

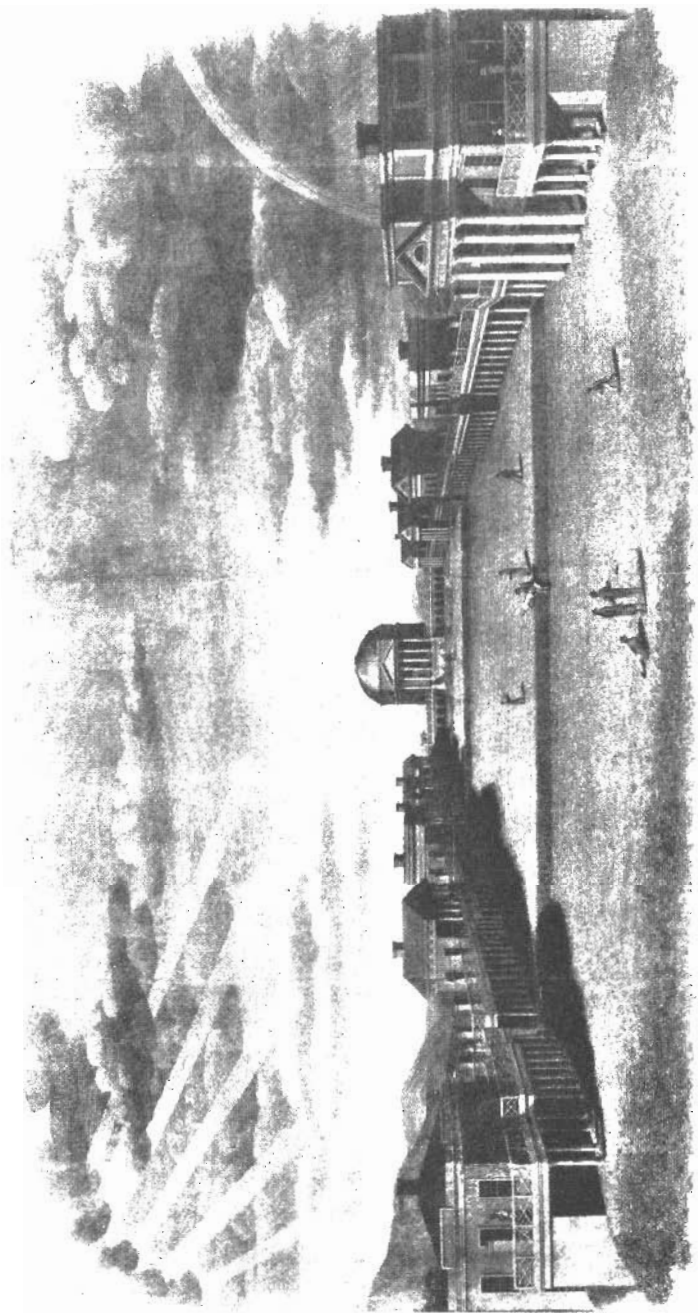
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# America's First Jewish Professor: James Joseph Sylvester at the University of Virginia

*Lewis S. Feuer*

An English Jew, James Joseph Sylvester, was the chief creator of the formal language of modern science; endowed with a mind overflowing with novel ideas and terms, he called himself a "mathematical Adam" because he had given more names to novel conceptions "than all the other mathematicians of the age combined." The schoolboy and statistician who today use the word "graph," the physicist studying the theory of relativity who masters equations that are "invariant" with respect to transformations of coordinate systems, or are "covariant" or "contravariant," the scientist grasping at the "canonical forms" of his domain, the philosopher writing of "Universal Algebra"—all alike are employing terminology minted by Sylvester.<sup>1</sup> The first observing Jew to be called to the United States to fill a full-time professorship in a secular subject, Sylvester led a brief career which brought at first a repudiation with consequences that were tragic for himself as well as for the history of mathematics; nonetheless, many years later, he achieved the highest academic honor accorded to British mathematicians, the Copley Medal of the Royal Society.

In the fullness of time, moreover, Sylvester became known as one of the greatest teachers of his time, celebrated among mathematicians and nonmathematicians alike. His auditor, Charles Sanders Peirce, unhappy and sparing in praise, wrote in admiration of "the great mathematician, Sylvester, perhaps the mind the most exuberant in original ideas of pure mathematics of any since Gauss." Many years later in 1928, the British political scientist Harold J. Laski conveyed the gossip to his friend Justice Holmes that at dinner, a retired judge of the county court had reminisced that "the greatest man he had ever met was J. J. Sylvester." The first director of the London School of Economics, W. A. Hewins, similarly recalled the inspiration that Sylvester imparted to his class over the beauty of the algebraic equations.<sup>2</sup>



*The lawn where James Joseph Sylvester lived during his time at the University of Virginia*

*Embattled Professor*

Late in November 1841 a young English Jew, James Joseph Sylvester, Fellow of the Royal Society, arrived in Charlottesville, Virginia. Twenty-seven years old, round-bodied with "dark curly hair," beardless and bespectacled, loquacious in his cockney speech, energetic in movement, he was already recognized as among the foremost men of mathematical genius in Britain.<sup>3</sup> The physical feature that most struck people on meeting him was his enormous head; many years later the great biometrician Francis Galton, Darwin's cousin, wrote: "It was a treat to watch the great dome on Sylvester's head."<sup>4</sup> The last of Virginia's fall foliage was already gone as he arrived to fill the chair of mathematics at the University of Virginia, Thomas Jefferson's "academical village." His journey had been troubled; he had lost all his baggage in Boston, but his reception at the university was rousing and presumably heartfelt. An austere senior student, the later Reverend Robert Lewis Dabney, wrote his mother on December 15, 1841: "Mr. Sylvester arrived about a fortnight ago, and was received by the students with an illumination and other demonstrations of respect, such as burning tar-barrels, yelling and such like dignified and manly proceedings."<sup>5</sup> Sylvester's colleague, the noted geologist William B. Rogers, professor of natural philosophy, and in later years, the first president of the Massachusetts Institute of Technology, was delighted with the new arrival: "the faculty, students and others attached to the University are all greatly pleased with Mr. Sylvester. He was terribly embarrassed at his first lecture, indeed quite overwhelmed, but has been doing better since. He has a good deal of hesitation, is not fluent, but is very enthusiastic and commands the attention and interest of his class," he wrote to his brother.<sup>6</sup>

The young British mathematician was encharged with forty-seven students, more than the forty-one in natural philosophy and the thirty-nine in ancient languages but less than the seventy-five in chemistry and the fifty-four in law. His beginner's class was to study arithmetic and algebra as logical sciences, using Lacroix's textbooks; the second class was to go on to Legendre's *Geometry*, mastering trigonometry, projective geometry, and the elements of differential calculus; the senior class was to continue through the differential and integral calculus; in addition, "a class of Mixed Mathematics for such of the more ad-

vanced students as choose to pursue it" would study Poisson's *Mechanics* and Laplace's *Mécanique Celeste*.<sup>7</sup> It was a large curriculum for mathematical education that Sylvester undertook with enthusiasm. He used the textbooks of the French mathematicians that his predecessors had used and that American colleges were generally using. Jefferson himself, who especially promoted the place of mathematics in education, thought the French works far superior to their British counterparts. The University of Virginia's "offering in mathematics was for a time unsurpassed anywhere in America."<sup>8</sup>

Indeed, the elite of the students seem to have been much pleased by the new professor of mathematics. Their monthly literary magazine, the *Collegian*, in its "Editor's Table," took note of "Professor Sylvester's Arrival": "We are happy to announce that his classes have been organized, and that the manner in which he has fulfilled his duties thus far, has been highly satisfactory. The students greeted his coming by illuminating the College buildings, and erecting bonfires. Professor Sylvester, being called upon, made a few chaste and appropriate remarks, expressing his grateful acknowledgement for his distinguished reception."<sup>9</sup>

But there were loci of hatred embedded in the Jeffersonian Garden of Eden that the young algebraist had never suspected. To begin with, two local Protestant journals had protested the appointment of the Jew Sylvester, as well as that of a Roman Catholic, Charles Kraitsir by name, to teach modern languages. The staunch Professor Rogers reported that he was

mortified and provoked, too, at finding so much illiberality among a portion of the community here on the subject of religion, as displayed in the bigoted publications which appeared during the summer respecting the appointments of Sylvester and Kraitsir [*sic*]. Would you believe it, that a series of essays has been published condemning the Visitors for the appointment of a Jew and a Catholic. . . . These have been chiefly printed by two of the religious papers, but have not passed without eliciting the sympathy of some of the other prints, though in the main condemned by them.<sup>10</sup>

The *Watchman of the South*, organ of the Presbyterian Church, the most influential denomination in Virginia, led the attack on the appointment of the English Jew Sylvester and the Hungarian Catholic Kraitsir with a long three-columned editorial. Published on August 5, 1841, a powerful essay in rhetoric, its logic has a Jeffersonian turn.

“The University of Virginia belongs to the people of this Commonwealth,” it observed, and they were annually contributing \$15,000 for its support. Therefore every citizen had a right to be heard with respect to his views on its management and choice of professors. Moreover, “The great body of the people in this Commonwealth are by professions Christians and not heathen, nor musselmen, nor Jews, nor Atheists, nor Infidels. They are also Protestants, and not Papists,” it continued. Of the “small number of Papists in the State,” chiefly “foreigners by birth,” not a single one had sent his son to the University of Virginia. Likewise, of the “few Jews,” also mostly “foreigners,” not one was known to have wished his child to be “educated at our University.” A professor, furthermore, could “in a thousand ways, stamp his own moral image on the minds of others.” Whatever the subject of his department, he was able to exercise “his ascendancy over the young mind,” a “decided and powerful” influence. Therefore, the *Watchman* argued, Virginian citizens had a right to require of their professors that they be adherents to a “pure morality based upon Christian principles,” though “without fanaticism.”

This was a time, furthermore, noted the *Watchman*, when “a portion of the scientific world, embracing mostly second and third rate men,” were “endeavoring to wield the facts and principles of science against those of Scripture,” when even mathematics, as applied to astronomy and natural philosophy, was among the sciences that were being “*perverted* to the purposes of infidelity and the unsettling of young and ardent minds.”

For too many years, according to the *Watchman*, the University of Virginia had been the instrumentality of an “Infidel junto that once had fearful sway over the public mind and the public purse in Virginia”; the university “was the Institution of a party [presumably that of Jefferson and his friends] . . . that was not very courteous in their treatment of professors of true religion.” “Three vacancies,” meanwhile, had been created at the university by “a series of disasters.” The board of visitors, to which people looked “to restore confidence,” instead appointed “a Jew of London” and a “Hungarian Papist.” The *Watchman* lamented: “This is the heaviest blow the University has ever received.” Despite the fact that more than thirty candidates had been available for one of these posts, and more than forty for the other, including among them minds “adorned with Christian virtues and

Christian principles," the proponents of infidelity, carrying the day, were forming alliances with "Papism, Unitarianism, Judaism, and other errors subversive of Christianity."

Also, apart from the fact that Sylvester was a Jew, he was an Englishman; "it is a historical fact," argued the *Watchman*, "that no Englishman has ever resided amongst us and then written a book respecting us, without shewing his prejudice against us and his ignorance of our peculiar Institutions"; in other words, an Englishman was apt to be antislavery, and perhaps offensively so. Such foreigners, however "urbane and mild and modest men," could scarcely contribute to the "vastly improved discipline" that the university pressingly needed.

The *Watchman* took heart, however, from one fact that had "not yet been seen in print." It was informed "that Messrs. Sylvester and Kreitzer [*sic*] were appointed *for one session only*." It had meanwhile voiced, in its opinion, the views of "a large majority of the people of Virginia."<sup>11</sup>

More ominous, however, than the *Watchman's* editorial was an animosity that festered among some of the university's studentry. Student Robert Lewis Dabney gloomily feared that Professor Sylvester might naively take the festivities and "gratulations" of welcome at their face value. He wrote his misgivings: "They [the students] will probably give him a little insight into this matter by stoning his house the first time he crosses their sovereign will, which will be very soon if he does his duty." The students indeed had been "disappointed" in Sylvester from the first time they saw him.

They thought that a man all the way from London, recommended by great men, and titled lords and bishops, must be a wonder in every respect. They were looking for a splendid fellow, . . . in the top notch of public instruction . . . and to surpass everything that was ever seen in his mark of instruction, when lo! a little, bluff, beef-fed English cockney, perfectly insignificant in his appearance, and raw and awkward in his manners, only twenty-six years old, deficient in the faculty of giving instruction, and far below what we have been accustomed to in a lecturer. . . . The students indeed, made no secret of their disappointment; but the Faculty make much of him. . . . He is, I should think . . . a fellow of excellent sense and good acquirements for his age, but not at all superior in intellect to Powers and many others among us. . . . He has a hearty, open-countenance, and seems to be an industrious, lively fellow. . . . The best professors in the institution are native Virginians. . . . I hope the Visitors will learn after a while to be satisfied with our own men.<sup>12</sup>

Then Dabney added a remarkable forecast as to what awaited the new professor:

Unless Sylvester is content to sink into a mere cypher, and submit to all sorts of imposition from the students, he will have difficulties. They will try him, and when they do so, he will be [manuscript torn and illegible] commit some blunder, and compromise his dignity in some way. I reckon our London cockney knows about as much about Virginian manners and character as a horse would about the differential calculus.<sup>13</sup>

According to the tradition among Sylvester's later friends in Britain and at Johns Hopkins, his antislavery opinions contributed to the feeling against him among the students and also to the culminating incident of rancor.<sup>14</sup> A widespread division of opinion, however, arose among scholars as to what had taken place at the University of Virginia; it centered around the account published by Sylvester's subsequent first graduate student at Johns Hopkins University, George Bruce Halsted. Later America's pioneer in the teaching of non-Euclidean geometry,<sup>15</sup> Halsted published his account in *Science* when Sylvester was still alive.

The cause of his sudden abandonment of the University of Virginia is often related by the Rev. R. L. Dabney, as follows: In Sylvester's class were a pair of brothers, stupid and excruciatingly pompous. When Sylvester pointed out the blunders made in a recitation by the younger of the pair, this individual felt his honor and family pride aggrieved, and sent word to Professor Sylvester that he must apologize or be chastised.

Sylvester bought a sword-cane, which he was carrying when way-laid by the brothers, the younger armed with a heavy bludgeon.

An intimate friend of Dr. Dabney's happened to be approaching at the moment of the encounter. The younger brother stepped up in front of Professor Sylvester and demanded an instant and humble apology.

Almost immediately he struck at Sylvester, knocking off his hat, and then delivered with his heavy bludgeon a crushing blow upon Sylvester's bare head.

Sylvester drew his sword-cane and lunged straight at him, striking him just over the heart. With a despairing howl, the student fell back into his brother's arms screaming out, "I am killed!!" "He has killed me!" Sylvester was urged away from the spot by Dr. Dabney's friend,<sup>16</sup> and without even waiting to collect his books, he left for New York, and took ship back to England.

Meanwhile, a surgeon was summoned to the student, who was lividly pale, bathed in cold sweat, in complete collapse, seemingly dying, whispering his last prayers. The surgeon tore open his vest, cut open his shirt, and at once declared him not in the least injured. The fine point of the sword-cane had struck a rib fair, and caught against it, not penetrating.

When assured that the wound was not much more than a mosquito-bite, the dying man arose, adjusted his shirt, buttoned his vest, and walked off, though still trembling from the nervous shock.<sup>17</sup>

This was a resignation more *de facto* than *de jure*. Halsted added in 1916, twenty-one years later, that he “never had the effrontery to ask Sylvester when he learned that he had not killed his man.” In any case, Sylvester realized he had to leave as soon as he could, even without waiting to pack his books.<sup>18</sup> Probably colleagues quickly assembled, for almost all lived in the pavilions on the lawn that Jefferson had designed. There is no mention in the minutes of the faculty that anyone tried to dissuade Sylvester from leaving in the middle of the academic year. Nor was Sylvester reproached for having broken his contractual obligation to complete the remaining months of teaching. Evidently it was agreed verbally and quickly that he was making the only possible decision for the safety of himself and his colleagues. The English-Jewish professor had with his own weapon fought a student assailant. An outbreak of extreme violence was then likely. Did Sylvester even have the time, as he rushed from Charlottesville, to write a letter of resignation?

### *Conflicting Accounts of What Happened*

The idea that Sylvester’s departure from the University of Virginia was the consequence of his armed physical battle with a student, and that anti-Semitism, antislavery, and antiintellectualism had anything to do with his leave-taking, was one that the university’s official historian would not accept; nor would the leading historian of mathematics who wrote extensively on the matter. Their arguments, if we condense them, were twofold: first, the account transmitted by the Reverend Robert Lewis Dabney was inauthentic and unreliable; second, the minutes of the faculty of the University of Virginia were altogether silent concerning the occurrence of any incident of physical battle that would have provoked Sylvester’s resignation, nor did they suggest the intrusion of religious and political animosities. Let us consider the latter arguments briefly.

The eminent historian of mathematics, Professor Raymond Clare Archibald, had understandably small respect for the Reverend Dr.



Dabney, an obviously unmathematical person who was the source of Halsted's original account. Archibald wrote: "There is no basis in fact for these statements. Rev. Dr. Dabney is quoted by Halsted as his authority, who has 'seriously assured me that Sylvester was actually deficient in intellect, a sort of semi-idiotic calculating boy.' A fine authority!" Archibald was glad to concur in the view of the university's official historian, Philip Alexander Bruce, that "the Halsted-Dabney story" was "the purest rubbish."<sup>19</sup>

"A fine authority!" declares R. C. Archibald almost scornfully of the preacher, Dr. Dabney. Yet Dabney is not to be thus dismissed. He was a man revered in his time for his probity, loyalty, and high character. He became known as "the greatest philosopher in the South."<sup>20</sup> Dabney, as we have seen, had, as a student in 1841, predicted presciently that fellow students would engage in some sort of physical assault against Professor Sylvester. He had reason to know the temper of mind and emotion among his fellow students. On November 12, 1840, a year before Sylvester arrived in Virginia, the professor of law, John A. G. Davis, married to the great-niece of Jefferson, was shot and killed by one of several masked, marauding students engaged in a riot to commemorate the student "Rebellion of 1834."<sup>21</sup> Robert Lewis Dabney, then a second-year student, bravely gave testimony against the accused murderer that led to the issuance of a warrant; he did so though he found himself "in a rather unenviable position, for in a college any man can have aiders and abettors no matter how vile he may be."<sup>22</sup> His fellow students, however, showed their respect for Dabney's stand by electing him to serve with the faculty and the civil authorities on a joint committee for resolving these problems. Declining an offer subsequently to join the Princeton faculty, Dabney served in Virginia as a rural preacher and professor of ecclesiastical history at the Union Theological Seminary. With the outbreak of the Civil War, he chose not to remain a preacher; rejecting the offer of General Thomas J. (Stonewall) Jackson that he join his army in that capacity, he accepted instead Jackson's later proposal that he enlist as his adjutant-general; Dabney acquitted himself so remarkably that he rose to be the great general's chief of staff.<sup>23</sup> A fellow officer said: "Our parson is not afraid of Yankee bullets, and I tell you he preaches like hell."<sup>24</sup>

Shortly after General Jackson was killed in May 1863 at the battle of Chancellorsville, his widow asked Dr. Dabney to undertake writing

the biography of her late husband. Dabney labored strenuously during the next two years, completing what became the primary work for all subsequent students of the general—*Life and Campaigns of Lieut.-Gen. Thomas J. Jackson (Stonewall Jackson)*.<sup>25</sup> The most comprehensive military historian of Jackson's life, a British officer, Lieutenant-Colonel G. F. R. Henderson, stated more than thirty years later that Dabney's work was "so complete and powerful that the need of a successor is not at once apparent. . . . It is only fitting, however, that I should acknowledge the debt I owe to a soldier and writer of such conspicuous ability. Not only have I quoted freely from his pages, but he was good enough, at my request, to write exhaustive memoranda on many episodes of Jackson's career."<sup>26</sup>

Dabney's memory in his old age was still eminently reliable for the manifold details of military campaigns during the Civil War. His oft-repeated narrative to his colleague Professor Halsted concerning the termination of Sylvester's career at Virginia was, one might infer, equally trustworthy.

The defeat of the Confederacy brought an unending sorrow to the life of R. L. Dabney. For a number of years he brooded with other Southerners upon schemes to emigrate to some such land as New Zealand or Australia, "far away from Yankees and negroes."<sup>27</sup> A Presbyterian in the mold of John Knox, he wondered what his God's will was. That will brought him in 1883 to the University of Texas to join its first faculty as professor of philosophy and economics. The newly founded university was indeed modeled upon the University of Virginia. Though "an old line, old school fundamentalist," Dabney was soon regarded as "the most distinguished" of its professors. At Texas he was joined in 1884 by the new professor of mathematics, Sylvester's pupil, George B. Halsted, and shortly afterwards, by Alexander Macfarlane, a graduate of the University of Edinburgh, who became associate professor of physics. Macfarlane, the favorite student of the famed P. G. Tait, had already in 1878 been elected a Fellow of the Royal Society.<sup>28</sup> His well-known book *Lectures on Ten British Mathematicians of the Nineteenth Century* was published many years later in 1916. No doubt Macfarlane too heard the story of Sylvester at Virginia directly from his aged colleague Dabney, for the narrative in his book, with some variations and mistakes, is similar to that written by Halsted.<sup>29</sup> (The principal variation: where Halsted writes that the attacking stu-

dent armed himself with a "heavy bludgeon," Macfarlane says it was a "heavy stick.")

In short, though Robert L. Dabney was no judge in matters mathematical, his veracity and insight concerning the prejudice against Sylvester, and his description of the episode of violence that took place, transcribed by his two scientific colleagues at Texas, Halsted and Macfarlane, has the stamp of truthfulness. Professor R. C. Archibald, who evidently knew nothing about Robert L. Dabney, had no basis for mocking him in such personal terms: "A fine authority!"

Dabney's account, moreover, was substantiated independently by the inquiries made in 1876 by the Johns Hopkins authorities when they were deciding upon Sylvester's appointment as their first professor of mathematics. Daniel Coit Gilman, the creator-president of Johns Hopkins University, inquired closely into the circumstances of Sylvester's departure from Virginia.<sup>30</sup> Thirty years later, furthermore, he urged a young graduate student, David S. Blondheim, subsequently professor of Romance languages at Johns Hopkins, to inquire into the question. Blondheim's findings were published first in 1906 in an obscure Baltimore Jewish periodical, and fifteen years later in the *Johns Hopkins Alumni Magazine*. They confirmed the accounts of the Reverend Dr. Dabney and Professor Halsted concerning the events that had surrounded Sylvester's "resignation" from the University of Virginia. A physical assault on Sylvester by a student had taken place; Sylvester had resisted with a sword-cane;<sup>31</sup> and anti-Semitic remarks were vaguely diffused in the university climate. Dr. Bruce, the official historian of the University of Virginia, thereupon wrote challenging Blondheim's conclusion; the latter courteously replied that his article "was written at the instance of the late President Gilman, who suggested its title. It rests in considerable measure upon materials which he supplied."<sup>32</sup> In addition, Blondheim noted, "Professor Halsted's version was vouched for as accurate by a gentleman who attended the University of Virginia not very long after the incident occurred." Blondheim also cited the eminent classical philologist Basil L. Gildersleeve, who had, after many years' teaching at the University of Virginia, become a professor at Johns Hopkins, as having, together with Sylvester's favorite pupil, Professor Fabian Franklin, provided "valuable material."<sup>33</sup> Thus in 1906, on the basis of the combined evidence of the president of Johns Hopkins University and scholarly

friends of Sylvester, Blondheim concluded that Halsted's account was "probably substantially correct."<sup>34</sup> Blondheim was, however, unable to produce any specific documentary evidence from any of Sylvester's colleagues that would have directly confirmed the occurrence of a physical battle between Sylvester and a student. Nonetheless, at the time of Blondheim's first publication, President Emeritus Daniel C. Gilman (who died in 1908), as well as Professors Gildersleeve and Fabian Franklin, were all living, informed witnesses. The gallant Gildersleeve, indeed, had written the resolution that his Johns Hopkins colleagues adopted when Sylvester left the university to return to Britain. Sylvester, as Gildersleeve wrote, had "by his presence alone . . . made Baltimore a great center of mathematical research," and moreover, contributed to that "reverence for the ideal" which was "the dominating characteristic of this University." Always limping from the bullet he received in a Civil War battle, Gildersleeve had during the war years alternated teaching Latin and Greek at Charlottesville during the academic year with fighting at the front in the summertime. His words no doubt did something to attenuate Sylvester's painful memory of the events in 1842 on Virginia's lawn.<sup>35</sup>

### *Attempts to Suppress the Facts*

What, however, is one to make of the absence of any reference to the incident of violence in the minutes of the faculty of the University of Virginia? The absence of a statement in the official records constitutes the gravamen for the repudiation of the Sylvester sword-cane story on the part of Philip Bruce, R. C. Archibald, and, more tentatively so, by R. C. Yates. What then do the official records state?<sup>36</sup>

The unpleasant story of Sylvester's misfortunes began at the faculty meeting of February 1, 1842, when he reported disrespect on the part of a first-year student from New Orleans, a Mr. William H. Ballard.<sup>37</sup> At that same meeting, the proctor's statement showed that Professor Sylvester had been assessed the sum of \$2.50 for broken windows. Evidently mischief had already begun, for when Sylvester objected to this bill, the matter was referred back for the proctor's consideration. Three weeks and a day, later on February 23, 1842, Sylvester had a sadder story to tell the convened faculty. Six professors were present—

Gessner Harrison, acting as chairman, and Professors William B. Rogers, Judge George Tucker, Charles Kraitsir, Dr. Henry Howard (the professor of medicine), and Sylvester himself.<sup>38</sup> Sylvester complained that Mr. H. W. Ballard paid no attention to the lecture, during which he evidently read some book, and that he was similarly inattentive to the "examination" (recitation); that when the student's turn came for "examination" he answered in a very unbecoming way, "contradicting and interrupting as if he were disputing with me"; that when he was called up after the lecture, and "privately recommended to pay more attention in the future—he answered (still with increased violence of demeanor and tone) that he understood the subject—could follow the lecture without looking at me and had not his spectacles"; that when Sylvester recommended that he bring the latter in the future, "he answered in a very violent tone, manner and language, but the exact words I do not remember," that "Mr. Ballard's mode of addressing me has been almost uniformly marked with insolence and defiance"; Sylvester had then told the student "that such conduct must not be persisted in, and that if Mr. Ballard could not alter his conduct, he must cease to attend my lecture room; whereupon he answered with increased insolence and violence," though Sylvester could "not recall the terms employed"; to which Sylvester responded "that I had been in different parts of the world, but had never witnessed similar conduct in persons brought up amongst gentlemen"; to which Ballard replied that "I was not to prate to him, to hold my jaw, that I might go to hell—and other abusive terms which I cannot recall"; that Sylvester "declined altercation with him and ordered him to leave the room, which he declared he would not do"; that Sylvester, turning to "such of the class as remained, made some remarks on the disgracefulness and discreditable character of such conduct and language, and left the room," during which time "Mr. Ballard was guilty of additional abusive language."<sup>39</sup>

Sylvester further reminded his colleagues that twice during the preceding month, the student, Mr. Ballard, had acted in "obnoxious" ways, and "been reprimanded by the chairman, by order of the Faculty, for rudeness and insubordination." Since then, Ballard had left the lecture room "towards" but not after the close, "and answered with great rudeness when informed that it was against order." Moreover, "on the following day he answered to his name on being called in such

a way as to excite laughter in the whole class,” and when rebuked by Sylvester for his “peremptory tone in addressing me—he forgot what was due to his own position and not mine.”

Finally, Sylvester uttered words which doubtless evoked the anxieties of a faculty that remembered very well all they had endured during recent years—continuous gunfire, murder, horsewhipping, and physical assault, on a scale that still seems to have exceeded anything that any other American university had known then or thereafter: “The manner was such as to make me apprehend the probability of personal violence.”<sup>40</sup>

Writers on Sylvester’s departure from the University of Virginia have failed to give sufficient weight to Sylvester’s apprehension of personal violence, and to the faculty’s personal fears, well-grounded in the light of their recent previous experience. Even the authoritative account of Sylvester’s life and contributions in the *Dictionary of Scientific Biography* merely alludes to the “many lurid and conflicting stories of the reasons for his having returned to England,”<sup>41</sup> conveying the suggestion that the “lurid” circumstances were peculiar to Sylvester’s case, whereas the truth was that the faculty itself had been exposed to acts of such luridness that Sylvester’s response seems, by comparison, to have been of a restrained order. What these acts had been I shall shortly narrate. Meanwhile, however, Sylvester’s case proceeded to its denouement. The student Ballard was summoned before the faculty, as Sylvester withdrew. Ballard managed to introduce an oblique reference to the slavery issue: “Mr. Sylvester said I was no gentleman—or something equivalent—the exact words I do not recollect. I considered I was imposed upon, and spoken to in an authoritative manner—as an overseer speaks to a negro slave.”<sup>42</sup> That Ballard should have challenged Professor Sylvester with having treated him the way one treats “a negro slave” carried with it the suggestion that Professor Sylvester was not sufficiently attuned to the distinction between a gentleman and a slave. Furthermore, Ballard insisted he had answered Professor Sylvester, as he did other professors, with no disrespect: “Till I was ordered out of the classroom my language was not violent—or I did not intend it should be so.” On Ballard’s request for the testimony of bystanders, a fellow student, Mr. W. F. Weeks, also a Louisianan, was summoned; he recalled that Ballard had informed Professor Sylvester that the latter’s authority terminated when the lecture ended, and “that he would see him in hell first”; then, when Sylvester declared to

the bystanders that such behavior could not be considered brave or gentlemanly, and that Mr. Ballard had "never associated with gentlemen or been in genteel society," Ballard had replied that he (Sylvester) had (obviously) himself never associated with gentlemen.<sup>43</sup>

The faculty was in a quandary. To vindicate Sylvester might have provoked another student rebellion of the kind they had already experienced, with their homes on the grounds possibly destroyed, and with killing and injury once again taking place; the university might finally have been closed, perhaps permanently. The faculty had not appointed Sylvester in the first place; it was the visitors, one or two of whom still nourished Jeffersonian enthusiasms, who had sought him out in Britain, albeit for a trial appointment of one year. The professors themselves, however, remembering their sore experience of student uprisings, violence, and provocation, would not exonerate the student Ballard. They therefore adopted a face-saving formula: "the reprimand bestowed by the Professor of Mathematics upon Mr. Ballard" was, they decided, already "adequate to the offense committed during the lecture"; furthermore, though they could not but reprehend the student's "violent language" toward Professor Sylvester after the lecture, they were "unable to determine" how the professor's remarks "might extenuate" the student's conduct, and that consequently, they judged it "expedient" to submit "this much of the transaction" to the visitors at their next meeting. One professor asked to be excused from voting; he was the other newly appointed foreigner, the Hungarian Catholic, Charles Kraitsir.<sup>44</sup>

Sylvester read the minutes; at the meeting the next day, February 24, 1842, he protested both the decision and the procedure. He protested especially "the principle of introducing students of a class to give evidence against their professor," on the ground that it placed the latter in "a position of direct controversy and altercation with those over whom he is placed in a position of authority"; he noted, moreover, that the students who were giving evidence had stayed behind after the lecture "with the desire, of encouraging the student subject to reprimand in resistance to the lawful authority of his professor," and that the student witness, Mr. Weeks, had himself been "habitually ill prepared," and "admonished," and reported by the professor of mathematics. Sylvester denied "absolutely having ever said to Mr. Ballard 'that he had never associated with gentlemen or been in genteel society'—or having used a word to this effect." He reiterated that "from

the beginning, Mr. Ballard's attitude was that of open defiance."<sup>45</sup>

In response to a query by the chairman of the faculty, Sylvester named three good students who, in his opinion, would have responded to questions with correct testimony. Upon Sylvester's departure from the meeting, his colleagues did indeed summon them, but found, in their view, no substantial divergence in their versions from those of their classmates Ballard and Weeks. Sylvester subsequently protested again, in the faculty minutes for March 19, 1842, that he had never expressed "or entertained a *desire* that further testimony should be obtained from students," but had only, by way of reply to the chairman's question, said "he would have objected less to testimony" being sought from certain others; had he had "the faintest idea" that "fresh depositions were to have been taken," he would "have remained to address questions to the witnesses." The faculty in reply defended their procedure; they had taken it to be Sylvester's own view "that it would be but just and proper" to summon the student witnesses, and they observed that Sylvester protested their procedure only after having inspected the secretary's notes on the interrogation.<sup>46</sup>

At this juncture, the minutes of the faculty of the University of Virginia make an abrupt, unexplained transition. Only the entry of the board of visitors for their meeting of March 22, 1842, is recorded.

Resolved that the resignation of Mr. Sylvester be accepted, to take effect from and after the 29th day of the present month or at any earlier period that he may elect; that a copy of this resolution be forthwith communicated to him by the secretary, and that he be informed that in accepting his resignation the Board has not deemed it necessary to investigate the merits of the matter in difference between himself and the student Ballard, and does not mean to impute to Mr. Sylvester any blame in that matter.

What had happened between the dates of March 19 and March 22, 1842? No letter of resignation from Sylvester is actually cited by either the board or the faculty; his resignation nonetheless is accepted for any date whatever that he might elect, if earlier than March 29. Why this vagueness as to date? The following year, in the spring of 1843, when Sylvester was trying desperately to secure a post at Columbia College, and finding his chances damaged by the stories that circulated concerning his departure from Virginia, the faculty of the Universi-



ty of Virginia, in response to his request, unanimously enacted a resolution, moved by the eminent geologist William B. Rogers, in his favor.

The faculty of the University of Virginia, having been informed that Mr. Sylvester is a candidate for the chair of Mathematics in Columbia College, and having learned that his prospects of success are likely to be injuriously affected by erroneous impressions as to the circumstances of his separation from this Institution, desire, in justice to him, to correct any misconceptions on this subject which may now be operating to his disadvantage. They, therefore, beg leave to state that his separation from the University was entirely his own voluntary act occasioned as they conceive by his dissatisfaction at the course which his colleagues thought it proper to adopt towards a student whom Mr. Sylvester had reprimanded for inattention to the lecture room and whom in view of the circumstances they were unwilling to punish to the extent Mr. Sylvester required.<sup>47</sup>

A few days later, however, the board of visitors, unlike the faculty, refused to make a statement that Sylvester requested of them. The board resolved on July 4, 1843, to say nothing more.

Resolved, that, under all the circumstances of the case, considering the brief connexion of Mr. Sylvester with the Institution, and the action of the Board which took place on the occasion of his resignation, the Visitors deem it most consistent with propriety to abstain from any other expression of sentiment touching the matters of Enquiry embraced said communication, than that which was given in the resolution adopted on the 22nd of March, 1842, a copy of which was, at the time directed to be furnished to Mr. Sylvester.<sup>48</sup>

The five signatures included several old Jeffersonians as well as Jefferson's favorite grandson.<sup>49</sup> Thus arose the official version that the University of Virginia adopted concerning Sylvester's departure.

The minutes of university faculty or trustee proceedings, however, would provide a poor guide to the truth in cases where resignation or dismissal has involved questions of a religious or political kind. In such cases, a formula acceptable under the circumstances to both sides is often used to cast into the background facts which both sides would prefer to ignore, no matter how crucial they might have been in the actual outcome. Clearly something happened in Sylvester's case between March 19 and March 22 that made impossible his remaining at the University of Virginia; the account that the Reverend Dr. Dabney provided is, in its general outlines, the likeliest hypothesis, notwithstanding that it has been disputed by historians.

Moreover, it should be noted that even if the provocative incidents with the student assailants had not taken place, Sylvester would probably have had his post terminated at the end of the academic year. We learn this from a letter that Robert Lewis Dabney sent to his brother Francis on March 15, 1842. In the course of advising the brother on his choice of a school to attend and a profession to pursue, R. L. Dabney wrote: "it is almost certain that Sylvester will receive his walking papers at the end of the session, and if so, it is very probable that Mr. Powers will be called to the university."<sup>50</sup> Probably the knowledge among students that Sylvester's tenure would shortly end contributed to the disregard and disrespect they were showing for the professor, who found mathematical ideas the most wonderful of realities. Sylvester himself was probably living with the uncertainties of an intellectual Samson captive among the Philistines. The student R. L. Dabney had indeed chronicled to his mother, on December 23, 1841, that within a month of their arrival, the two new professors, Sylvester and Kraitsir, both foreigners, were finding their environs ever more antagonistic.

The two new professors, while they are very smart men, are an actual disadvantage to the discipline from their total ignorance of our character, and the proper means to support their own dignity. They are forever embroiled with some of the students and increase tenfold the inflammability of the students' feelings. Nothing but the most perfect dignity and self possession united with the greatest firmness will sustain a professor. . . . But these two men not only get mad in the lecture room, but they condescend to bandy words with the students. The consequence is that the students insult them every day, in some way or other, and they really have a great deal to complain of.

By contrast, there was, at the other extreme in popularity, the sixty-six-year-old Judge Tucker, "much loved," though colleagues regarded his lectures as "nonsensical," and even the student Dabney judged them as "dull and uninteresting." But Judge Tucker had dignity, and lived under the illusion, according to Dabney, "that he is dealing with men who have gentlemanly feelings . . . instead of . . . absurd, wrong-headed and selfish rascals. . . . One college principle is that the faculty are your enemies." The "fools," said their classmate, think that "they are revenging themselves by getting drunk, and behaving disorderly."<sup>51</sup> Professional dignity, however, had not saved the professors from murder, horsewhipping, physical assault, and menace to family and home. How would they behave if the Jewish cockney genius struck back?

*Judge Tucker's Evidence*

Fortunately, an additional document of the most trustworthy kind, hitherto unused, is now available to dispel any doubts as to what was in the minds of both the faculty and the visitors of the University of Virginia. It consists of a page of the autobiography of one of Sylvester's colleagues, Professor George Tucker. Of the six professors who met on February 23, 1842, the oldest and most respected was Judge George Tucker, the professor of moral philosophy, and the last survivor of the original faculty that Thomas Jefferson had personally chosen. Born in 1775 in Bermuda, Tucker was in 1842 the oldest professor at the university; he had served six years as a Congressman in Washington, D.C., prior to accepting the invitation of Jefferson and Madison to take the chair of moral philosophy. Advocates of free trade were disturbed by the rumor that Tucker was a protectionist, but were reassured when it proved unfounded.<sup>52</sup> Jefferson wanted for this position an American with practical experience in American politics; Tucker, a friend of the French Revolution, a thorough master of Adam Smith's *The Wealth of Nations*, confirmed Jefferson's trust by making contributions to economic theory that placed him, according to the *Encyclopaedia of the Social Sciences*, "among the foremost Americans of the pre-Civil War period."<sup>53</sup> A path-opener in the statistical analysis of American census reports, Tucker held the reasoned view that with the increasing density of population, the use of slaves would become more costly than free labor; thus the institution of slavery would come to an end because of the workings of economic forces.<sup>54</sup> Fortunately, his great-great-grandchildren preserved the manuscript of the "Autobiography of George Tucker," which was then published in 1961 in a perhaps out-of-the-way journal, the *Bermuda Historical Quarterly*.

In his "Autobiography," written during the first three months of 1858, Judge Tucker recalled the character of James Joseph Sylvester and the strange events of his Virginian interlude.

I received a letter from my former colleague T. H. Key of the London University in favor of Sylvester, accompanied by a printed volume of testimonials in his favor, given by the ablest men in England. It had secured to him the appointment of professor of Mathematics in the London University, where alone he could have been elected in that country in consequence of his being a Jew. I felt it to be my duty to communicate Key's letter, etc. to the Visitors, who unanimously appointed him, and at the succeeding session he entered on the duties of

his professorship—but with a rare genius for profound and refined investigation he was little acquainted with the ways and the conventional rules of society. He was moreover morbidly sensitive on the subject of his creed, his personal dignity, his infallibility, and very unscrupulous and fearless in showing his ill-humor, so that it soon proved impossible for either the students or his brothers to get along smoothly with him. In some dispute with one of his class, growing out of a trifle, they had a personal rencontre and he attempted to stab the student, but was fortunately prevented. His application to resign before the year was out was therefore readily acceded to by the Visitors, and, after failing in an application to be appointed Professor to a college of New York, when the Faculty of Virginia on his application cheerfully testified to his high intellectual qualifications, he returned to England, where he was placed in the employment well suited him of actuary to a great insurance company. Having only figures to deal with, his results may be safely relied on.<sup>55</sup>

An obvious animus against Sylvester seems apparent in Tucker's remarks; he regards Sylvester as one who could deal with figures but was incompetent with human beings. Yet Sylvester became the professor most revered at Johns Hopkins University for his genius, simplicity, and candor; consulted most frequently by its president, he was universally adored by his students, to whom he imparted a sense of their high vocation as the first mathematical school of thought in the United States.<sup>56</sup> Nonetheless, Judge Tucker's reminiscence indicates that Sylvester's Jewish creed (concerning which he was allegedly "morbidly sensitive") was one factor in the strains that developed between him, on the one side, and students and professors on the other. Unfortunately, Judge Tucker did not record for posterity the character of the religious or racial allusions or insults to which Sylvester conceivably may have been responding. Secondly, Judge Tucker makes it clear that a "personal rencontre" between Sylvester and a student, with whom he had been in previous dispute, did ensue, during which Sylvester "attempted to stab the student," and that this incident was the proximate cause of "his application to resign."

In short, there is a broad agreement between the Reverend Dr. Dabney and Judge Tucker, between the contemporaneous student and professor in 1842, concerning the events that culminated in Sylvester's departure from the University of Virginia. It is understandable that the faculty minutes, the student's testimony, the visitors' resolutions, and the remarks of Sylvester himself would have glossed over, or "suppressed," as we say today, whatever specific animadversions had been made concerning Sylvester's being Jewish. In the long history of anti-

Semitism, it has indeed been often said that Jews are “morbidly sensitive” concerning their Jewishness, though when the Jew has failed to resist some insult in a direct physical way, he has usually been accused of being unmanly. Judge Tucker fails to record what the then student, the Reverend Dr. Dabney, had more reason to remember, namely, that the student assailant struck first at Sylvester with a “heavy bludgeon.” Sylvester had already warned his colleagues that he expected a physical assault, and they had not disputed his apprehensions.

The two brothers who, according to the accounts of Dabney, Halsted, and Macfarlane, endeavored to “confront” Sylvester were probably William F. Weeks and Alfred C. Weeks, both from Louisiana, and both enrolled in the School of Mathematics under Sylvester;<sup>57</sup> W. F. Weeks had been the principal witness on behalf of Ballard, who had no brother as a fellow student at the university. Alfred C. Weeks, according to one writer, was dismissed from the university effective after March 2, 1842;<sup>58</sup> but the minutes of the faculty show merely that he had dropped mathematics on Sylvester’s request, and been reimbursed with the unused portion of his fee; as late as April 30, 1842, Alfred C. Weeks was still being cited for his excessive absences in moral philosophy. The student Ballard received a similar reprimand on that date in ancient languages.<sup>59</sup> It is not possible to determine which of the students wielded the bludgeon against Professor Sylvester; the university minutes aimed to gloss over such doings with a gentle nonstatement of cause. Sylvester had indeed a history of responding directly to gibes that were probably of an anti-Semitic character; at the adolescent age of fourteen, enrolled as a student in the University of London, he was after five months “shortly expelled for taking a table-knife from the refectory with the intention of sticking it into a fellow student who had incurred his displeasure.”<sup>60</sup> Sylvester thereupon, at the age of fifteen, matriculated at the Royal Institution at Liverpool in 1829; he won its first prize in the Mathematical School, but as H. E. Baker writes, “at this early period of life, too, he seems to have suffered for his Jewish faith at the hands of his young contemporaries,” and probably for this reason, he ran away from school and sailed to Dublin. Here Sylvester was accidentally met on the street by a judge of an Irish court whose wife was a cousin of the young runaway; the judge fed him, and sent him back to Liverpool.<sup>61</sup> Sylvester was to have no such luck when he fled in 1842 from Charlottesville to New York, jobless and near penniless.

*Violence and Disorder at the University of Virginia*

Regrettably, almost all the historians of Sylvester's career in Virginia have omitted to note that his encounter with violence, his decision for self-defense, was only a minor episode in a series of much more violent ones during this period in the history of the University of Virginia. Jefferson's "academical village," during its first twenty years, reached the zenith for violent outbreaks in the annals of American universities. The continuous violence had an especial poignancy, for it confuted Jefferson's dream of a university, dedicated to free inquiry and research and with complete freedom enjoyed by professors and students alike. Though the form of a resignation was maintained, Sylvester's "resignation" was in effect an ouster, done under the duress of a threatening recurrence of physical violence. That Sylvester's colleagues were little anxious to defend him signified that Jefferson's project of securing the ablest scientists and scholars throughout the world was henceforth shelved.<sup>62</sup> The students, at least the activists among them, wanted Virginians to teach them, not foreigners, least of all a Jew. The university, for the remainder of the century, avoided seeking any appointment of a foreign scholar. To safeguard the fragile peace on its grounds, the university chose provincialism and its prejudice, rather than the advancement of cosmopolitan, free, and unfettered inquiry.

The University of Virginia had opened its classrooms on March 7, 1825, with sixty-eight students in attendance; its average enrollment grew during the first seventeen sessions to 191. Of its first faculty of eight professors, four were British, one a German, and three American Southerners, of whom only one was a native Virginian. Jefferson, in his democratic vision, had designed not only the architecture but the rules and governance of the university. He believed that "by appealing to their reason, their hopes, their generous feelings, their honor, and their manhood," the students would require no rules; if treated as gentlemen and scholars, he opined, they would so behave. The students' behavior rapidly falsified Jefferson's hypothesis: "Disorder ran riot, the position of the professors became intolerable, they suspended their lectures, and tendered their resignations to the Board of Visitors." According to the university's historian, Jefferson had envisaged a "University of Adolescent Freedom," not a "College of Juvenile Dis-

cipline"; he hoped to see his "faith in abstract rights" fulfilled.<sup>63</sup> Soon, however, the students were energetically using "the pistol, dirk, bowie knife, and cowhide." Quarrels at card games terminated in violence; even a duel was not unknown, while drinking bouts abetted bravado despite the interposition of professors and sheriffs.<sup>64</sup> A political slogan always lends the dignity of ideology to the propensity for violence. In September 1825, the cry was sounded from a large crowd of masked students: "Down with the European professors!"<sup>65</sup> Professors became targets for missiles; a large bottle with a foul fluid was tossed into the house of one (George Long), a brick was hurled at another (John P. Emmet), a third (George Tucker) was assaulted with a cane, amidst a verbal bombardment of vulgarities.<sup>66</sup> When the faculty as a whole resolved to resign unless reforms in discipline were enacted, a "confrontation" (as it was later called) between the students and visitors took place in the Rotunda. Three former presidents of the United States faced a studentry in turmoil. As one student later remembered: "At a long table near the centre of the room sat the most august body of men I had ever seen—Jefferson, Madison, and Monroe, who had administered the government twenty-four out of thirty-six years of its existence under the Constitution; . . . Jefferson rose to address the students. He began by declaring that it was one of the most painful events of his life, but he had not gone far before his feelings overcame him, and he sat down."<sup>67</sup> The sight of the author of the Declaration of Independence, the venerable founder of their university, their rector, reduced to tears before a crowd of ignominious rowdies evoked a certain awareness of guilt.<sup>68</sup> Another visitor arose, calling upon the guilty ones to take responsibility for their acts; a nephew of his was among those who did. The worst offenders were expelled. Jefferson himself publicly acknowledged that "the experience of six months had proved that stricter provisions were necessary for the preservation of order, that coercion must be resorted to, where confidence has been disappointed." "Perhaps, in the whole course of his protracted and diversified life, Jefferson was never so keenly chagrined . . . as he was by the ungovernable temper which the students manifested. . . . His favorite theory was exploded," wrote the university's historian.<sup>69</sup> Jefferson's new resolution, calling for more powers for the faculty and admonishing students to shun "communion" with offenders, did not, however, succeed in curbing the studentry's propensity for violence.

Judge Tucker, later Sylvester's colleague, thought it was "the vices of drinking and gaming" that were the students' undoing, "these being the rocks on which so many youth in Virginia, and in all slaveholding states, had been wrecked." No doubt he was vividly reminded by Sylvester's plea to the faculty of his own altercation with students. As Tucker recorded in his "Autobiography":

After a while a party of students in disguise, marched about the lawn, as they had often done before, inviting and defying the notice of the Faculty. Dr. Emmet (the Professor of Chemistry and *Materia Medica*) who chanced to be at my house, and myself went out to try the effect of our remonstrances and to bring the offenders, when ascertained, before the Faculty. Emmet, in attempting to take hold of one of them, got into a boxing match with him. When I attempted to join them and to remonstrate with them—"They advised me to go to my logic"—and soon afterwards . . . one of them took up a piece of the brush . . . and seemed to threaten me with personal violence and some others followed his example, on which I determined to try the effect of appealing to their pride. "Gentlemen," I said, "you seem as if you meant to use violence against me. What can I do against you all?" and then, folding my arms, I said, "*If you are mean enough* to do so, you are welcome." On which they all threw down the brush and dispersed. The next day such of the rioters as were known were summoned before the faculty, and the principal offenders were dismissed.<sup>70</sup>

In November 1836, seventy students were summarily expelled for having combined illegally to keep firearms on the university grounds and for having ignored certain faculty regulations concerning their use. "University Volunteers," they called themselves, and on the second night after they rejected the faculty conditions, "disturbance commenced by the frequent firing of a musket or muskets on the lawn and elsewhere in the University, which was continued on the following night." An "outrageous riot" ensued on a subsequent night, "during which there was a continual roar of musketry on the lawn . . . apparently intended to celebrate the triumph supposed to have been already achieved by the combination, or to intimidate the Faculty into submission." Upon the students' expulsion, "a scene of unparalleled disorder and violence was immediately commenced (on a Saturday afternoon) which with little intermission was committed until late on Sunday night. The acts committed . . . were altogether different in their character from those which have usually distinguished college riots—they were the outrages of an infuriated mob. Our houses were attacked, the doors forced, and the blinds and windows broken. And there is reason



to believe that not content with this, they contemplated proceeding to the desperate extremity of entering our houses for the purpose of attempting personal violence." Thus wrote the chairman of the faculty and professor of law, John A. G. Davis.<sup>71</sup> As the university historian wrote: "The professors now began to arm themselves, in the expectation that they would be called upon to defend their families, not from mere personal assault as before, but from attacks with deliberate intention to kill."<sup>72</sup> Order was restored only when a grand jury returned indictments and a military force occupied the grounds. At least thirty students were expelled.

A year before Sylvester arrived at the University of Virginia, Professor John A. G. Davis was murdered. The killing of Professor Davis occurred during a celebration in 1840 of the anniversary of the riot of 1836, the so-called Military Rebellion. Its circumstances were set forth by the gifted state's geologist, Professor William B. Rogers, in a letter to his brothers a few days later.

This morning I assisted in laying another of my colleagues in the grave. My kind friend, and long my bosom companion, Davis died on Saturday evening of a wound received on the preceding Thursday night! He was shot in cold blood while watching the movements of a student who, disguised and masked, was making riotous noises and firing a pistol on the lawn. The assassin retired a few paces from Mr. Davis before firing, and then deliberately discharged his pistol. . . . He [Professor Davis] died a Christian hero.

Those engaged in the atrocious murder have been arrested, and he who fired the fatal ball, as well as his chief, . . . are in confinement. The students to a man joined in the pursuit of the villain. . . . No violence was attempted by Davis, but he was mildly exercising the proper supervision which appertained to his duty as Chairman. . . . It appears that the perpetrator of the crime, from all accounts a heartless though determined villain, had no particular grudge against Davis, but was determined . . . that he would shoot any professor who attempted to discover him while engaged in a riot.<sup>73</sup>

Professor Rogers spoke warmly of the sorrow that this tragedy had brought the students.

The murdered John A. G. Davis, the husband of Jefferson's grand-niece, had been a valued coworker of a former president of the United States, James Madison, and was a highly popular teacher, known for his amiability. His lectures on constitutional law attracted throngs of students who wanted to hear him "discuss the questions which Calhoun and Webster were debating . . . whether the Constitution was

a simple compact or a fundamental law.” Davis, “arguing on historical premises, taught absolute denial of the United States Courts in fixing by construction the rights of a state.”<sup>74</sup> Even a high states'-rights man might fall to the assassin's bullet in Jefferson's “academical village.”

Two years previously, Professor Rogers, the future first president of the Massachusetts Institute of Technology, had also experienced danger at close range to his family's lives. In 1838, the faculty, alarmed by the excessive drunkenness, declined to allow the students to celebrate Jefferson's birthday with a ball. Thereupon, the students ignited tar barrels on the lawn and marched in masked processions, firing volleys from their pistols and rifles. “Numerous students in disguise,” wrote Professor Rogers, “with firearms, paraded the lawn, assailed the doors and windows of some of the professors known to be unfriendly to the ball, and more particularly my own. At the same time the most insulting ribaldry was used, and their violence was such that neither I nor those in the house considered their persons safe. Accordingly we prepared ourself with firearms.” When the faculty convened the next day, “the chairman was personally threatened by one of the offenders,” and that night “another and worse scene of violence was presented.” The subsequent night as well, reported Rogers, “the dastards made a deliberate and almost silent attack upon my house. . . . They broke in my front door, stoned my house on all sides, and for half an hour one of them amused himself by breaking the glass of my back windows. The night was dark . . . and it was impossible to watch, or he would have been inevitably shot.” Though most of the students deplored the violence, they did not dare take a stand against their classmates: “but here is the evil,” wrote Rogers, “—their reprobation is not active, and it is only by being so that the institution can be saved. Our police is worthless; two or three rowdies can with impunity stone our dwellings, destroy our property, peril our lives, and take from us that quiet without which the situation is unworthy a man of science. . . . The very man who doubtless broke my windows I met this morning on the lawn. Can an institution be permanent thus governed? or can a professor consent to the degradation of such a life? I am determined not to do it, and, my dear brothers, I write to you to ask for your counsel. The pecuniary sacrifice of leaving the University would be great, but I shall have a support left. . . . I shall have time at my command, and my reputation as a man of science, which I of course

have much at heart, will be more promoted by having more time for research.”<sup>75</sup>

Actually Professor Rogers remained at the University of Virginia until the spring of 1853, much attached to the institution, though feeling himself isolated, “working on year after year in a university . . . somewhat remote and apart,” and yearning “for the stimulus of townlife and a more scientific atmosphere.”<sup>76</sup> He was cheered in 1842 when his brother Robert was appointed professor of chemistry and materia medica.<sup>77</sup> The episodes of student violence, however, never ceased. In 1845, the prolonged rioting required the intervention of the civil authorities; Rogers’s brother, Robert, embattled physically one of a marauding band, overcame him, and warned off the others by telling them “that he was armed, and that if they approached him it should be at their peril.”<sup>78</sup> William observed that “we have so large an admixture this year of cowardly rowdies” that it would be wise to let them know “that we are prepared to punish their insults on the spot.”<sup>79</sup> This was, of course, what the young British Jew, Sylvester, had dared to do in the first place, only to find himself deserted in his stand.

As Rogers narrated, things had come to such a pass that “almost every Faculty meeting” witnessed “a suspension or dismissal,” evoking “much heartburning” and “some vindictive feelings.” To add to the university’s problems, the phenomenon appeared, for the first time, of what is now called the “nonstudent”: “Unfortunately, we have no way of compelling dismissed students to go home,” wrote Rogers, “and hence those from the far South linger for months about the taverns of Charlottesville, rioting in dissipation and tempting away their former associates at the University. But enough of this.”<sup>80</sup> How much new under the sun?

Young Gessner Harrison, professor of ancient languages, was, at thirty-four years of age, the chairman of the faculty that heard Sylvester’s case in 1842. He had endured more than one physical assault on the part of students, most recently that which occurred in 1839, two years prior to Sylvester’s arrival. Harrison, shortly after leaving his lecture hall, was confronted by two “students,” one a suspender, the other a new expellee. One of them, the larger and stronger, “roughly seized” the professor, “and held him tightly in his arms,” while “the other laid on vigorously with a stout horsewhip. At least a hundred students rushed from all sides to the spot, but only two or three offered to interfere, and these so timidly and half-heartedly as to be brushed

aside." When Professor Harrison was released, he denounced the outrage; whereupon the attack was renewed. The culprits fled south, aiming to escape to Mississippi, but were captured, one of them sustaining a bullet wound in the shoulder. Next day, his friends, emulating Mark Antony, exhibited the bloodstained coat, and exercised their oratorical art anent the evil done by professors.<sup>81</sup>

Evidently the cultural climate helped spread the infection of violence even to faculty wives. The professor of modern languages, Charles Kraitsir, the Hungarian Catholic, had already been facing an uncertain tenure; his classes were rapidly diminishing in numbers. More important, his wife constantly ejected him from their house in the middle of the night, and most significantly, whipped him. In 1843, Kraitsir was dismissed.<sup>82</sup>

Of the five colleagues who considered Sylvester's academic fate and the protection of his person, the majority, three of them, Tucker, Rogers, and Harrison, evidently had reason, on the basis of their personal experiences, to fear student reprisals and riots. The fourth, a veteran of a Polish uprising against the Russians, was spiritually undermined by his personal situation. Understandably, they were too fearful a group to undertake with any enthusiasm the responsibility of defending the rights of the British Jewish mathematical genius, who spoke his opinions on slavery, philosophy, and life with a simple clarity, mathematical logic, and poetical verve.

The official historian of the University of Virginia, Philip Alexander Bruce, as we have seen, denigrated as fiction the report that a weapon-wielding student had assaulted Sylvester; instead he depicted Sylvester as an injudicious, oversensitive troublemaker. The bias and methodology of Bruce have been defined by Virginia's foremost historical scholar, the biographer of Jefferson, Dumas Malone: "He [Bruce] has an obvious partiality for the well-born and emphasizes . . . the aristocratic Virginia tradition of which, both as a scholar and man, he is himself a notable exemplar"; the "steady trend" of Bruce's scholarship was "toward the Old South myth."<sup>83</sup> Other scholars, scarcely nurtured in Virginian tradition and loyalty, have, however, also been prone to cast Sylvester in the role of the crotchety Jew who brought discord to an otherwise idyllic stage. The University of Virginia, which before the Civil War was the most bullet-ridden of America's universities, would probably have nullified the patience of even the legendary non-Jew, Job.

*Causes of Student Lawlessness*

Why was the studentry at the University of Virginia during the pre-Civil War years the most lawless and prone to extreme violence of all American universities? Various circumstances have been adduced: the students were accustomed to "the free life of the plantation";<sup>84</sup> as the masters of Negro slaves, they grew to maturity in an environment that lent itself to arrogance, even cruelty and bestiality; many of the students, furthermore, came from Western frontier states, for the University of Virginia at once became the preeminent center in the South for higher learning;<sup>85</sup> during Sylvester's year, 1841-1842, of the 170 students present there were 58 from other Southern states, a notable increase having taken place in the numbers from South Carolina, Georgia, Alabama, and Mississippi.<sup>86</sup> To the men of the frontier, weapons were the foundation of their survival against Indians, robbers, outlaws; it is noteworthy that Sylvester's student antagonist and probable two assailants came from plantations in Louisiana; the murderer of Professor Davis escaped to Texas. Only in 1859, when the spirit of turbulence was waning, was the board of visitors, on the faculty's advice, able to require that every student, when admitted, sign a pledge that he had surrendered to the proctor every dirk and pistol that he possessed.<sup>87</sup> Moreover, as William Barton Rogers observed, Charlottesville had become a center for what we call today "nonstudents," that is, persons who live in the university environs because they are fixated in the attitudes and practices of adolescent student rebellion.

Among many Americans, especially on the frontier, the drinking of inordinate quantities of alcoholic beverages was also taken as a mark of manhood; only as the temperance movement gained influence among professors, students, and townsmen in Charlottesville did violence begin to abate, though as late as 1850-51, the entire studentry fought a pitched battle with the Charlottesville police to rescue several of their arrested drunken classmates.<sup>88</sup> Above all, a goodly number of students were impregnated by their wealth with a dedication to non-scholarly pursuits, from fine clothes to mistresses. As Robert L. Dabney wrote his mother in October 1840:

Those students who are able, and are not prevented by principle dress in a most extravagant manner. . . . They do not think a coat wearable for more than two

months, and as for pantaloons and vests, the number they consume is beyond calculation. These are the chaps to spend their \$1,500 or \$2,000, and learn about three cents worth of useful learning and enough rascality to ruin them forever. . . . They have some old standing belles . . . whom they flirt with as their daily occupation.<sup>89</sup>

About two weeks after Sylvester's arrival at Virginia, Dabney reiterated that as far as the students' honor and "measure of morality" were concerned, they were making of "old Virginia . . . but a scurvy place . . . ; and, under the excuse that they are sowing their wild oats, they commit all sorts of vice." The "only curb on the conduct of five-sixths of the young men" was "sheer selfishness."<sup>90</sup>

It must be noted, moreover, that in slave societies, where fathers and sons, uncles and nephews, have access to the same subordinate group of female servants, an intense rivalry and challenge of a sexual kind may well arise. Thomas Jefferson's nephews in their unhappy histories were evidently drawn to favored slave women on his plantation.<sup>91</sup> A heightened generational antagonism among the young men of the master class and their elders may well have found a substitute target in the revolt against the professors of the University of Virginia. Jefferson, in an oft-cited, eloquent passage in his *Notes on the State of Virginia*, explored the "unhappy influence" of the slave institution on the character and the "manners" of his people: "The whole commerce between master and slave is a perpetual exercise of the most boisterous passions, the most unremitting despotism on the one part, and degrading submissions on the other. Our children see this, and learn to imitate it. . . . The parent storms, the child looks on . . . puts on the same airs . . . , gives a loose to his worst of passions."<sup>92</sup>

While all this is certainly to the point, there have been student classes with similar backgrounds that did not manifest such offensive behavior. The Russian university students of the nineteenth century, for instance, though the children of nobility and serf-owners, tormented themselves with questions as to the justice of their social order, and evinced little of the academic indiscipline peculiar to the Virginian students. The Russians too had their "plantations," Siberian frontier, and drunkenness, yet they evolved more often toward introspective patterns of feeling. Possibly the growing antislavery debate, creating a sectional cleavage, as Northern abolitionists assailed what they alleged was Southern depravity, placed all Southerners, including their student youth, into a stance of defensive defiance. At any rate, al-

though the Virginian students have been described as “xenophobic,” their antipathy to foreigners was dropped when the latter were clearly aligned with Southern institutions. George Frederick Holmes, who remained a British subject all his life, was nonetheless welcome as professor of history and literature in 1857–58 because he was renowned for his essentially positivist sociological defense of slavery;<sup>93</sup> Schele de Vere, who succeeded Kraitsir, Sylvester’s colleague, as professor of modern languages, was “a Swede by birth . . . a Prussian by allegiance . . . a Frenchman in appearance”; he was much valued, however, for a grace and suavity redolent of the Parisian boulevardier, and admired, with his silk hat and red coat, as “the arbiter of good form; what he endorsed was questioned by no one.”<sup>94</sup> Obviously, James Joseph Sylvester, cockney Jew and bubbling with mathematics, had little chance.

It must be borne in mind, moreover, that student unrest, often violent in character, was endemic in American colleges during the decade in which the University of Virginia was founded. The “Great Rebellion” of Harvard’s senior class in the spring of 1823 was marked by explosions, physical combat on the Commons, and the “ingenious vexing of tutors and professors”; of the seventy in the class, forty-three were expelled.<sup>95</sup> Yale in New Haven and the College of William and Mary in Williamsburg were beset with turbulence. Nonetheless, the University of Virginia led its peers with respect to its continuous armed violence and physical assaults. At Hampden-Sydney College, in nearby Prince Edward County, the astute James Marsh, later president of the University of Vermont, and the pioneer of American transcendental idealism, believed, as did George Tucker, that “slavery presses upon this southern country with an intolerable weight,” and that slavery mocked all his “plans for the intellectual and moral improvement of the people.”<sup>96</sup> All the more, Marsh felt that the Jeffersonian refusal to accord religion any place in his “academical village” would leave the students philosophically enfeebled, without the moral convictions to help them withstand the calls to physical indulgence and dissipation by their freethinking and freeliving classmates; he also disapproved of an academic regime under which examinations were lax, and a formal baccalaureate degree, with its attendant requirements, lacking. Marsh observed that Hampden-Sydney, a Presbyterian institution, was spared the indiscipline that was elsewhere so common.<sup>97</sup> Subsequently, as president of the University of Vermont, where he introduced a cur-

riculum that was based on a transcendentalist, antimaterialist, indeed anti-Jeffersonian, philosophy, Marsh asserted that as a consequence, “we have no combinations or rebellions, no feelings of jealousy,” and the “idle or vicious” were disapproved of by students as well as faculty.<sup>98</sup> Marsh was indeed a man of unique moral force; furthermore, his students were often backwoodsmen from impoverished farms and villages; there were no wastrels among them to lavish large sums on their attire and “belles,” such as abounded in Virginia. Those for whom education was achieved at a financial sacrifice for a direct vocational purpose were much less apt to fritter away their time in aimless violence. Intercollegiate athletic competition did not provide a vent for collective militance of aggressive energies until after the Civil War.<sup>99</sup>

### *Jefferson's Vision versus the Reality*

In accordance with Jefferson's high-minded liberal vision, the University of Virginia had virtually neither entrance requirements nor any formalized academic degrees. Jefferson envisaged a studentry motivated altogether by the desire for study and converse with masters in learning and science. The informality of its structure instead encouraged an atmosphere of decadence.

The induced resignation of Sylvester marked the end for a century of the Jeffersonian conception of the University of Virginia. When Jefferson had tried to make of his projected university a cosmopolitan center of learning and research, he sorrowfully failed to secure the freethinking, versatile English scientist Thomas Cooper for his faculty.<sup>100</sup> Then, in 1824, he had dispatched a young friend, Francis W. Gilmer, to Britain to recruit the best professors he could find. Indeed, a close relationship existed at the outset between the University of Virginia and the University of London, both of which were in gestation at the same time. In 1824, the founders of the future University of London considered carefully Jefferson's far-seeing *Rockfish Gap Report* with its exposition of the aims and principles of his proposed university. Distributed among the London founders by Jefferson's envoy, Jefferson's report afforded, according to the historian of the University of London, “the closest parallel to the ideals of those educational reformers” of whom Henry Brougham became the leader.<sup>101</sup> The Virginian envoy, Francis Gilmer, met with such eminent progressive



Englishmen as the utilitarian Jeremy Bentham; the later famed factory investigator, Leonard Horner; the pioneer in education for the working classes, George Birkhead; the Scottish utilitarian politician Brougham, reputed an "infidel"; and most often, with the lawyer Thomas Campbell, brother-in-law to the daughter of Patrick Henry, the celebrated Virginian revolutionary. Such men were foremost in the "association of liberals," as Bentham called them, who founded University College, London.<sup>102</sup>

The proposed London University, designed as a nonsectarian institution, aimed to provide an academic center for all those who, for religious reasons, were elsewhere denied either admission, as at Oxford, or a degree, as at Cambridge—Dissenters, Catholics, Jews. As Campbell said, it would be a university for the "middling rich," or as a magazine put it, the "middling classes."<sup>103</sup> A millionaire Jewish financier, Isaac Lyon Goldsmid, known as a utilitarian and an advocate of Negro emancipation, first brought together the chief spirits for guiding the project; Goldsmid's backing "ensured the considerable support of the Jewish community," so much so that the greatest Anglo-Jewish historian of recent years, Cecil Roth, characterized University College as "indeed in large measure a Jewish foundation"; when its classes met in 1826, Jews were, for the first time in England, admitted as students on terms of equality with their fellow students.<sup>104</sup> To this "association of liberals," Jefferson's proposed university seemed the counterpart in the New World of what they were trying to do in the Old. Jefferson, too, sought a modern university, attuned to the needs of democratic government, industry, agriculture, and science, and with its students free to elect their own courses. The British were designing a university adapted to the culture arising from the Industrial Revolution, with no religious requirements for either professors or students; they did, to be sure, prohibit ministers from membership on their council, but then Jefferson barred any Federalist from the professorship of law.<sup>105</sup> With the liberals' encouragement, Gilmer recruited four Englishmen to join the faculty of the University of Virginia; of these, two were closely associated with the founders of the London University College—George Long, age twenty-five, actually already appointed at London as professor of Greek language, literature, and antiquities,<sup>106</sup> and Thomas H. Key, who, when he became professor of Latin at London in 1828, had already served at Virginia in 1825, in

that interdisciplinary era as professor of mathematics. But Key resigned early in his Charlottesville career, to return to London in 1827; it was he who brought the name of Sylvester to the attention of the University of Virginia as a candidate for the chair in mathematics. Key, a "zealous supporter" of the Reform Bill of 1832, was also, fittingly, an active leader in the Society for the Diffusion of Useful Knowledge. George Long, despite his association with Jefferson and Madison, was restive with the poor preparation of Virginia's students; an "embarrassing member," Madison called Long, who shortly afterwards returned to London. Long denied the charge that the English professors had by their alleged severity of discipline provoked the student lawlessness that brought sorrow to Jefferson.<sup>107</sup>

With the departure of Sylvester, the illiberal party that had stormed and terrorized Jefferson's "academical village" virtually achieved its objective. The university that had had a cosmopolitan beginning and aspiration chose to be sectional instead; rather than share in the new philosophic and scientific ideas, it became parochial and traditionalist. No voices on its faculty arose to temper the growing intolerance of mind that cancelled any hope of compromise or the rational resolving of the terrible social and political problems arising from slavery. One searches in vain among its subsequent professors for the names of scientists of international note. Only Gildersleeve stood out among its later humanistic scholars, and in 1876 he joined Sylvester at Johns Hopkins, where they became good friends; for Sylvester too was learned in classical lore, with which he adorned his mathematical articles.<sup>108</sup>

#### *Anti-Semitism as a Factor*

To what extent anti-Semitism was influential among the community at the University of Virginia in the middle of the nineteenth century is difficult to estimate. Precise information is, of course, lacking. On the other hand, its persistence was attested twenty years later in a remarkable letter of a noble young man, universally respected, Gratz Cohen. The only son of a Savannah family, Gratz Cohen entered the University of Virginia in October 1862, staying for almost two years. He had already served in the Confederate Army, having, at the age of seventeen, enlisted as a "common soldier," and rising shortly to the rank of captain in the Georgian seaboard defense. Not only did his fellow

students elect him unanimously as president of the Jefferson Society, they asked him to write on their behalf a poem addressing those classmates who, having reached the age of eighteen, were departing as military volunteers.

Fervent in his Confederate patriotism, Cohen said in his long poem:

Go where our noble soldiers stem the invading tide,  
Go where Right opposes Might, where justice strives with pride;  
Go where your country needs you, where the foe is ten to one:  
The Lord of Hosts will lead you through whom all things are done.<sup>109</sup>

Although nearly an invalid, Gratz Cohen rejoined the Confederate Army trying to repulse Sherman's invading force. Commended for bravery in one engagement, he was killed in a later battle in March 1865, a few weeks before the war's end. A novel he had written, which was awaiting publication, also perished; the publisher's building and the author's manuscript were both burned when the city of Columbia was devastated by Sherman's army. For all his Confederate patriotism, Gratz Cohen, however, recognized that a strong anti-Semitic feeling pervaded the Southern cultural climate. From the University of Virginia on January 9, 1864, he wrote with feeling to his father in Savannah:

It is a mournful fact that in these troubled times when intolerance and prejudice cast their baneful seed throughout the land, which from one quarter of it to another ring with abuse of God's people, that we have done nothing for our religion and are blind to our own interests. Jewish wealth . . . has been scattered in all directions and for everybody's benefit, but their own . . . yet the newspapers of the country lift up their lying tongues against them and no defending voice has been heard. Why have we no Jewish newspaper to justify us before the world . . .<sup>110</sup>

Probably the university was a relatively more tolerant enclave in the illiberal Southern cultural climate.

Living near Charlottesville during Sylvester's residence was the famed Commander Uriah P. Levy, of the United States Navy. Highly unpopular, especially because of his duel with an anti-Semite, Levy had purchased Monticello, the estate of Thomas Jefferson, whom he much admired, and labored devotedly to restore its land and mansion. During 1841-42, Levy, awaiting a new naval assignment, was intermittently at Monticello. It is not known, however, whether the mathe-

matician and the naval officer ever met. Both men shared certain traits of character, and one of them indeed was that they were prepared to meet an overt challenge with arms. Levy was court-martialed several times; provocative incidents of anti-Semitic remarks and deeds were involved in a number of them. His most notorious duel arose out of one such incident in 1816. At a naval ball, Levy, after having ignored repeated anti-Semitic aspersions ("You damned Jew") and overt jostling, felt obliged to accept the challenge of a fellow naval officer. When the duel took place, Lieutenant Levy fired his first four shots in the air, despite the fact that his opponent aimed to kill each time; the fourth shot nicked Levy's ear. Whereupon Levy took aim for his fifth shot, and killed Lieutenant William Potter. In later years, the historian, and founder of the Naval Academy, George Bancroft, as Secretary of the Navy in 1845-46, wrote of the "strong prejudice against Capt. Levy, which seemed to me, in considerable part attributable to his being of the Jewish persuasion."<sup>111</sup> Levy is now most remembered for his part in achieving the abolition of flogging in the Navy. He and Sylvester were cast in the same mold.<sup>112</sup>

#### *Sylvester's Later Career*

Desperately seeking another post as professor of mathematics, Sylvester felt it advisable to circulate a pamphlet of testimonials previously written by his British friends, teachers, and colleagues; in a brief, reticent footnote, he explained his coming and going from Virginia. Adhering to the noncommittal formula of explanation endorsed by the Virginia faculty, an appended footnote stated:

Mr. Sylvester succeeded in obtaining this appointment the annual emoluments of which appeared, from the Proctor's Books, to have averaged for the last four years, \$3,900 per annum, exclusive of house and land; but, in consequence of differing in opinion with a majority of his colleagues in respect to certain acts of insubordination on the part of two students, he sent in an unconditional resignation a few months after accepting office.<sup>113</sup>

The men who had supported Sylvester's candidacy were a veritable assemblage of Britain's mathematical and scientific talent. The illustrious Augustus de Morgan had declared: "No person of his years in this country has more reputation than Mr. Sylvester as an original Mathematician or bids fairer to extend the exact sciences by his la-

bors." Charles Babbage, inventor of the calculating machine and former Lucasian Professor at Cambridge, told of Sylvester's "capacity for discovery" and "originality of invention." Sir John Herschel, the eminent astronomer and scientific logician, wrote of Sylvester's "new method of Eliminations," his discovery "in this difficult and intricate branch of abstract science." The Plumian Professor of Astronomy, the peculiar James Challis, averred that Sylvester possessed "analytical skill of the highest order" that would have won him a Smith's Prize but for a certain disqualifying factor; the president of Queen's College, Cambridge, Joshua King, stated more specifically that Sylvester, because of his Jewish persuasion, had been denied his degree despite his competitive rank as Second Wrangler. Sylvester's examiner, J. W. Heaviside, characterized him as "a person of very extraordinary philosophical abilities, and likely hereafter to contribute in extending the sphere of science."<sup>114</sup> But it was all to no avail. Sylvester's trumpet would breach no walls of Jericho. He waited for more than a decade before a post was finally offered him at the Military Academy in Woolwich.

Above all, the virtual ouster of Sylvester did terrible damage not only to Sylvester's career, but especially to the advancement of science itself. More than ten years of Sylvester's genius, precisely those years in one's twenties and thirties that are the optimal ones for mathematical creativity, were lost to humanity.<sup>115</sup> Sylvester in his old age was recognized, as Francis Galton tells us, as the most daring and brilliant mathematician of England.<sup>116</sup> His genius had already made itself manifest in remarkable papers written before he migrated to Virginia. As George Bruce Halsted wrote:

The five papers produced in the year, 1841, before Sylvester's departure for Virginia adumbrate some of his greatest discoveries. Then suddenly occurs a complete stoppage in this wonderful productivity. Not one paper, not one word, is dated from the University of Virginia. Not until 1844 does the wounded bird begin again feebly to chirp, and indeed it is a whole decade before the song pours forth again with mellow vigor that wins a waiting world.

The story of Sylvester's departure became magnified with disparaging accretions; by the time it reached Germany, Sylvester was being described as having murdered a man; years later President Daniel Coit Gilman of Johns Hopkins University, on a trip to Germany, undertook to dispel such rumors.<sup>117</sup> Disgraced, outcast from the mathematical

community, unable to secure any teaching post, unemployed for more than a year in New York City, Sylvester for ten years sought his livelihood as an actuary and at the legal bar. His publications then commenced to appear rapidly, thanks in large part to the wonderful stimulus of his friend Arthur Cayley, also an immense mathematical genius and a barrister. From 1850 onward, as Charles S. Peirce noted, Sylvester's papers during the next years followed one another "at an average rate of one every month."<sup>118</sup> Sylvester, we estimate, might well have given the world one hundred additional mathematical papers, conceived moreover during the age of greatest zest and originality. One cannot conjecture what further great mathematical conceptions were thus denied to the world, and to American and British scientific advance. Peirce, America's greatest logician, declared that Sylvester's logical powers had never been equaled by more than two or three of all the sons of men.<sup>119</sup> "A big block" of his life was wasted as the outcome of what Sylvester called "fighting the world." A miserable adolescent plantation bully, availing himself of a place and time during which scholars were intimidated, might have enhanced his petty ego with an awareness that he had succeeded in retarding the advancement of knowledge, in helping disable for several years an intellectual power and devotion that he probably envied and hated, and that was a rare asset to mankind. Nonetheless, "to Sylvester more than to any other man is due the remarkable impetus given to the science at that time," wrote the two chief historians of mathematics in America, David Eugene Smith and Jekuthiel Ginsburg. The *American Journal of Mathematics*, of which Sylvester was the prime founder in 1878, during its first ten years published papers by ninety different writers from many places and peoples; of these, one-third were Sylvester's own students. Thus was the first American scientific school created.<sup>120</sup>

Sylvester's experiences in "fighting the world" (as he called it)<sup>121</sup> confirmed his liberal loyalty to those classes of the community that suffered deprivation. He stood in 1872 as a candidate for election to the London School Board for the place vacated by Thomas Henry Huxley. As an advocate of extending public education to the working classes he declared in his election address: "If you send me to the London School Board, I shall be prepared, while looking forward to the gradual adoption of a National system of Education, to adhere to that wise and moderate compromise by which . . . you may obtain the

use of existing machinery." Among the scientists who supported Sylvester's candidacy were the astronomer Norman Lockyer and the zoologist Henry Walter Bates.<sup>122</sup> Six years later, at Johns Hopkins University, Sylvester's intervention enabled a woman, for the first time in the history of the United States, to attend regular classes as a graduate student. It all began when the later celebrated Christine Ladd, wishing to study with Sylvester, sent him several mathematical papers, and requested on their basis that she be admitted as a student. Sylvester, impressed by her work, urged President Gilman to secure her admission. Sylvester's enormous reputation as an intellectual phenomenon overawed the opposition, and the university's executive committee, hitherto recalcitrant to women, voted to allow her to attend Sylvester's lectures, though no others. But Christine Ladd's ability soon broadened the privileges and precedents. She even married four years later Sylvester's associate and favorite student, Fabian Franklin.<sup>123</sup> Above all, she became justly famed, as she herself described it, as "the first woman to have improved on Aristotle"; her theory of the "antilogism" brought an astonishing logical simplicity into the theory of the syllogism, and the name for her formula, the "antilogism," presciently connoted the stance of a first feminine opposition.

### *Sylvester's Jewish Commitment*

Sylvester remained a believing Jew all his life. The school that he had attended as a youngster was, under the direction of headmaster Leopold Neumegen, the best known of the Jewish schools in London.<sup>124</sup> In his maturity, Sylvester affirmed his theism in a curious, almost naïf note to his presidential address to the mathematical section of the British Association: "In philosophy, as in aesthetic, the highest knowledge comes by faith. . . . If an Aristotle, or Descartes, or Kant assures me that he recognizes God in the conscience, I accuse my own blindness if I fail to see with him."<sup>125</sup>

When the fame of his eminent fellow mathematician William Kingdon Clifford was at its height, and Clifford's provocative philosophical views were most influential, Sylvester remarked: "I only wish he would stick to mathematics, instead of talking atheism."<sup>126</sup> There was a Spinozist note in Sylvester's praise of the title *Nature* for the newly founded magazine in 1869.

What a glorious title *Nature* is. . . . It is more than cosmos, more than universe (les mondes). It includes the seen as well as the unseen, the probable as well as the actual. Nature and nature's God, mind and matter.

I am lost in admiration of the effulgent blaze of the idea it calls forth.<sup>127</sup>

There was little opportunity for Sylvester to take part in any Jewish religious observances while he lived in Charlottesville. Possibly a handful of Jews, small merchants of dry goods and groceries, were residents of Charlottesville, while at Monticello (as we have seen), where Jefferson had once resided, Sylvester might possibly have met a relative or two of the naval officer, Uriah P. Levy.<sup>128</sup> When he left Johns Hopkins University, however, in 1883, Sylvester contributed, through Mendes Cohen of the Baltimore Jewish community, a sum of money to be used for anonymous gifts to Jewish charities. Professor Fabian Franklin, his pupil and successor at Hopkins, recalled that Sylvester had been "a man of truly reverent mind and a sincere theist" who, when he used the expression "please God" with reference to future mathematical projects, did so "with an accent that showed it was not a mere form of words."<sup>129</sup>

Indeed, Sylvester's simple religious faith was such as to make him regard most sympathetically the foremost American evangelical preacher of his time. Sylvester was "greatly attracted" by the famed lay preacher Dwight Lyman Moody, who throughout the United States and Britain brought a message of God's fatherly love. Sylvester wrote that Moody was a "good and gifted man" who "was wont to call the penitentiary, where he gave comfort and hope to the outcasts of society, his parish church."<sup>130</sup> Indeed, at one of Moody's meetings, Sylvester sat on the platform, and joined enthusiastically in the hymn singing. This probably occurred sometime between October 28, 1878, and May 25, 1879, a period which Moody spent in Baltimore, delivering 270 sermons.<sup>131</sup> "He was the greatest revivalist of his age," said his admirers, echoing the sentiments of many thousands.<sup>132</sup> Sylvester ecumenically would have concurred; he remained, however, a Jew.

Returned to Britain, and a professor at Oxford in his last years, Sylvester was stirred to enthusiasm by a plan conceived by the Jewish communal leader, Oswald John Simon, for "making a spiritual revolution in Anglo-Judaism"; its purpose was to encourage independent-minded young men to enter the rabbinate; for several years, Sylvester discussed such problems with Simon, and then became an honorary member of the Maccabaeans, an association of Jewish professional



men that had been founded in London in 1891 "for the purpose of advancing the interests of Jewry." Simon later wrote in the *Jewish Chronicle* that Sylvester had been "a staunch Jew from first to last."<sup>133</sup> When he died on March 16, 1897, Sylvester was buried in the cemetery of the West London Synagogue at Dalston. His funeral was attended by the chief rabbi, the Reverend Dr. Hermann Adler, as well as by representatives of Oxford University and the Royal Society.<sup>134</sup>

Curiously, with his ebullient gift for innovation in terminology, Sylvester was also the first to introduce the letters of the Hebrew alphabet into mathematical papers. It began when he employed them to demarcate the sections in his paper on syzygetic relations, but evolved in more substantive directions.<sup>135</sup> This Jewish bravado estranged at least one famed German mathematician; Karl Weierstrass closely followed Sylvester's papers on the theory of algebraic forms, but when Sylvester used Hebrew characters, the classical language of the Ten Commandments, that was "more than he could stand and after that he quit him."<sup>136</sup> Was the great Georg Cantor, who used the Hebrew *aleph* to symbolize the transfinite, influenced by Sylvester's example?<sup>137</sup> And did such usage exacerbate the resistance to transfinite numbers? Cantor, it should be noted, was in 1904 "awarded the highest honor the Royal Society of London can confer, the Sylvester Medal."<sup>138</sup>

But the greatest act of Sylvester's on behalf of his fellow Jews and the principle of equal freedom came in his celebrated address on Commemoration Day at Johns Hopkins University in 1877. It was the first speech in the history of American universities to declare that anti-Semitism contravened the basic spirit of institutions dedicated to the advancement of science and scholarship. Writing "on a rather sudden call, within a few hours," Sylvester was inspired to a burst of "a wonderful piece of oratory" (as Halsted recalled it); drawing upon his own experience in Britain, Sylvester analyzed the deleterious effect that narrow class and sectarian influences had and still exerted on British science; he looked for the future to the greatness of the American universities, flourishing in a free setting, and providing an example to the world. For a moment, the mantle of the prophet seemed to have descended upon the old mathematician, battered since boyhood by a series of physical and emotional struggles against intolerance; his words merged into sheer poetry. The New England bard, James Russell Lowell, was visibly shaken and moved by this unexpected phenomenon, as "no one who saw will ever forget."<sup>139</sup>

For once, Sylvester could embattle the academic obscurantists on a public forum. He defined the enemy: “the narrow-minded class, or section of a class, of its [England’s] universities and chiefs . . . , the obscurantist class of her university professors and heads”; their policies would make England “inferior in intellectual weight and influence in the world to what she ought to, and but for them would have been.” This obscurantist class chose to emulate the successors of the Spanish Inquisition, “laboring to cut out an English university upon the pattern of the University of Salamanca”; “cowering behind *their* academic gowns, *Intolerance* found its last refuge.” “The great universities of England” had tried to prevent the granting of a charter to the University of London because they were hostile to any institution that would grant academic degrees without requiring a religious test. Indeed, “the official head of Physical Science” at the University of Cambridge signed a petition to exclude “all but members of the Church of England from holding office of instruction in the university.” But the “magnanimous English people had over-ruled the monkish objections of the professional and other chiefs of the retrograde party.” America, happily, was free from the monkish tradition of religious intolerance; “you in this favored land,” said Sylvester to his Baltimore audience, “are so far educated out of such pseudo-religious and anti-social views (survivals of a bygone age), that you will feel almost prompted to doubt the veracity of my statements.” “From Maine to Florida or from Chesapeake Bay to the shores of the Pacific,” said Sylvester, a petition for intolerance would not garner the signatures it attracted in Britain’s ancient universities. His own Cambridge University was still as it was when the Master of Trinity College, the famed Reverend Dr. William Whewell, made “strict inquisition” to ascertain whether a given student “professed the faith in which the founder of Christianity was educated, as in that case he must refuse to admit him as a student.” Like Disraeli, Sylvester adopted an historic circumlocution to avoid mentioning Judaism by name. As he spoke from his sources of personal experience, as America’s first Jewish undergraduate and graduate professor, and soon to be Oxford’s first Jewish professor, his emotion overcame his grammar:

If I speak with warmth on this subject, it is because it is one that comes home to me—because I feel what irreparable loss of facilities for domestic and foreign study, for full mental development and the growth of productive power, I have

suffered, what opportunities for usefulness have been cut off from them, under the effect of this oppressive monopoly, this baneful system of protections of such old standing and inveterate tenacity of existence.<sup>140</sup>

America was the country in which for all his early mishaps, Sylvester's mathematical genius had its highest fruition, a school of kindred spirits. "I believe there is no nation in the world," he wrote, "where ability with character counts for so much, and the mere possession of wealth (in spite of all we hear about the Almighty dollar) for so little as in America." And for "the benefit of my English friends," he said in 1877, rejecting with foresight the image of Mark Twain's Gilded Age, he rejoiced, rather, at "how widely diffused a spirit there exists in this country of disinterested love of learning."<sup>141</sup>

The University of Virginia, it might be recorded, moved in 1888 in turtlelike fashion to make a slight amend for its virtual ouster of Sylvester forty-six years earlier.<sup>142</sup> According to R. C. Archibald, the faculty expressed its "high appreciation" upon its acceptance of a portrait photograph of Sylvester presented to it by a Baltimore admirer. Actually, however, the faculty minutes on the subject were laconic: "The thanks of the Faculty are returned to Dr. Archer Atkinson, of Baltimore, for presenting a photograph of J. J. Sylvester, former Professor of Mathematics in the University."<sup>143</sup> In any case, the picture was lost in 1895 during a fire that destroyed Jefferson's famed Rotunda.

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### Notes

I am grateful for the kind permission of the Manuscripts Department, University of Virginia Library, for all citations from the Robert Lewis Dabney Papers (#38-219) and from the Minutes of the Faculty and the Minutes of the Rector and Visitors of the University of Virginia.

1. *The Collected Mathematical Papers of James Joseph Sylvester*, ed. H. F. Baker, vol. 4 (Cambridge, England, 1912), p. 588. "Glossary of New or Unusual Terms," *ibid.*, vol. 1, (Cambridge, 1904), pp. 580-586. Arthur Cayley, "James Joseph Sylvester," in *The Collected Mathematical Papers of Arthur Cayley*, vol. 13, (Cambridge, 1897), p. 46. See *The Oxford English Dictionary* (Oxford, 1933, 1961), vol. 4, p. 359; vol. 5, p. 450; vol. 2 p. 923; vol. 2, p. 1099. Alfred North

Whitehead, *A Treatise on Universal Algebra with Applications* (Cambridge, England, 1898), p. vi. "The general name to be given to the subject has caused me much thought: that finally adopted, Universal Algebra, has been used somewhat in this signification by Sylvester . . . in 1884." Also, *The Collected Papers of Charles Sanders Peirce*, ed. C. Hartshorne and P. Weiss, vol. 4, (Cambridge, Mass., 1933), p. 421. The "discriminant" and the "Hessian" were also christened by Sylvester. See George Salmon, *Lessons Introductory to the Modern Higher Algebra*, 4th ed., (Dublin, 1885), pp. 341-342.

2. *Collected Papers of Charles Sanders Peirce*, vol. 4, p. 506. Mark De Wolfe Howe, ed., *Holmes-Laski Letters: The Correspondence of Mr. Justice Holmes and Harold J. Laski, 1916-1935* (Cambridge, Mass., 1953), vol. 2, p. 1038. W. A. S. Hewins, *The Apologia of an Imperialist: Forty Years of Empire Policy* (London, 1929), vol. 1, p. 15.

3. H. F. Baker, "Biographical Notice," in the *Collected Mathematical Papers of James Joseph Sylvester*, vol. 4, p. xxii.

4. Karl Pearson, *The Life, Letters and Labours of Francis Galton*, vol. IIIA (Cambridge, England, 1930), p. 248.

5. Thomas Cary Johnson, *The Life and Letters of Robert Lewis Dabney* (Richmond, 1903), p. 52.

6. Emma Rogers and William T. Sedgwick, eds., *Life and Letters of William Barton Rogers* (Boston, 1896), vol. 1, p. 201.

7. *Catalogue of the Officers and Students of the University of Virginia: Session of 1841-42* (Charlottesville, n.d.), pp. 12-13.

8. David Eugene Smith and Jekuthiel Ginsburg, *A History of Mathematics in America Before 1900* (Chicago, 1934), p. 74. Also cf. Lao G. Simons, "The Influence of French Mathematicians at the End of the Eighteenth Century upon the Teaching of Mathematics in American Colleges," *Isis*, vol. 15 (1931): 110-111, 119, 120. Even in faraway Vermont the textbooks of the French mathematicians were being used in 1828. Julian Ira Lindsay, *Tradition Looks Forward: The University of Vermont: A History 1791-1904* (Burlington, Vt., 1954), pp. 273-274.

9. "Professor Sylvester's Arrival," *Collegian* (published by the Students of the University of Virginia), vol. 4, no. 11, (November, 1841): 62.

10. *Life and Letters of William Barton Rogers*, vol. 1, p. 192.

11. "University of Virginia," *Watchman of the South*, vol. 4, no. 50, (Richmond, Thursday, August 5, 1841).

12. Johnson, *Life and Letters of Robert Lewis Dabney*, pp. 52-53. Dabney's letter, clearly written in 1841, is erroneously given as written on December 15, 1840.

13. This passage was omitted in Johnson, *Life and Letters of Robert Lewis Dabney*, p. 53. Dabney's original letter to his mother, Elizabeth, is in the Dabney Collection 38-219, January-December 1841, Manuscript Division, Alderman Library, University of Virginia.

14. "In Virginia at this time the question of slavery was a subject of bitter contention, and Sylvester had a horror of slavery. The outcome was his almost immediate return"; Baker, "Biographical Notice," p. xxiii. "The delight of us students, however, was the rare reading of a paper by old Professor Sylvester." When, forty years previously, he had taught at the University of Virginia, "he aroused the hatred of some of the older students by his open criticism of the 'domestic institution' of slavery. Two of them declared they would 'ger' the 'semi-idiotic calculating boy' at the first opportunity. Sylvester bought a sword cane." Allen Kerr Bond, *When the Hopkins Came to Baltimore* (Baltimore, 1928), p. 37. According to the article in the famous eleventh edition of the *Encyclopaedia Britannica*, Sylvester "remained only six months" at Virginia . . . for certain views on slavery, strongly held and injudiciously expressed, entailed unpleasant consequences, and necessitated his return to England. *Encyclopaedia Britannica* (1911), s.v.

"James Joseph Sylvester," (vol. 26, p. 284). Likewise, according to Professor Barry Spain of London in the *Encyclopaedia Judaica* (Jerusalem, 1971), Sylvester's "outspoken sympathy for the slaves made it impossible for him to remain in Virginia" (vol. 15, p. 567).

15. Carolyn Eisele, *Studies in the Scientific and Mathematical Philosophy of Charles S. Peirce*, ed. R. M. Martin (The Hague, 1979), p. 316. Halsted inspired such men as L. Dickson, R. L. Moore, and H. B. Fine to their notable mathematical careers. David Eugene Smith, "George Bruce Halsted," in *Dictionary of American Biography* (New York, 1932), vol. 4, pp. 163-165. Roberto Bonola, *Non-Euclidean Geometry: A Critical and Historical Study of Its Development*, trans. H. S. Carslaw, 2d ed., (LaSalle, Ill., 1938), pp. 44, 86, 93, 100, 139.

16. Was the "intimate friend" of Dr. Dabney a student or a professor? If he had been a student, one might expect that Dr. Dabney would have said "a fellow student, an intimate friend of mine." Probably it was a professor whose identity Dabney felt he should not divulge. Sylvester, moreover, might not otherwise have acted so promptly on the advice. We are, however, in the realm of conjecture. Sylvester's "resignation" was possibly transmitted to his colleagues by this adviser.

17. George Bruce Halsted, "Original Research and Creative Authorship, the Essence of University Teaching," *Science*, n.s., 1 (Feb. 22, 1895): p. 205. Also cf. George Bruce Halsted, "De Morgan to Sylvester," *Monist* 10 (1900): 189.

18. George Bruce Halsted, "Sylvester at Hopkins," *Johns Hopkins Alumni Magazine* 4 (1916): 186.

19. Philip Alexander Bruce, *History of the University of Virginia, 1819-1919*, vol. 2, (New York, 1920-21), pp. 169, 309.

20. Thomas Ulvan Taylor, *Fifty Years on Forty Acres* (Austin, Texas, 1938), p. 297.

21. Cf. John D. Wade, "Robert Lewis Dabney," in *Dictionary of American Biography*, vol. 3, (New York, 1931), pp. 20-21.

22. Johnson, *Life and Letters of Robert Lewis Dabney*, p. 58.

23. *Ibid.*, pp. 261-262.

24. *Ibid.*, p. 264.

25. *Ibid.*, p. 280. R. L. Dabney, *Life and Campaigns of Lieut.-Gen. Thomas J. Jackson (Stonewall Jackson)* (New York, 1866), p. v.

26. G. F. R. Henderson, *Stonewall Jackson and the American Civil War* (1898; 2d ed., new imp., London, 1911), vol. 1, pp. xviii-xix.

27. Taylor, *Fifty Years on Forty Acres*, p. 82.

28. J. M. Colaw, "Alexander Macfarlane, M.A., D.Sc., LL.D.," *American Mathematical Monthly*, vol. 2, (January 1895): 1-4.

29. Alexander Macfarlane, *Lectures on Ten British Mathematicians of the Nineteenth Century* (New York, 1916), pp. 108-109.

30. Abraham Flexner, *Daniel Coit Gilman: Creator of the American Type of University* (New York, 1946), p. 70.

31. David S. Blondheim, "James Joseph Sylvester," *Jewish Comment* 23 (May 25, 1906): 39. David S. Blondheim, "A Brilliant and Eccentric Mathematician," *Johns Hopkins Alumni Magazine* 9 (1921): 121.

32. David S. Blondheim, "Sylvester at the University of Virginia," *Johns Hopkins Alumni Magazine* 9 (1921): 220.

33. *Ibid.*

34. Blondheim, "James Joseph Sylvester," p. 39. This article in a Baltimore Jewish journal understandably eluded the notice of all the historians of science and encyclopedists who have written accounts of Sylvester.

35. Harry Clemons, *Notes on the Professors for Whom the University of Virginia Halls and*

*Residence Houses are Named* (Charlottesville, 1961), p. 38. Gildersleeve became professor of Greek at the University of Virginia in 1856 when he was not yet twenty-five years old. He remained till 1876, when the Johns Hopkins University was founded.

36. Several long passages from the relevant minutes of the faculty of the University of Virginia were published in R. C. Yates, "Sylvester at the University of Virginia," *American Mathematical Monthly* 44 (1937): 193-201.

37. According to the university records, Ballard was born in 1828, and was thus not more than fourteen years old at this time. Probably the date was a misprint for 1818.

38. The three remaining professors were presumably absent: John P. Emmet, professor of chemistry and materia medica; James L. Cabell, professor of anatomy and surgery; Henry St. George Tucker, professor of law.

39. Yates, "Sylvester at the University of Virginia," p. 196.

40. *Ibid.*, p. 197.

41. J. D. North, "James Joseph Sylvester," in *Dictionary of Scientific Biography*, vol. 13 (New York, 1976), p. 217.

42. Yates, "Sylvester at the University of Virginia," p. 197.

43. *Ibid.*, pp. 197-198.

44. *Ibid.*

45. *Ibid.*, p. 198. At that same meeting on Feb. 24, 1842, the Catholic, Professor Kraitsir, reported a similar incident concerning a discourteous student who had refused to leave the classroom. Kraitsir himself had been obliged to leave to the accompaniment of foot-pounding and hand-clapping by students. The student defended himself, saying that the professor had spoken "rather roughly." Nonetheless, the faculty found him "guilty of contumacy," and dismissed him from the university. *Minutes of the Faculty, University of Virginia*, vol. 6. Sylvester received no such support from his colleagues.

46. *Minutes of the Faculty, University of Virginia*, vol. 6, March 19, 1842.

47. *Ibid.*, June 30, 1843, Manuscript Division, Alderman Library.

48. *Minutes of the Rector and Visitors of the University of Virginia*, vol. 3 (1837-1853), pp. 71-72.

49. Bruce, *History of the University of Virginia*, vol. 3, p. 196; vol. 1, pp. 159, 152, 144, 234.

50. R. L. Dabney to Family and Friends, Jananuary-June 1842, Dabney Papers 38-219, Manuscript Division, Alderman Library, University of Virginia.

51. R. L. Dabney to Mrs. Elizabeth Dabney, December 23, 1841, January-December 1841, Dabney Papers 38-219, *ibid.* In an essay written in 1842 for his fellow students, Robert L. Dabney reiterated sardonically: "The very first thing for you to learn is that college life is a state of war against the Professors who are your natural enemies." The essay, intended for the *Collegian*, was entitled "Experientia Compert[?] ad usum Posterorum." Dabney Collection, January-June 1842, 38-219.

52. Tipton R. Snavely, *The Department of Economics at the University of Virginia, 1825-1956* (Charlottesville, 1967), pp. 516-521. "Autobiography of George Tucker," p. 139. Also cf. Clemons, *Notes on the Professors*, p. 134.

53. Harold U. Faulkner, "George Tucker," in *Encyclopaedia of the Social Sciences* (New York, 1935), vol. 15, p. 127.

54. Robert Colin McLean, *George Tucker: Moral Philosopher and Man of Letters* (Chapel Hill, 1961), pp. 43-44, 193, 226.

55. "Autobiography of George Tucker," *Bermuda Historical Quarterly* 18, nos. 3 and 4 (1961): 153.

56. "Sylvester was quick-tempered and impatient, but generous, charitable, and tender-

hearted. He was always extremely appreciative of the work of others, and gave the warmest recognition to any talent or ability displayed by his pupils. He was capable of flying into a passion on slight provocation, but did not harbor resentment, and was always glad to forget the cause of quarrel at the earliest opportunity." Fabian Franklin, "James Joseph Sylvester," in *People and Problems: A Collection of Addresses and Editorials* (New York, 1908), p. 24.

57. *Catalogue of the Officers and Students of the University of Virginia: Session of 1841-42*, p. 8.

58. Yates, "Sylvester at the University of Virginia," p. 201.

59. *Minutes of the Faculty, University of Virginia*, vol. 3, 1837-1855, Manuscript Division, Alderman Library.

60. H. Hale Bellot, *University College London 1826-1926* (London, 1929), p. 180.

61. Baker, "Biographical Notice," p. xvii.

62. "We have proposed, therefore to call to it characters of the first order of science from Europe, as well as our own country," wrote Jefferson on Dec. 28, 1822. David M. R. Culbreth, *The University of Virginia* (New York, 1908), p. 119.

63. Johnson, *Life and Letters of Robert Lewis Dabney*, p. 56.

64. Bruce, *History of the University of Virginia*, pp. 294, 291.

65. *Ibid.*, p. 298.

66. *Ibid.*, vol. 2, pp. 298-299.

67. *Ibid.*, p. 299.

68. Thomas Perkins Abernethy, *Historical Sketch of the University of Virginia* (Richmond, 1948), p. 9.

69. Bruce, *History of the University of Virginia*, pp. 264-265.

70. "Autobiography of George Tucker," pp. 137-138.

71. *Life and Letters of William Barton Rogers*, vol. 1, pp. 138-139.

72. Bruce, *History of the University of Virginia*, vol. 2, p. 306.

73. *Life and Letters of William Barton Rogers*, vol. 1, pp. 176-177. Also cf. Johnson, *Life and Letters of Robert Lewis Dabney*, p. 57.

74. Bruce, *History of the University of Virginia*, pp. 169-170. W. Gordon McCabe, *Virginia Schools Before and After the Revolution* (Charlottesville, 1890), p. 42.

75. *Life and Letters of William Barton Rogers*, vol. 1, pp. 158-159.

76. *Ibid.*, p. 333.

77. *Ibid.*, p. 216.

78. *Ibid.*, p. 247.

79. *Ibid.*

80. *Ibid.*, p. 248.

81. Bruce, *History of the University of Virginia*, vol. 5, p. 294.

82. *Ibid.*, pp. 161-162.

83. Darrett B. Rutman, "Philip Alexander Bruce: A Divided Mind of the South," *Virginia Magazine of History and Biography* 68 (October 1960): 402.

84. Bruce, *History of the University of Virginia*, vol. 2, p. 262.

85. "Previous to 1842, there was a remarkable increase in the number of young men matriculating at the University of Virginia who had come up from the communities of the Gulf and the Southwest." Bruce, *History of the University of Virginia*, vol. 3, p. 4.

86. *Ibid.*, vol. 2, pp. 74-75.

87. *Ibid.*, vol. 3, p. 128.

88. *Ibid.*, p. 127.

89. Johnson, *Life and Letters of Robert Lewis Dabney*, p. 54.

90. *Ibid.*, p. 55.
91. Dumas Malone, *Jefferson and His Time*, vol. 6, *The Sage of Monticello* (Boston, 1981), p. 513; vol. 4, *Jefferson the President, First Term, 1801-1805* (Boston, 1970), pp. 497-498. Cf. Fawn M. Brodie, *Thomas Jefferson: An Intimate History* (New York, 1974), pp. 30, 473. Boynton Merrill, Jr., *Jefferson's Nephews: A Frontier Tragedy* (1976, reprint ed., New York, 1978), pp. 49, 85.
92. Thomas Jefferson, *Notes on the State of Virginia*, ed. William Peden (Chapel Hill, 1955), p. 162.
93. Bruce, *History of the University of Virginia*, vol. 3, p. 88. Tipton R. Snavely, *The Department of Economics at the University of Virginia*, pp. 47, 87. Holmes wrote to Auguste Comte, the philosopher of positivism, that apart from his differences with respect to religion, "I am even now a sincere positivist, in spirit, aim, and even mode of procedure, and have long been so." Richmond L. Hawkins, *Auguste Comte and the United States, 1816-1853* (Cambridge, Mass., 1936), p. 121. Harvey Wish, "George Frederick Holmes and the Genesis of American Sociology," *American Journal of Sociology* 46 (1941): 698-707. Holmes's views that economic factors would bring about the decline of slavery were actually identical with those of Karl Marx. Neal C. Gillespie, *The Collapse of Orthodoxy: The Intellectual Ordeal of George Frederick Holmes* (Charlottesville, 1972), pp. 192-193, 124.
94. Bruce, *History of the University of Virginia*, vol. 3, pp. 81-82.
95. David B. Tyack, *George Ticknor and the Boston Brahmins* (Cambridge, Mass., 1967), p. 99.
96. David E. Swift, "James Marsh at Hampden-Sydney, 1823-1826," *Virginia Magazine of History and Biography* 80 (1972): 328.
97. *Ibid.*, p. 321. Cf. Virginius Dabney, *America's Bicentennial '76 College: The Story of Hampden-Sydney College in Virginia* (New York, 1973), pp. 7-12.
98. Swift, "James Marsh at Hampden-Sydney," p. 232. Lewis S. Feuer, "James Marsh and the Conservative Transcendentalist Philosophy," *New England Quarterly* 31 (1958): 3-31.
99. John Allen Krout, *Annals of American Sport* (New Haven, 1929), pp. 144-145.
100. Dumas Malone, *The Public Life of Thomas Cooper 1783-1839* (Columbia, 1961), pp. 239-245.
101. Bellot, *University College, London*, pp. 11, 16. Cf. John S. Patton, *Jefferson, Cabell and the University of Virginia* (New York, 1906), pp. 83-88.
102. Negley Harte and John North, *The World of University College, London, 1828-1978* (London, 1978), p. 10. Bellot, *University College, London*, pp. 15-16.
103. Bellot, *University College, London*, pp. 47-48. Harte and North, *World of University College*, p. 12.
104. Bellot, *University College, London*, p. 29. Cecil Roth, "The Jews in the English Universities," *Jewish Historical Society of England, Miscellanies, Part IV* (London, 1942), p. 108.
105. Bruce, *History of the University of Virginia*, vol. 2, p. 24; vol. 1, pp. 15, 327-329. Harte and North, *World of University College*, p. 15. Bellot, *University College, London*, p. 342. W. W., "Thomas Hewitt Key," in *The Dictionary of National Biography*, vol. 11 (London, rep., 1921-22), pp. 84-86.
106. Bruce, *History of the University of Virginia*, vol. 2, p. 146.
107. *Ibid.*, vol. 2, pp. 263-264.
108. "Address on Commemoration Day at Johns Hopkins University, 22 February 1877," *The Collected Mathematical Papers of James Joseph Sylvester*, vol. 3 (Cambridge, England, 1909), p. 84.
109. "Gratz Cohen," in John Lipscomb Johnson, *The University Memorial: Biographical*



*Sketches* (Baltimore, 1872), p. 706.

110. Bertram W. Korn, *American Jewry and the Civil War* (New York, 1970), p. xx.

111. Aaron Kanof, "Uriah Phillips Levy: The Story of a Pugnacious Commodore," *Publications of the American Jewish Historical Society* 39 (1949), pt. 1, p. 25. Donovan Fitzpatrick and Saul Saphire, *Navy Maverick: Uriah Phillips Levy* (New York, 1963), pp. 62–66. M. A. DeWolfe Howe, *The Life and Letters of George Bancroft* (New York, 1908), vol. 1, p. 275. Levy's case, however, is not discussed.

112. According to Benjamin Blake Minor, a student at the University of Virginia between 1834 and 1837, the "Misses Levy," presumably the nieces of the captain, "were personae gratae in the family of Dr. George W. Blatterman, Professor of Modern Languages." Minor, attending a social gathering at the Blatterman house, met the "Misses Levy," and was invited to visit Monticello. "The Misses Levy received us very courteously and cordially, entertained us with intelligent conversation, treated us to cake, wine and fruit, and told us and showed us many things which interested the former owner [Jefferson]." Bringing his father with him on his next visit, Minor was again courteously and hospitably entertained "by the same sisters." Louis Ginsberg, *Chapters on the Jews of Virginia, 1658–1900* (Petersburg, Va., 1969), pp. 53–54. Professor Blatterman, sadly to relate, also experienced personally the turbulence of the studentry. In 1838, an altercation in his lecture room with an impertinent student led, "in the midst of a scene of extraordinary confusion," to the student's striking Professor Blatterman "repeatedly." The professor, Jefferson's own appointee, was in 1840 dismissed from the university, allegedly for having twice cowhided his wife, once in public view. The chairman of the faculty reported that it was the "general opinion that Mrs. Blatterman had done nothing which could in the slightest degree, extenuate the enormity of the act." It is not clear how this was known. Student lore still preserves the memory of the incident. The university consented, nonetheless, to have Blatterman buried in its cemetery. Bruce, *History of the University of Virginia*, vol. 2, pp. 159, 160, 293; *Cavalier Daily*, November 10, 1978, p. 4.

113. *Testimonials of J. J. Sylvester, Esq. A.M., F.R.S.* (London, 1841), p. 35. The number of students taking courses in the School of Mathematics in 1841–42 made it among the larger of the university's schools. The forty-seven in mathematics were more numerous than the forty-one in natural philosophy, the forty-six in moral philosophy, the thirty-nine in medicine, the thirty-nine in ancient languages, and the forty-eight in modern languages. That was why Sylvester's salary and tuition fees exceeded the average at that time of \$2,300. *Catalogue of the Officers and Students of the University of Virginia 1841–42*, p. 4. Bruce, *History of the University of Virginia*, vol. 2, pp. 80–81, vol. 3, p. 98.

114. *Testimonials of J. J. Sylvester*, pp. 3, 11, 17, 23–24, 32, 33, 34.

115. Harvey C. Lehman, *Age and Achievement* (Princeton, 1953), pp. 291, 180–183.

116. The council of the Royal Society deliberated whether to choose Cayler or Sylvester as the recipient of the Copley Medal, its highest honor. Galton, a member of the council at that time, tells how they were guided by the opinions of "the eminent mathematicians" into choosing Sylvester first. Francis Galton, *Memories of My Life* (New York, 1909), pp. 71–72.

117. Hugh Hawkins, *Pioneer: A History of the Johns Hopkins University, 1874–1889* (Ithaca, N.Y., 1960), p. 158.

118. Charles S. Peirce, Review of *The Collected Mathematical Papers of James Joseph Sylvester*, vol. 1, *Nation*, 70, no. 2045 (Sept. 8, 1904): 204.

119. Halsted, "Sylvester at Hopkins," p. 188.

120. Smith and Ginsburg, *History of Mathematics in America Before 1900*, pp. 104, 127.

121. Halsted, "Sylvester at Hopkins," p. 186.

122. "Science at the London School Board," *Nature*, March 21, 1872, p. 410.

123. Hawkins, *Pioneer*, pp. 263–264. A predecessor, M. Carey Thomas, had not been allowed to attend classes. M. H. Dobkin, ed., *The Making of a Feminist: Early Journals and Letters of M. Carey Thomas* (Kent State University Press, 1979), p. 150.
124. Harold Pollins, *Economic History of the Jews in England* (East Brunswick, N. J., 1982), p. 89.
125. Sylvester, *The Laws of Verse* (London, 1870), p. 114. *Collected Mathematical Papers of James Joseph Sylvester*, vol. 2 (Cambridge, 1908), p. 716.
126. Franklin, “James Joseph Sylvester,” p. 25. Baker, “Biographical Notice,” p. xxxvi.
127. Raymond Clare Archibald, “Material Concerning James Joseph Sylvester,” in M. F. Ashley Montagu, ed., *Studies and Essays in the History of Science and Learning Offered in Homage to George Sarton* (New York, 1944), p. 215. A solitary reference to Spinoza occurs in Sylvester’s Oxford Inaugural Lecture, *Collected Mathematical Papers*, vol. 4, p. 298.
128. Ginsberg, *Chapters on the Jews of Virginia*, pp. 61–62, 54.
129. Franklin, *People and Problems*, p. 25. Blondheim, “James Joseph Sylvester,” p. 39.
130. Sylvester, *Spring’s Debut*, cited in Blondheim, “A Brilliant and Eccentric Mathematician,” p. 133.
131. J. C. Pollock, *Moody Without Sankey: A New Biographical Portrait* (London, 1963), p. 183.
132. L.A.W., “Dwight Lyman Moody,” *Dictionary of American Biography*, vol. 7 (New York, 1934), p. 104. William R. Moody, *The Life of Dwight L. Moody* (New York, 1900), p. 311.
133. Henry Davenport Northrop, *Life and Labors of Dwight L. Moody* (1899, n.p.), p. 179.
134. Blondheim, “James Joseph Sylvester,” p. 38. *Universal Jewish Encyclopedia* (1942), s.v. “The Maccabaeans” (vol. 8, p. 238). Oswald John Simon, the son of the first Jewish judge in England, became active in Jewish affairs when the persecution of Jews in Russia became more virulent in 1890. Cf. *Universal Jewish Encyclopedia*, vol. 9, p. 547. Oswald John Simon, “The Mission of Judaism,” *Fortnightly Review*, n.s. 60, (1896): 577–589.
135. Blondheim, “James Joseph Sylvester,” p. 38. Baker, “Biographical Notice,” p. xxxvi.
136. *Collected Mathematical Papers of James Joseph Sylvester*, vol. 1, pp. 572–579. Also, for his use of the Hebrew letters *shin* and *teth*, in cubic functions, *ibid.*, p. 422. Vol. 2, pp. 12–14.
137. Robert Edward Moritz, *On Mathematics*, formerly entitled *Memorabilia Mathematica* (1914; reprint ed., New York, 1958), p. 180.
138. Joseph W. Dauben, “Georg Cantor and Pope Leo XIII: Mathematics, Theology, and the Infinite,” *Journal of the History of Ideas* 38 (1977): 85–108.
139. Joseph Warren Dauben, *Georg Cantor: His Mathematics and Philosophy of the Infinite* (Cambridge, Mass., 1979), p. 248.
140. Halsted, “Original Research and Creative Authorship,” p. 205. Even Sylvester’s address, however, proved powerless to arrest the “monomania” that Lowell developed with respect to the Jews while he served as minister to Great Britain from 1880 to 1885; “he detected a Jew in every hiding place and under every disguise”; Gladstone, Lord Granville, and Robert Browning, he judged, were descended from Jews, principally because they were able men; a fear possessed Lowell as to the future when Jews would thus rule. Horace Elisha Scudder, *James Russell Lowell: A Biography* (Boston, 1901), vol. 2, p. 303. Martin Duberman, *James Russell Lowell* (Boston, 1966), p. 307.
141. *Collected Mathematical Papers of James Joseph Sylvester*, vol. 3, pp. 80–83.
142. *Ibid.*, p. 77.
143. Archibald, “Material Concerning James Joseph Sylvester,” p. 100.
144. *Minutes of the Faculty of the University of Virginia*, March 1, 1888, p. 266.