can be found in Bret E. Carroll, *Spiritualism in Antebellum America* (Bloomington, IN, 1997).

basis of their claims. Scientists, on the other hand, viewed his actions quite differently. Prior to his conversion, they lauded Hare as one of the greatest American chemists; afterwards, they rejected, scorned, or pitied him. A. A. Gould, an internationally recognized naturalist, suggested that his colleagues were witnessing the “break-up of a powerful mind.” Benjamin Silliman, Hare’s close friend and the founder of the first scientific journal in the United States, urged Hare to return to Christian orthodoxy. In less diplomatic language, the faculty at Harvard College denounced Hare for his “insane adherence” to a “gigantic humbug.” In his obituary, the *New York Times* noted Hare’s contributions to science, but lamented his Spiritualist “delusion.”⁵ Subsequent generations of historians have followed suit by depicting Hare’s conversion to Spiritualism as somehow being divorced from his earlier scientific work.⁶

Close scrutiny of Robert Hare’s life, however, reveals that his attraction to Spiritualism was not a late-in-life aberration. Rather, it was consistent with beliefs that he held throughout his entire career as a public intellectual in the fields of science, politics, and culture. Indeed, Hare’s *Experimental Investigation of the Spirit Manifestations, Demonstrating the Existence of Spirits and Their Communion with Mortals* (1855) was the culmination of his lifelong efforts to promote the restoration of a social order constructed on the principles of republicanism, as he understood them.⁷ Thus, Spiritualism allowed Hare to harmonize his political, scientific, social, and religious beliefs.

By birth and conviction, Hare was a firm believer in social hierarchy. His father, Robert Hare Sr., was an English brewer who immigrated to

⁵ Quoted in Kohlstedt, *Formation of the American Scientific Community*, 152; Benjamin Silliman to Robert Hare, May 17, 1856, and Robert Hare to Benjamin Silliman, June 8, 1856, Robert Hare Papers, 1764–1859, American Philosophical Society, Philadelphia; Burton Gates Brown Jr., “Spiritualism in Nineteenth-Century America” (PhD diss., Boston University, 1973), 277; “Death of Dr. Robert Hare,” *New York Times*, May 18, 1858.

⁶ Smith, *Robert Hare*; Wyndahm Miles, “Robert Hare,” in *Dictionary of Scientific Biography*, ed. Charles Coulston Gillispie, vol. 6 (New York, 1972).

⁷ Recent work on Robert Hare’s Spiritualism has discussed the ties between his scientific work and his Spiritualist beliefs. See Craig James Hazen, *The Village Enlightenment in America: Popular Religion and Science in the Nineteenth Century* (Urbana, IL, 2000), 68–106. On ties between his political ideology and his spiritual work, see Carroll, *Spiritualism in Antebellum America*; Robert S. Cox, “Vox Populi: Spiritualism and George Washington’s Postmortem Career,” *Early American Studies* 1 (2003): 230–72. On the context of Spiritualism, see Robert S. Cox, *Body and Soul: A Sympathetic History of American Spiritualism* (Charlottesville, VA, 2003). On the republican theory, see Robert E. Shalhope, *The Roots of Democracy: American Thought and Culture, 1760–1800* (Boston, 1990).

America in 1773, joined the patriot cause, assisted in drafting Pennsylvania's first constitution, served as speaker of the Pennsylvania State Senate, and was a trustee for the University of Pennsylvania.⁸ Hare Sr. considerably enhanced his own wealth and status when he married Margaret Willing, a member of one of Pennsylvania's most prominent families. Robert Hare Jr.'s maternal uncle, Thomas Willing, first headed the Bank of North America and then the Bank of the United States.⁹ Hare solidified his social standing with his marriage to Harriet Clark, the daughter of a wealthy Rhode Island mercantile family. Robert and Harriet lived in a mansion on Chestnut Street, a central location for many of Philadelphia's most affluent families. Throughout his life, Hare enjoyed all the privileges of wealth. He was not only a man of science, but also a man of business: a speculator, a landlord, and an investor.¹⁰

Hare subscribed to the republican political philosophy that the best political system was one governed by wealthy men of virtue who sought to maintain a harmonious and hierarchical social order. Often associated with Federalism, Hare and his ideological brethren rejected democracy as mob rule and political parties as mere masks for self-interested factions.¹¹ Hare maintained an interest in politics throughout his life, but he was careful to label himself a "Washington Federalist," largely because Washington was considered by many to be a symbol of virtue and a man above party politics.¹² In contrast to his adoration for Washington, Hare had a lifelong disdain for Thomas Jefferson, the *bête noire* of conservatives during the early republic. He viewed him as a demagogue who pro-

⁸ Richard G. Miller, *Philadelphia—The Federalist City: A Study of Urban Politics, 1789–1801* (Port Washington, NY, 1976).

⁹ E. Digby Baltzell, *Philadelphia Gentlemen: The Making of a National Upper Class* (Glencoe, IL, 1958), 187; Edward Pessen, *Riches, Class, and Power before the Civil War* (Lexington, MA, 1973), 108.

¹⁰ The Robert Hare Papers at the American Philosophical Society reveal much about his business activities.

¹¹ Stanley Elkins and Eric McKittrick, *The Age of Federalism: The Early American Republic, 1788–1800* (New York, 1993), 694.

¹² Washington's Farewell Address in 1796 contained a warning about the danger of political parties. Hare called himself a "Washington Federalist" in Hare, *Experimental Investigation of the Spirit Manifestations, Demonstrating the Existence of Spirits and Their Communion with Mortals* (New York, 1855), 117. After his death in 1799, Washington achieved a cult-like status among Federalists. See Albrecht Koschnik, "Let a Common Interest Bind Us Together": *Associations, Partisanship, and Culture in Philadelphia, 1775–1840* (Charlottesville, VA, 2007), 82–89, 98; David Hackett Fischer, *The Revolution of American Conservatism: The Federalist Party in the Era of Jeffersonian Democracy* (New York, 1965), 380.

moted democracy, which he equated with violence and social anarchy.¹³

Faced with the democratization of American politics and their own fading power, many Federalists retreated into private associations, which they used to promote republican ideals and oppose Jeffersonian democracy. They sought to restore a political system in which the elite exercised political power over the lower classes, much as a father paternalistically ruled his family.¹⁴ Hare joined two such organizations, the Tuesday Club and the Washington Benevolent Society. He also contributed anti-Jeffersonian articles to the *Port Folio*, a Federalist political and literary magazine.¹⁵

After the decline of the Federalists following the War of 1812, Hare naturally gravitated toward the Whigs, and he promoted the election of William Henry Harrison and Henry Clay. The American Whig party arose in opposition to Andrew Jackson, heir of the party of Jefferson and the scourge of antebellum conservatives. Hare believed that Jackson emulated the late Thomas Jefferson by professing love for the common man while secretly holding kingly aspirations. Despising Jackson no less than Jefferson, Hare spoke out at Philadelphia town meetings, published anti-Jackson diatribes in the *National Intelligencer*, and prepared pamphlets that urged the adoption of such anti-Jacksonian policies as internal improvements and the use of credit as money. Despite Hare's efforts, his conservative ideals were rejected both at the ballot box and by the court of public opinion. The democratization of American society continued apace.¹⁶

¹³ Robert Hare, "On the Election of Jefferson to the American Philosophical Society," Robert Hare Papers. William C. Dowling, *Literary Federalism in the Age of Jefferson: Joseph Dennie and The Port Folio, 1801–1812* (Columbia, SC, 2003), 6–15, offers a sophisticated discussion of the philosophical contrast between Jeffersonians and Federalists. Also useful is Linda K. Kerber, *Federalists in Dissent: Imagery and Ideology in Jeffersonian America* (Ithaca, NY, 1970). On Jefferson and the rise of democracy and class conflict in this period, see Sean Wilentz, *The Rise of American Democracy: Jefferson to Lincoln* (New York, 2005). Older but still useful is Fischer, *Revolution of American Conservatism*.

¹⁴ Daniel Kilbride, "Cultivation, Conservatism, and the Early National Gentry: The Manigault Family and Their Circle," *Journal of the Early Republic* 19 (1999): 221–56; Koschnik, "Let a Common Interest Bind Us Together," 69–75.

¹⁵ Randolph C. Randall, "Authors of the *Port Folio* Revealed by the Hall Files," *American Literature* 11 (1940): 401. See also Dowling, *Literary Federalism*, 16; Koschnik, "Let a Common Interest Bind Us Together," 154–55; Albrecht Koschnik, "Fashioning a Federalist Self: Young Men and Voluntary Association in Early Nineteenth-Century Philadelphia," *Explorations in Early American Culture* 4 (2000): 221.

¹⁶ Eliza Cope Harrison, ed., *Philadelphia Merchant: The Diary of Thomas P. Cope, 1800–1851* (South Bend, IN, 1978), 258; Robert Hare, "On the Democratic Whig Party and the Federalists Black Cockade," and "On the Advantages of Living under a Democratic Republican Government," Robert Hare Papers. For the Whigs, see Daniel Walker Howe, *The Political Culture of the American*

Robert Hare's scientific inquiry was closely linked to his politics and social status. In the early nineteenth century, science was a gentlemen's endeavor, pursued and patronized by men of wealth from upper-class and professional families. Moreover, Philadelphia was the nation's center of scientific activity.¹⁷ Due in part to his position as the chair of the chemistry department at the University of Pennsylvania and in part to his skill, Hare wielded tremendous influence in the scientific community. Young scientists such as Joseph Henry, Josiah Whitney, and Wolcott Gibbs did postgraduate chemistry work in Hare's laboratory. Hare's patronage of individuals and his promotion of science in general had a national impact. When the American Association for the Advancement of Science was founded, fifteen of the society's originators were former Hare students.¹⁸

Hare's social standing allowed him to study science, but it was his political passions that drew him into the field of chemistry. At the turn of the nineteenth century, Hare enrolled in a series of lectures given by James Woodhouse at the University of Pennsylvania, and he joined Woodhouse's Chemical Society of Philadelphia in 1801.¹⁹ The Chemical Society imbued its members with a sense of national pride and patriotism. Felix Pascalis gave the annual oration to the society in 1801 and urged the members to "let a liberal patriotism animate your scientific pursuits." Pascalis compared the scientific breakthroughs of Antoine Lavoisier, credited with developing chemistry into a modern science, to the American Revolution, and he believed that his generation would witness "the golden age of Science and Liberty." Other chemists of the

Whigs (Chicago, 1979). On Hare's activities and views, see Robert Hare, *A Brief View of the Policy and Resources of the United States* (Philadelphia, 1810); and Hare, *Proofs That Credit as Money, in a Truly Free Country, is to a Great Extent Preferable to Coin* (Philadelphia, 1834). The story of American democratization has been most recently told in Wilentz, *Rise of American Democracy*.

¹⁷ Robert V. Bruce, *The Launching of Modern American Science, 1846–1876* (New York, 1987); Simon Baatz, "Philadelphia Patronage: The Institutional Structure of Natural History in the New Republic, 1800–1833," *Journal of the Early Republic* 8 (1988): 112; Hugh Richard Slotten, *Patronage, Practice, and the Culture of American Science: Alexander Dallas Bache and the U.S. Coast Survey* (Cambridge, 1994).

¹⁸ Albert E. Moyer, *Joseph Henry: The Rise of an American Scientist* (Washington, DC, 1997), 187–89; Slotten, *Patronage, Practice, and the Culture of American Science*, 5. On the nature of early American science in Philadelphia, see Simon Baatz, "Patronage, Science, and Ideology in an American City: Patrician Philadelphia, 1800–1860" (PhD diss., University of Pennsylvania, 1986). See Bruce, *Launching of Modern American Science*, 19–20; Kohlstedt, *Formation of the American Scientific Community*.

¹⁹ Smith, *Robert Hare*, 4; Ralph S. Bates, *Scientific Societies in the United States*, 2nd ed. (New York, 1958), 24. Bates notes that the society later changed its name to the Columbian Chemical Society of Philadelphia.

day echoed this refrain, including Thomas P. Smith and Benjamin Silliman Sr. While studying under Woodhouse and living in the same boarding house, Silliman and Hare shared a mutual interest in chemistry and politics.²⁰ Thus, from the outset of his career, Hare was drawn into the discipline of science that he associated with the political and social achievements of the American Revolution and early republic.

Lavoisier's work greatly influenced the study of chemistry in antebellum America. Lavoisier drew upon eighteenth-century ideas of the material fluids, such as electricity, light, magnetism, and the matter of heat (which he called caloric), to refine and develop his chemical theories. He used careful experimentation to demonstrate the primacy of the caloric and tied it into a general theory of chemistry. According to eighteenth-century scientific understanding, gravity should have made the repulsion of matter impossible. However, repulsion did happen, and Lavoisier identified these forces as the caloric.²¹ He claimed that matter was actually a combination of a subtle fluid with a self-repulsing nature, named the caloric, and ordinary matter—matter having mass—which together formed a substance that was subject to the laws of attraction or gravity. Exposing matter to different conditions allowed the caloric to become disassociated from the ordinary matter and made it possible for matter to change from one state to another, emitting heat in the process. The amount of caloric present was equivalent to the amount of heat produced. The presence of caloric could not be measured or detected by the senses or ordinary laboratory equipment; it was imponderable, invisible, and moved with great celerity.²²

²⁰ Felix Pascalis, "Annual Oration," can be found in John C. Burnham, *Science in American: Historical Selections* (New York, 1971), 50, 75; William H. Brock, *Norton History of Chemistry* (New York, 1993), 126; Trevor H. Levere, *Transforming Matter: A History of Chemistry from Alchemy to the Buckyball* (Baltimore, 2001), 78. Lavoisier is recognized for his work in creating a new paradigm for chemistry. See Arthur Donovan, "Lavoisier and the Origins of Modern Chemistry," *Osiris*, 2nd ser., 4 (1988): 214–31. Thomas P. Smith "A Sketch of the Revolutions in Chemistry," quoted in Edgar F. Smith, *Chemistry in America: Chapters from the History of the Science in the United States* (New York, 1914), 35; Chandros Michael Brown, *Benjamin Silliman: A Life in the Young Republic* (Princeton, NJ, 1989), 130, 103. Brown mentions that the other Federalists who occupied the boardinghouse were Charles Chauncey, Horace Binney, and Enos Bronson.

²¹ Robert Siegfried, "The Chemical Revolution in the History of Chemistry," *Osiris*, 2nd ser., 4 (1988): 37; Robert J. Morris, "Lavoisier and the Caloric Theory," *British Journal for the History of Science* 6 (1972): 1–38; Antoine Laurent Lavoisier, *Elements of Chemistry, in a New Systematic Order, Containing All the Modern Discoveries*, trans. by Robert Kerr (1790; repr. New York, 1965), 454.

²² The caloric is laid out in the first chapter of Lavoisier's *Elements of Chemistry*. See also Brock, *Norton History of Chemistry*, 126; Robert Hare, "Animadversions by Dr. Robert Hare in the Review

Lavoisier suggested that the caloric could be construed as either real or hypothetical, but Hare believed that these “material imponderable principles, producing the phenomena of heat, light, and electricity” existed in and around all visible matter. For example, Hare placed fulminating powder on a table and struck it with a hammer to cause an explosion. The explosion, he surmised, resulted from the disassociation of the ponderable matter in the fulminating powder from the imponderable caloric that was also present.²³

Hare became the leading chemist of his day by inventing or refining chemical apparatus necessary for both experimentation on and measurement of matter. So highly prized was this equipment that upon Hare’s retirement from the University of Pennsylvania, Joseph Henry sought and successfully obtained the majority of Hare’s materials for the Smithsonian Institution. In the decades following his death, articles noting Hare’s contributions to American science inevitably mentioned his apparatus.²⁴ Hare’s most famous invention, for which he received the prestigious Rumford Medal in 1839, was the oxyhydrogen blowpipe. The blowpipe brought together a mixture of oxygen and hydrogen to create an intense flame that allowed for the fusion of seemingly intractable metals. In 1816, Hare built the first in a series of calorimeters, a chemical battery that generated quantities of heat that could then be studied. In 1820, he invented a deflagrator, a battery that produced a ready supply of electricity and heat for both classroom demonstrations and research.²⁵

of His New Theory of Galvanism,” *Philadelphia Journal of Medical and Physical Sciences* 1 (1820): 371–82. On the imponderables, see Levere, *Transforming Matter*; J. L. Heilbron, *Weighing Imponderables and Other Quantitative Science around 1800* (Berkeley, CA, 1993). Older, but still useful, is Robert Fox, *The Caloric Theory of Gases: From Lavoisier to Regnault* (Oxford, 1971).

²³ Robert Hare to Benjamin Silliman, May 1822, quoted in Smith, *Robert Hare*, 127.

²⁴ Hare followed Lavoisier in his attention to apparatus. Lissa Roberts analyzes the important role of instruments in Lavoisier’s work in fashioning his paradigm in “A Word and the World: The Significance of Naming the Calorimeter,” *Isis* 82 (1991): 199–222. On Henry’s acquisition of Hare’s equipment, see *Proceedings of the American Association for the Advancement of Science, First Meeting . . . 1848* (Philadelphia, 1849), 90. The equipment was destroyed by fire in 1865. For articles citing Hare’s contributions, see “The Most Important American Discoveries and Inventions,” *Scientific American* 10 (1864): 210; Robert J. Walker, “American Slavery and Finances,” *Continental Monthly* 6 (1864): 25.

²⁵ Benjamin Silliman, “On the Compound Blowpipe,” *American Journal of Science and Arts* 1 (2nd ed., 1819): 97. On Hare’s reception of the Rumford Medal, see Bates, *Scientific Societies in the United States*, 45. Robert Hare, “Description of an Electrical Machine, with a Plate Four Feet in Diameter, so Constructed as to Be above the Operator: Also of a Battery Discharger Employed Therewith: And Some Observations on the Causes of the Diversity in the Length of the Sparks Erroneously Distinguished by the Terms Positive and Negative,” *Transactions of the American Philosophical Society*, n.s., 5 (1837): 365–73; Hare, “Animadversions by Dr. Robert Hare,” 371.

The theory of imponderable matter around which Hare structured his research and lectures remained the prevailing theory of chemistry into the mid-nineteenth century, especially in the United States.²⁶ Hare stood apart from his contemporaries in his insistence that the imponderable materials, such as caloric, required a radical redefinition of matter. Most scientists agreed with Benjamin Silliman, who argued that since all matter, by definition, had to have weight, the inability of science to detect weight in the imponderables represented a failure of the instrumentation in use rather than a need to reconsider the definition of matter. Whereas the majority of scientists were comfortable with treating the imponderables in a heuristic manner, Hare was adamant that imponderables were more than theoretical constructs; they were an alternate form of matter, as real as solid matter. Hare suggested that mind, matter, and spirit were equally real and differed in their relative densities and properties. His theory that matter was found in both the ponderable and imponderable states made it easier for him, later in life, to believe that, in addition to the visible material conditions of the world around us, there existed an incorporeal spirit realm apart from, but related to, the everyday world we see.²⁷

By the 1840s, though, Robert Hare and his generation began to lose their position in the advancing scientific community. The professionalization of science in the United States, begun in large part by Hare's contemporaries, eventually resulted in a redefinition of the practice of science and the source of scientific authority. Joseph Henry, born a generation after Robert Hare and Benjamin Silliman Sr., chafed at the older generation. He critiqued Silliman's *American Journal of Science and Arts* as being "filled with a mass of trash."²⁸ Although Hare had helped create the American Association for the Advancement of Science (AAAS) in 1848, from the outset he was at odds with the organization about who should be allowed to speak, and on what topics, at the association's annual meetings. Hare's notion of a model scientist was someone like himself, an educated gentleman who was not necessarily a specialist in any particular subject.

²⁶ New texts included that of Samuel Metcalfe, who published a two volume work on this subject in 1843. See Fox, *Caloric Theory*, 126; Florian Cajori, "On the History of Caloric," *Isis* 4 (1922): 489–91.

²⁷ Hare's redefinition of matter and his debates with contemporaries are discussed in Hazen, *Village Enlightenment in America*, 69. See also George H. Daniels, *American Science in the Age of Jackson* (New York, 1968), 133.

²⁸ Henry quoted in John D. Holmfeld, "From Amateurs to Professionals in American Science: The Controversy over the Proceedings of an 1853 Scientific Meeting," *Proceedings of the American Philosophical Society* 114 (1970): 23.

In contrast, the younger generation, as represented by Joseph Henry and Alexander Dallas Bache, supported those with scientific credentials who specialized in and spoke on recognized scientific topics.²⁹

It was this younger generation of scientists that denied the materiality of the imponderables and suggested mechanical or dynamic explanations for heat.³⁰ Hare found incredulous the idea that all matter was ponderable. He argued that, "Denying the existence of imponderable matter is equivalent to alleging that all matter is ponderable, in other words, heavy or endowed with attraction of gravitation," which countered the observed action of repulsion. He continued, "Neither particles nor masses can at the same time move toward each other in obedience to one force, and yet move away from each other in obedience to other forces." Hare filled the pages of the *American Journal of Science and Arts* with defenses of the caloric theory.³¹ He not only aimed his arguments at his colleagues in the United States, such as Joseph Henry, but he also questioned the theories of the leading figures in European chemistry. He publicly attacked the Swedish chemist Jöns Jakob Berzelius's chemical nomenclature, questioned William Whewell's rejection of the caloric theory, and opposed Michael Faraday's conception of matter.³² Hare's position on the caloric remained unchanged into the 1840s, but his ability to speak on this issue declined precipitously when the next generation of scientists assumed

²⁹ Discussion of the clashes between Hare and the AAAS over what constituted good science can be found in Kohlstedt, *Formation of the American Scientific Community*, 108, 133, 141, 151.

³⁰ Silliman himself accepted the kinetic theory of gas after 1859. Cajori, "History of Caloric," 491. See also Russell McCormmach, "Henry Cavendish on the Theory of Heat," *Isis* 79 (1988): 37–67.

³¹ Robert Hare, "Letter to National Intelligencer," Robert Hare Papers. Hare's call for a redefinition of matter and perhaps his best defense of the caloric is Robert Hare, "Letter . . . in Opposition to the Conjecture That Heat May Be in Motion; and in Favor of the Existence of the Material Cause of Calorific Repulsion," *American Journal of Science and Arts* 4 (1822): 142–48.

³² Joseph Henry, "On the Theory of the So-Called Imponderables," *Proceedings of the American Association for the Advancement of Science, Sixth Meeting . . . 1851* (Washington, DC, 1852), 84–91; Robert Hare, "Some Encomiums upon the Excellent Treatise of Chemistry, by Berzelius; also Objections to His Nomenclature, and Suggestions Respecting a Substitute, Deemed Preferable, in a Letter to Professor Silliman," *American Journal of Science and Arts* 27 (1835): 61–74. See also Hare, "Criticisms and Suggestions Respecting Nomenclature," *American Journal of Pharmacy* 3 (1838): 1–16; Robert Hare, "A Letter to William Whewell, Professor of Moral Philosophy in the University of Cambridge, England, in Reply to Certain Allegations and Arguments Advanced in a Pamphlet Entitled a Demonstration That All Matter is Heavy," *American Journal of Science and Arts* 49 (1842): 260–73; Robert Hare, "Remarks Made by Dr. Hare, at a Late Meeting of the American Philosophical Society, on a Recent Speculation by Faraday on Electric Conduction and the Nature of Matter," *London, Edinburgh and Dublin Philosophical Magazine and Journal of Science* 26 (1845): 602–7.

control not only of the AAAS but also of the *American Journal of Science and Arts*. Hare's publications in the journal declined dramatically after the younger generation of scientists, represented by Benjamin Silliman Jr. and James Dana, took over its editorship.

Hare's frustrations over his increasingly marginalized status within the scientific community were compounded by the class and sectional antagonisms that wracked Philadelphia and the nation in the two decades before the Civil War. Political upheaval and instability plagued Philadelphia in the late 1840s, as the city grew more rapidly than at any previous time in its history. Much of the population increase was the result of Irish immigrants, whose arrival strained the political, economic, and social fabric of the city. Conflict between the Irish workingmen and native-born Americans was often violent, with the worst riots occurring in the summer of 1844.³³ Hare blamed the violence on the new immigrants, whom he believed incapable of self-government.³⁴ Political upheaval continued into the 1850s, as calls for abolition and sectional tensions grew. Hare faulted fanatic abolitionists for the national violence, and he believed that they were more destructive than the institution of slavery itself.³⁵

In response to this perceived disorder and chaos, and with the Whig

³³ Sam Bass Warner, *The Private City: Philadelphia in Three Periods of Its Growth* (Philadelphia, 1968), 106, 125–57; Agnes Repplier, *Philadelphia: The Place and the People* (1898; New York, 1925), 342. On the clashes between Irish and freed blacks, see George M. Fredrickson, *The Black Image in the White Mind: The Debate on Afro-American Character and Destiny, 1817–1914* (1971; repr. Middleton, CT, 1987), 32. On riots in Philadelphia during the 1840s, see Elizabeth M. Geffen, "Industrial Development and Social Crisis, 1841–1854," in *Philadelphia: A 300-Year History*, ed. Russell F. Weigley (New York, 1982), 346–62. On the freedmen of Philadelphia, see Gary B. Nash, *Forging Freedom: The Formation of Philadelphia's Black Community, 1720–1840* (Cambridge, MA, 1988). On nativists and the Irish, see Michael Feldberg, *The Turbulent Era: Riot and Disorder in Jacksonian America* (New York, 1980); Michael F. Holt, *The Rise and Fall of the American Whig Party: Jacksonian Politics and the Onset of the Civil War* (New York, 1999), 191.

³⁴ Robert Hare, "Strictures on an Article on the Riots in the Suburbs of Philadelphia," Robert Hare Papers. Hare's comments echoed the ideas of the American Republican Party, an anti-immigrant political party that briefly allied itself with the weakening Whig Party in Philadelphia. Holt, *Rise and Fall of the American Whig Party*, 191–93. Hare never openly supported the nativists but clearly held ideas compatible with their ideology. Subsequently, Hare developed close ties with Millard Fillmore, who ran for president on the nativist "Know Nothing" party line in 1856.

³⁵ Robert Hare, "Concerning U.S. National Politics"; "Some Ideas Suggested by the Preamble to the Resolutions of the Alabama Legislature, in Favour of the Annexation of Texas, Submitted to Congress in 1838"; "To the North American: A Peace Offering to the South by One Who is Opposed to All Unconstitutional Opposition to Slave Holding"; "On Slavery"; "America's Duty to the Negro"; "On the Success of the U.S. Government"; all in Robert Hare Papers. Hare insisted that Senator Charles Sumner was to blame for the beating he received at the hands of Preston Brooks.

Party in its death throes, Hare sought the cultural and moral reconstruction of society through literature. In the 1850s, He wrote and published two historical novels.³⁶ Hare set his first novel, *Standish the Puritan*, during the Revolutionary War. His characters include: a transplanted member of the British aristocracy, George De Leur; a gentleman farmer, William Standish; and a member of the artisan class, Zimri Freeborn. The novel's antagonist is Julius Caesar Sniffling, whose desire for power threatens the new republic. A counterfeit in every sense of the word, Sniffling lies and cheats his way through the Revolution, flattering the gullible artisans in hopes of exploiting them.³⁷ United by the Revolution and by their desire to defeat Sniffling, Hare's characters join together under the direction of the aristocrat De Leur and cooperate to expose Sniffling. *Standish the Puritan* concludes by imagining the postrevolutionary nation as a utopian, patrician republic. Hare depicts postwar society as a family, with the upper and middling classes living in close proximity in the country. From here, they govern the happy and deferential artisans of the city.³⁸

The novel, a paean to the hierarchical, interdependent, and harmonious society that Robert Hare had supported his entire life, was part of a genre of popular antebellum fiction. During the sectional crisis of the 1850s, fretful intellectuals wrote historical fiction as a means of recalling, and perhaps re-forming, a time of "national unity."³⁹ Hare's historical fiction expressed his desire for a restoration of an orderly society controlled by men like him. His final efforts toward this end came within a few years of the publication of *Standish the Puritan*, when Hare astounded his scientific colleagues and mortified his close friends by converting to Spiritualism. Hare spent the remaining years of his life zealously trying to convert others to his new beliefs, which he argued would promote order and progress in American society.

Millions of Americans joined the Spiritualist movement between 1850 and 1900. Spiritualists believed that the deceased lived on as spirits and that these spirits could communicate with the living. Historians have connected Spiritualism to broader social reform movements in antebellum

³⁶ Hare was not the only Philadelphian to use literature to express his distress over social decay. See Kilbride, "Cultivation, Conservatism, and the Early National Gentry."

³⁷ Sniffling is clearly patterned on Thomas Jefferson.

³⁸ Grayson, *Standish the Puritan*, 315–20.

³⁹ Harvey Green, "Popular Science and Popular Thought Converge: Colonial Survival becomes Colonial Revival, 1830–1910," *Journal of American Culture* 6 (1983): 3.

America and also to efforts to reconcile science with religion.⁴⁰ More recent scholarship has argued that a search for order, by both progressive reformers and some conservatives, such as Robert Hare, underlay the rise of Spiritualism.⁴¹ Hare had broached the idea of a spirit world in his novel, *Standish the Puritan*. In a comment imbued with overtones of science and Spiritualism, Edith De Leur remarks that death is not terminal but part of a longer journey. "Death is the transformation of the elements of the body from one state to another."⁴²

Hare was initially skeptical of Spiritualism. Persuaded by an old friend, the telescope maker Amasa Holcombe, to investigate the claims of Spiritualists, Hare did so with all the rigor his scientific training demanded.⁴³ To prove that the rappings and table turnings associated with Spiritualism were the result of human actions, Hare attended séances and invented the spiritscope to detect the fraud that he suspected lay behind these phenomena. Rather than uncovering fraud, however, Hare became convinced that Spiritualism was authentic, and he zealously converted. In the final years of his life, he gave a noted lecture on Spiritualism at the New York Tabernacle, wrote and published a lengthy account of his conversations with the dead, urged the Episcopal Church to consider the evidence supporting the existence of spirits, and tried (unsuccessfully) to convert fellow scientists to his beliefs.⁴⁴

Science was not antithetical to Hare's conversion, but rather it was the foundation for it. Throughout his career, Hare adhered to the caloric theory, which posited that matter existed in visible and invisible forms. He

⁴⁰ For example, see R. Laurence Moore, *In Search of White Crows: Spiritualism, Parapsychology, and American Culture* (New York, 1977); Mary Farrell Bednarowski, "Nineteenth-Century American Spiritualism: An Attempt at a Scientific Religion" (PhD diss., University of Minnesota, 1973); Molly McGarry, *Ghosts of Futures Past: Spiritualism and the Cultural Politics of Nineteenth-Century America* (Berkeley, CA, 2008); Ann Braude, *Radical Spirits: Spiritualism and Women's Rights in Nineteenth-Century America*, 2nd ed. (Boston, 2000).

⁴¹ Cox, *Body and Soul*; Lisa M. Lenker, "Haunted Culture and Surrogate Space: A New Historicist Account of Nineteenth-Century American Spiritualism" (PhD diss., Stanford University, 1998); Carroll, *Spiritualism in Antebellum America*.

⁴² Grayson, *Standish the Puritan*, 261–62.

⁴³ Carroll, *Spiritualism in Antebellum America*, 73.

⁴⁴ Robert Hare, *Lecture on Spiritualism Delivered before an Audience of Three Thousand, at the Tabernacle, in the City of New York, in November, 1855* (Philadelphia, 1855); Hare *Experimental Investigation*; "Death of Dr. Robert Hare." Hare was ridiculed by fellow scientists in life and after his death for his belief in Spiritualism. See Stephen D. Andrews, "Which Threatens to Tear Our Fabric Asunder: The Opposition to American Spiritualism, 1848–1860" (PhD diss., Stanford University, 2005); James McClenon, *Deviant Science: The Case of Parapsychology* (Philadelphia, 1984), 307.

manifested his scientific inclination toward Spiritualism before his conversion. In a paper titled "Definitions and Discriminations Respecting Matter, Void, Space, and Nihility," delivered in 1848 before the Philadelphia meeting of the American Association for the Advancement of Science, he openly suggested that spirits were a form of matter.⁴⁵ Hare had already formed an operational definition of matter based on its presumed effects. If there was no human agency behind the table turnings, rappings, or other noises associated with séances, then there must be some other agent at work. For Hare those agents were imponderable spirits. He drew a direct connection between his work on imponderables in chemistry, known by the presence of light, heat, or electricity, and the existence of spirits.⁴⁶

Hare utilized his scientific training in his investigation of spirit phenomena. Much as he approached the study of heat and electricity by developing instruments to study them, Hare devised a set of experiments to circumvent the possibility of a medium tricking the attendees of a séance by moving the table.⁴⁷ To allow the spirits "to manifest their physical and intellectual power independent of control by any medium," Hare constructed the spiritoscope, a device consisting of a series of letters written on pasteboard over which were placed pointers or indicators, like the hands on a clock. By tipping the table one way or another, the spirits moved the pointers to various letters in order to spell out ethereal messages. Mediums, however, remained essential in spirit communication. Hare acknowledged that the spirits' affinity for these individuals made it possible for them to communicate with the earthly world.⁴⁸

⁴⁵ Kohlstedt, *Formation of the American Scientific Community*, 152; Carroll, *Spiritualism in Antebellum America*, 170.

⁴⁶ Hare was continuing in his quest to redefine matter. Hare, *Experimental Investigation*, 94. On his philosophy of matter, see Hare, "Letter . . . in Opposition to the Conjecture That Heat May Be in Motion." For more insights into his philosophy in the context of his peers, see Hazen, *Village Enlightenment in America*, 100–107; Daniels, *American Science in the Age of Jackson*, 121–26; Hare, *Lecture on Spiritualism*, 21.

⁴⁷ Hare, *Lecture on Spiritualism*, 4.

⁴⁸ Hare, *Experimental Investigation*, plates I–IV, 38–39, 40. Hare's spiritoscope was popular during his lifetime and in high demand. It appeared again in the 1870s when British scientist and Spiritualist William Crookes improved upon it. Hare made dozens of spiritoscopes, which he sold and shipped across the country. See Hare letterbook, 1841–47, Hare-Willing Papers, American Philosophical Society. On Crookes, see Janet Oppenheim, *The Other World: Spiritualism and Psychical Research in England, 1850–1914* (New York, 1985), 339–45; Bednarowski, "Nineteenth-Century American Spiritualism," 197; Robert Hare, *Dr. Hare's Letter to the Episcopal Clergy: Most Respectfully Offering to Submit to Their Consideration New and Irrefragable Evidence of Human Immortality, to Which Is Subjoined a Brief Sketch of the Spirit World and of the Moral Influences of Spiritualism* (New York, 1855), 20–21.

Hare's attempts to share his Spiritualist insights with his scientific colleagues led to a series of confrontations at the American Association for the Advancement of Science's meetings. Hare first announced his conversion at the 1854 meeting, but Joseph Henry strenuously objected and had Hare ruled as being out of order. After Hare conducted what he considered to be careful experiments on the spirit phenomena, he submitted a preliminary report to the president of the AAAS but was told the report was outside the scope of scientific investigation. Undaunted, Hare continued to urge his colleagues to listen to his evidence. At the 1856 meeting, reluctant to offend Hare and out of respect for their elderly colleague and his past scientific achievements, the membership passed a motion allowing Hare to use the meeting hall, but only after the regular sessions had ended for the day. By 1857, members of the association had lost patience with him and denied his speaking requests.⁴⁹

Dismissed by the scientific community, Hare found support for his ideas among the spirits and those in the Spiritualist community. Hare "gave up science for the investigation of truth." The spirits told him that in the future, humankind would spend its days studying reason and collecting knowledge, not pursuing power or money. "Nature is the object of our study, and indirectly of our worship," he wrote. Hare's séances almost always led to some affirmation of his own theories on matter and the caloric. No less a spirit than Benjamin Franklin called Hare his "scientific heir."⁵⁰ Hare noted that the shades of the dead encouraged him to share his newly found truth, and so he wrote *Experimental Investigation*.

Following his rejection by the scientific community, Hare's interest in science as practiced by his colleagues in the AAAS diminished. Much of his spirit writing concerned the political and social aspects of the world to come—so much so that he was chastised by the editors of the *Spiritual Telegraph* for not including sufficient scientific evidence in his articles.⁵¹

⁴⁹ Joseph Henry, "Locked Book, December 11, 1854," in *The Papers of Joseph Henry*, vol. 9, *January 1854–December 1857: The Smithsonian Years* (Washington, DC, 2002), 161; Hare had battled the AAAS from its outset about what constituted science. On his report and its rejection, see Hare, *Experimental Investigation*, 430; *Proceedings of the American Association for the Advancement of Science, Tenth Meeting . . . 1856* (Cambridge, MA, 1857), 238; Koldstedt, *Formation of the American Scientific Community*, 152.

⁵⁰ Hare to anonymous, Feb. 1857, Robert Hare Papers; Hare, *Experimental Investigation*, 90, 363–70; Hare letterbook, 1841–57, Hare-Willing Papers; Carroll, *Spiritualism in Antebellum America*, 68. Benjamin Franklin was one of the most often invoked "spirits" of this era. See Werner Sollors, "Dr. Benjamin Franklin's Celestial Telegraph, or Indian Blessings to Gas-Lit American Drawing Rooms," *American Quarterly* 35 (1983): 459–80.

⁵¹ S. B. Britton to Robert Hare, Jan. 30, 1857, Robert Hare Papers.

Hare found the spirit realm as amenable to his nineteenth-century conservative political beliefs as to his scientific theories. According to Hare, the world of the spirits consisted of six spheres arranged from lowest to highest, with the most moral and intelligent spirits residing in the highest. Hare claimed that after death a person's place in the spirit realm was directly related to his or her moral and intellectual qualities here on earth, so that the person of "bad passions passes to the society of such as have similar propensity." In Hare's vision, it was the purpose and destiny of every individual to ascend up the spheres as he or she acquired education. The motto of the spirit realm, he told his readers, was "onward and upward," and the spheres were designed, much like a "normal school," to train and educate the inhabitants to move up the spheres.⁵² Thus, inhabitants of the lowest sphere would be the dark, violent, and ignorant people. From there to the sixth sphere individuals became more enlightened and humane. The sixth sphere above the earth was reserved for the most benevolent and wisest of all humans. Here resided George Washington, Jesus of Nazareth, John the Beloved, Socrates, and Plato. Notably, neither Thomas Jefferson nor his followers had reached the sixth sphere. Due to his scientific standing and his lifelong commitment to truth, Hare claimed to be a special favorite of the worthies of the spirit realm.⁵³

Hare's description of the spiritual spheres also reflected the "natural" order of republicanism he had embraced in his youth. Each sphere was governed by the rule of law. Like the United States, the government of each sphere was republican and consisted of an executive, legislative, and judicial branch. In the spirit realm, there was neither democracy nor aristocracy, but rather a meritocracy of "mind and merit."⁵⁴ Hare suggested that harmony, not violence, and reason, not politics, dominated. Hence, Hare's vision of the world to come was consonant with the vision of community and hierarchy he preached in such publications as the *Port Folio* and *Standish the Puritan*.

Hare made his last stand against scientific and political opponents through his lectures and writing on Spiritualism, through séances, and through his spiritoscope. On May 8, 1858, too weak to rise from his bed,

⁵² Hare, *Lecture on Spiritualism*, 19, 90.

⁵³ The "worthies" who were drawn to Hare were almost all Federalists and Whigs, including Washington, John Quincy Adams, William Henry Harrison, Henry Clay, and Daniel Webster, among others. See Hare, *Dr. Hare's Letter to the Episcopal Clergy*, 6. Hare's political affinity is discussed by both Carroll, *Spiritualism in Antebellum America*, 74, and Cox, "Vox Populi," 259–66.

⁵⁴ Hare, *Experimental Investigation*, 88.

Robert Hare predicted that his work would launch “a new era of science.”⁵⁵ He died ten days later, believing once and for all that his political, scientific, and social beliefs would be vindicated.

Hare’s embrace of Spiritualism may have settled his mind and enabled him to die with the assurance that the order he cherished would be restored. But his conversion unsettles current understandings of the Spiritualism movement. Hare’s reactionary political ideals challenge the predominant historical interpretation of Spiritualism, which views the movement as an instrument of feminist and progressive ideologies of the nineteenth and twentieth centuries. This school of interpretation suggests that Spiritualism was the culmination of a broad series of reform movements and is best understood as part of a nineteenth-century counterculture that sought liberation from secularist tendencies and other forms of oppression.⁵⁶ Robert Hare, who was by inclination and practice a reactionary, acts as an important counterweight to those who see Spiritualism as merely the extension of the reformist impulses of the Romantic Era. That reformers were attracted to Spiritualism is indisputable, but they by no means owned the Spiritualist movement and its millions of followers. The example of Robert Hare adds to recent scholarship that recognizes that, like any religious movement, there were “many paths to Spiritualism.”⁵⁷ Nonetheless, Hare’s politics aside, he shared with the reformist idealists, religious rationalists, and other adherents of Spiritualism a desire to order or re-order society. The same desire for certainty that dominated his love of science and that surfaced in the 1850s, when he reconstructed history through literature, finally led him to Spiritualism, where Hare found, as did many others in this generation, a haven from the disorders of antebellum America.

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⁵⁵ Robert Hare to James Ruggles, May 8, 1858, Robert Hare Papers.

⁵⁶ See especially Braude, *Radical Spirits*, and McGarry, *Ghosts of Futures Past*.

⁵⁷ Quoted in Cox, “*Vox Populi*,” 241.

⁵⁸ For a fuller explanation of Spiritualism as a search for order, see Carroll, *Spiritualism in Antebellum America*.