LINCOLN AND THE MARFAN SYNDROME: THE MEDICAL DIAGNOSIS OF A HISTORICAL FIGURE

Gabor S. Boritt
Adam Boritt

THIRTY-ONE YEARS AFTER Abraham Lincoln's death, in 1896, Antoine Bernard-Jean Marfan, professor of pediatrics in Paris, published the case history of a five-and-a-half-year-old girl who suffered from a syndrome that was to bear his name. During the decades that followed others defined the disease with increasing precision. The Marfan syndrome thus became known as a dominantly inherited illness of the connective tissues with incomplete penetrance, and its cardinal manifestations as being skeletal (elongation and thinness of the bones), ocular (displacement of the lens), and cardiovascular (dilatation and dissection of the ascending aorta). Ninety-seven years after Abraham Lincoln's death, in 1962, he was identified as a victim of the Marfan syndrome.[1]

The first diagnosis came from Abraham M. Gordon, a Kentucky internist affiliated with the University of Louisville Medical School, who had both clinical and research experience with the Marfan Syndrome. His findings, published in the *Journal of the Kentucky Medical Association*, were based chiefly on the physical description of the lanky president and to a lesser degree on corroborating evidence in Lincoln's maternal lineage—high-pitched voice, and high intelligence. Gordon tentative-

A longer version of this paper was presented at the seventy-fifth annual meeting of the Organization of American Historians, in Philadelphia, on April 2, 1982. We acknowledge our indebtedness to the commentators, David Brion Davis of Yale University, James M. McPherson of Princeton University, and Reed E. Pyeritz of The Johns Hopkins University Medical School, as well as to the earlier comments of Don E. Fehrenbacher of Stanford University, and the subsequent comments of anonymous readers.

[1] A. B. Marfan, "Un cas de déformation congénitale des quatre membres, plus prononcée aux extrémités, caractérisee par l'allongement des os avec un certain degré d'amincissement," *Bulletin et mémoires de las société médicale des Hôpitaux de Paris* 13 (1896): 220–26; Victor A. McKusick, *Heritable Disorders of Connective Tissue*, 4th edition (St. Louis, 1972), 61–65; Abraham M. Gordon, "Abraham Lincoln—A Medical Appraisal," *The Journal of the Kentucky State Medical Association* 60 (1962): 249–53. The term "dominantly inherited" means that of the two gene alleles, one from each parent; the one causing the disease is dominant over the other. "Incomplete penetrance" means that the disease shows up with variable frequency in individuals carrying the affected gene, depending on other factors, genetic, environmental, or both.

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ly noted the possibility of ocular symptoms as well. And his conclusions were far-reaching. More important than explaining Lincoln's peculiar physical appearance, the Marfan syndrome, Gordon suggested, helped explain Lincoln's greatness. In an interview with the medical columnist of *Newsweek* magazine he promised further research. "I'd like to find out how much of Lincoln is Lincoln and how much is Marfan Syndrome."[2]

Gordon believed that his diagnosis could help resolve the questions about Lincoln's ancestry as well and identify the presumably unknown sire of his mother. "I would search," he wrote, "for a Virginia family that carries the stigma of this disease who were probably neighbors to Joseph Hanks, Lincoln's great-grandfather. If such a family can be uncovered I believe Lincoln's maternal grandfather will be found among them."[3]

Then in February 1964, a more persistent champion of the Lincoln-Marfan diagnosis appeared in California physician Harold Schwartz, an instructor at the University of Southern California School of Medicine. Writing in *The Journal of the American Medical Association*, he suggested the Marfan diagnosis for Lincoln through the *paternal* line. In 1959 Schwartz had diagnosed a young patient as suffering from the Marfan syndrome. Some months later when the boy's grandmother came to inquire about the child, her name turned out to be Lincoln. This was my " 'burning bush' moment," Schwartz later said in an interview with *Time* magazine. He had connected the sixteenth president with the Marfan syndrome, independently from Gordon.[4]

Schwartz went about trying to substantiate his hunch methodically. He provided skeletal indices for Lincoln and eye findings, and he noted the lack of cardiovascular involvement, while raising the possibility of such a problem in the Lincoln line. Schwartz added that though little was known about marfanoid personality traits, Lincoln appeared to fit what was known. But the most impressive contribution of the article appeared to be an inferential Lincoln-Marfan pedigree that traced eleven generations in two branches of the family: the president's branch and that of Schwartz's patient. Incidentally, because questions have been raised not only about who the father of Lincoln's mother was but also about who Lincoln's father was, Schwartz noted that his material offered scientific proof that the husband of Lincoln's mother was indeed his father. Schwartz concluded in a measured manner calling for "Lincoln scholars and interested physicians" to study the Marfan syndrome's significance for Lincoln.[5]

[2] Gordon, "Lincoln—A Medical Appraisal," 249–53; *Newsweek*, June 11, 1962.

[3] Gordon, "Lincoln—A Medical Appraisal," 253.

[4] Harold Schwartz, "Abraham Lincoln and the Marfan Syndrome," *The Journal of the American Medical Association* 187 (Feb. 15, 1964), 473–79; *Time*, May 22, 1978.

[5] Schwartz, "Lincoln and the Marfan Syndrome," 473–79. (Cf. Harold Schwartz, "Medical Clues to Genealogy," revised MS of lecture delivered for the Southern California Genealogical Society, 1985, in coauthor's [GSB] possession.) The Lincoln-Marfan pedigree also included another unrelated patient with the name Lincoln.

During the years that followed, the "Letters" column of *The Journal of the American Medical Association* bristled with contributions on the subject. The quality of the discussion varied, but Schwartz, and with him the diagnosis of Lincoln as a Marfan, fared well.[6] And the California physician continued to work diligently. By 1972 and 1978 he was able to publish his finding of aortic insufficiency in the president and describe him as being "in an early stage of congestive heart failure." The question became whether he "could have outlived the more than three remaining years of his second term in office."[7] This finding was challenged, too, but Schwartz stood his ground forcefully. Adding thus the missing element to the trinity of Marfan features reinforced "considerably," to quote his own judgment, the earlier diagnosis.[8] Historians, and before them contemporary observers, have noted the toll the war presidency had extracted from Lincoln—photographs bear eloquent evidence—but the Marfan diagnosis substituted an organic explanation as the cause.

If voices of dissent remained, the dominant answer provided by the members of the medical profession who have studied the question over the past two decades clearly leaned in favor of the Marfan diagnosis. Not only did various medical journals print the Lincoln-Marfan studies, but editorially both *The Journal of the American Medical Association* and *The British Medical Journal* appeared to endorse the diagnosis. Discussions of Lincoln's disease were published not only in America and Britain but also in France, Germany, Switzerland, and presumably in other countries as well. Most significantly, the world's leading expert on the Marfan syndrome, Victor A. McKusick of the Johns Hopkins University School of Medicine, noted the Lincoln link in some detail in the 1966 (third) and subsequent editions of his standard text the *Heritable Disorders of Connective Tissue*.[9]

[6] Letters from A. M. Gordon, Harold Schwartz, and J. Willard Montgomery, in *The Journal of the American Medical Association* 189 (July 13, 1964): 164–65; letter from J. Willard Montgomery, ibid. 191 (Feb. 8, 1965): 64 [cf. "Lincoln's Inheritance," editorial, ibid. 187 (Feb. 15, 1964)], 530–31; letter from Schwartz, ibid. 192 (Apr. 5, 1965): 64; and 195 (Feb. 7, 1966); letter from Carl Ellenberger, ibid. 196 (May 2, 1966): 172–73; see also J. W. M. [Montgomery] to R. Gerald McMurtry, June 25, 1965, Collections of the Louis A. Warren Lincoln Library and Museum.

[7] Harold Schwartz, "Abraham Lincoln and Aortic Insufficiency—The Declining Health of the President," *California Medicine* 116 (May 1972): 82–84; and Schwartz, "Abraham Lincoln and Cardiac Decompensation: A Preliminary Report," *Western Journal of Medicine* 128 (Feb. 1978): 174–77.

[8] Walter T. Flaherty, "President Lincoln's Illness," *Western Journal of Medicine* 128 (Apr. 1978): 352–53; Schwartz, "Lincoln's Health—Dr. Schwartz Responds," ibid. 128 (June 1978): 550; see also Harriet F. Durham, "Lincoln's Sons and the Marfan Syndrome," *Lincoln Herald* 79 (Summer 1977): 67–71, which extends the Marfan diagnosis to the next generation of Lincolns.

[9] "Lincoln's Inheritance," 530–31; "The Strange Case of Abraham Lincoln," *The British Medical Journal* 1 (Apr. 4, 1964): 858; Abraham M. Gordon, "Abraham Lincoln, der berühmte Fall eines Marfan-Syndrome," *Deutsches Medizinisches Journal* 18 (May 5, 1967):

Indeed by the early 1970s the association of Lincoln and the Marfan syndrome had become so commonplace that when in a cooperative venture four medical scientists—Michael S. Ramsey, Ben S. Fine, J. A. Shields, and Myron Yanoff, all affiliated with fine institutions—made an important contribution to the ocular diagnosis of the disease, they noted matter of factly that one of the eyes they had worked with was the organ of a child who was "said to be a direct descendant of Abraham Lincoln." They made this determination solely upon a statement by the patient's mother to the child's physician. They were not historians and did not know that by that time Lincoln had only one direct descendant, a man in his sixties. Later an attempt by Schwartz to find any connection between the child and the Lincoln family failed. It is not surprising, however, that a year after the appearance of the article by Ramsey, Fine, Shields, and Yanoff, J. Couvreur cited it in Paris, in *Nouvelle Presse Medicale*, as additional confirmation of Lincoln's Marfan syndrome. One medical author in the United States even proposed the name "Lincoln's syndrome" as perhaps appropriate.[10]

Not until the end of 1981 did a full-length article appear in the *New York State Journal of Medicine* opposing the Lincoln-Marfan diagnosis. The author, John K. Lattimer, the recently retired chairman of the Department of Urology of the College of Physicians and Surgeons of Columbia University, was the author of some 300 medical articles as well as of a book on the medical evidence concerning both the Lincoln and the John F. Kennedy assassinations. Lattimer had briefly expressed his views earlier and was immediately attacked by Schwartz and another physician on the pages of the AMA's *American Medical News*. Now he tackled the Lincoln-Marfan question in the form of an after-dinner speech to a medical audience. The diagnosis of Lincoln's supposed disease had been presented over the years with substantial ingenuity and commendable persistence but above all in the manner of lawyers presenting a brief. Careful weighing of evidence that the spirit of both science and history requires had not been sufficiently favored. The case

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256–60; J. Couvreur, "Un cas historique de syndrome de Marfan," *Nouvelle Presse Medicale* 3 (May 18, 1974): 1321; Vera Fertig, "Le Morphotype du Syndrome de Marfan," *J. Genet. Hum.* suppl. vol., 25 (1977): 68–70; McKusick *Heritable Disorders*, 1968 ed., 135, 1972 ed., 65–68.

[10] Michael S. Ramsey, Ben S. Fine, J. A. Shields, Myron Yanoff, "The Marfan Syndrome. A Histopathologic Study of Ocular Findings," *American Journal of Ophthalmology* 76 (July 1973): 102, 116; Couvreur, "Un cas historique de syndrome de Marfan," 1321. (We are indebted to the generous aid of Ben S. Fine, M.D., for helping to untangle the mystery of the supposed Lincoln descendant, Ben S. Fine to G. S. Boritt, Jan. 18, 1982, in the recipient's possession.) "A. Lincoln . . . A case of the Marfan Syndrome?" Publication and author unknown, from the Collections of the Louis A. Warren Lincoln Library and Museum. Also in this collection see, "Lincoln Studies Trace Marfan Syndrome to 1600, Show Pattern of Intelligence," *Modern Medicine* Feb. 14, 1966, p. 39, "A Famous Case of Marfan's Syndrome," *Spectrum* (Nov.–Dec. 1963): 94–96; "Lincoln and Marfan's Syndrome," ibid. (Spring 1964): 18.

Lattimer made against the Lincoln-Marfan diagnosis had many virtues and met the "enemy" on its own ground. At last, both the pro and con sides to the Lincoln-Marfan diagnosis had been presented.[11]

In contrast to the physicians, professional historians ignored the questions about Lincoln's health, at least in their writings, though in private many indicated great confusion. In some part the problem was, and is, characteristic of the profession. When recently two popular medical writers complained about scholars partaking in almost a conspiracy to "suppress all but the vaguest information about the health and disabilities" of historical figures, they were not entirely wrong.[12] Though of course there is no conspiracy, historians do generally lack the competence to deal with clinical material from medicine and therefore avoid the subject. Lincoln scholars are no exceptions.

While the professional historians were silent, the media, both television and the press, had been reporting on Lincoln's disease with enthusiasm since the early 1960s. Untold millions were exposed to the image of Lincoln the Marfan.[13] By the time Schwartz's 1978 article appeared, the general public was ready to be informed that, to quote *Time* magazine for example, "had John Wilkes Booth not fired the fatal shot on April 14, 1865 Lincoln would have died within a year from complications of Marfan's syndrome—for which there is still no cure."[14] When in 1980 New

[11] John K. Lattimer, "Lincoln Did Not Have the Marfan Syndrome: Documented Evidence," *New York State Journal of Medicine* 81 (Nov. 1981): 1805–13. Letters from John K. Lattimer in *American Medical News*, Aug. 15, 1980, Jan. 23, 1981; John B. Moses, ibid., Oct. 3, 1980; Harold Schwartz, ibid., Oct. 3, 1980; Lattimer, *Kennedy and Lincoln: Medical and Ballistic Comparisons of their Assassinations* (New York, 1980), 38. This is a convenient place to note Emmett F. Pearson, "Abraham Lincoln—Health, Habits, and Doctors," *Illinois Medical Journal* 147 (Feb. 1975), 143–47, 174, which curtly dismissed the case for Marfan as "Armchair post-mortem" diagnosis and lumped it with other illnesses mentioned in connection with Lincoln, including "oedipus complex."

[12] John B. Moses and Wilbur Cross, *Presidential Courage*, (New York, 1980), 5–6.

[13] For example, when the Sunday magazine attachment, *Family Weekly*, Feb. 14, 1982, published an item on the subject, the circulation of 12½ million reached an estimated 26 million readers. Diana Browne, assistant editor of *Family Weekly*, to G. S. Boritt, Mar. 16, 1982, in coauthor's (GSB) possession.

[14] *Time*, May 22, 1978. See also, for example, *Louisville Times*, Sept. 21, 1961; *Louisville Courier-Journal*, June 17, 1962; *Newsweek*, June 11, July 2, 1962; *St. Paul Sunday Pioneer Press*, Feb. 10, 1963; *Cincinnati Pictorial Enquirer*, Feb. 2, 1964; *McAlester News-Capital*, Feb. 12, 1964 (NEA report); *Philadelphia Evening Bulletin*, Feb. 7, 1964; *Boston Herald*, May 15, 1964 and *Chicago Tribune*, Oct. 4, 1972 (both in columns by Theodore R. Van Dellen, M.D.); *Fort Wayne Journal-Gazette*, Aug. 3, 1975; *Louisville Courier-Journal*, Apr. 16, 1978; *Chicago Tribune*, Apr. 14, 1978 (AP report); *Time*, June 12, 1978. *U.S. News and World Report*, March 3, 1980; *Houston Post*, Apr. 13, 1980; *Memphis Commercial Appeal*, Apr. 13, 1980 (UPI report); *New York Post*, Apr. 15, 1980; *Los Angeles Herald-Examiner*, Feb. 12, 1982; *Charlotte Observer*, Feb. 14, 1982; *Chicago Sun-Times*, Feb. 12, 1982; *Fort Wayne Journal-Gazette*, Feb. 12, 1982; *The News*, (Frederick, Md.), Feb. 12, 1982; *The Evening News*, (Harrisburg, Pa.), Feb. 12, 1982; *Newark Star-Ledger*, Feb. 12, 1982; *Schenectady Gazette*, Feb. 12, 1982; *State Journal Register* (Springfield, Ill.), Feb. 12, 1982; *Washington Post*, Feb. 12, 1982 (all but the first 1982 items are various versions of an AP report).

York internist John B. Moses and journalist Wilbur Cross produced their much publicized book on the health of the presidents, they, too, stated unequivocally that Lincoln's "illness would have proved fatal before the middle of his second term had he not been asassinated."[15] "He was already in heart failure at the time he was assassinated," the *Washington Post* reported on February 12, 1982, as did newspapers across the nation. "He could not have lived more than 6 to 12 months." And so in our time one of the most persistent questions the public has about Lincoln is this: Is it true that even without John Wilkes Booth's bullet the president would have died in 1866?

Having surveyed the development of the Lincoln-Marfan discussion, we should now examine the evidence linking the president to the disease. Because Lincoln's physical appearance played a central part not only in his being diagnosed as a Marfan but one suspects also in the public's reaction to that diagnosis, it is fitting to begin with it.

Lincoln's looks have become legendary in the past 120 some years, but in his own lifetime they left an indelible impression. Lincoln's sole self-description, from 1859, is clear enough: "I am, in height, six feet, four inches, nearly; lean in flesh weighing, on an average, one hundred and eighty pounds; dark complexion, with coarse black hair, and grey eyes—no other marks or brands recollected."[16]

William H. Herndon, Lincoln's long-time law partner, left us perhaps the most thorough description, one that is also quoted in the Marfan diagnosis:

> He was thin, sinewy, rawboned, thin through the breast to the back, and narrow across the shoulders; standing he leaned forward—was what maybe called stoop shouldered, inclining to the consumptive build. . . . His structure was loose and leathery; his body shrunk and shrivelled; he had dark skin, dark hair and looked woe-struck. . . . His legs and arms were abnormally, unnaturally long and in undue proportion to the remainder of his body. It was only when he stood up that he loomed over other men. Mr. Lincoln's head was long and tall from the base of the brain and from the eyebrows . . . his long sallow face was wrinkled and dry . . . his ears large and ran down almost at right angles from his head. . . .[17]

To some this much alone might suggest a Marfan but there is more. Daniel W. Voorhees, a congressman from Indiana during the Civil War and later a U.S. senator, used the word *spiderlike* to describe Lincoln's legs. This is the same expression that Marfan used in 1896 for *his* pa-

[15] Moses and Cross, *Presidential Courage*, 77, 90–92. It should be noted that, reflecting perhaps the hazards of coauthorship, when repeating the diagnosis the book added "if true," to leave the careful reader confused. The medical part of the team, however, left no doubt about his views: John B. Moses in "Letters" column of the AMA's *American Medical News*, Oct. 3, 1980.

[16] Basler, ed., *Collected Works of Lincoln*, 3:512.

[17] The full original statement, whence the above description is taken, is Paul M. Angle, ed., *Herndon's Life of Lincoln* (Greenwich, Ct., 1921), 448–50. Herndon's somewhat different draft MS is "Lincoln [the] Individual," 3395–401, Herndon-Weik Papers, Library of Congress.

tient.[18] Then there is a drawing of Lincoln's feet on his deathbed, made by an artist on the basis of an eyewitness description, shortly after the assassination. The drawing depicts huge great toes, again suggesting arachnodactyly (elongation and thinness of the bones). McKusick's standard text contains, as Schwartz pointed out, a photograph of similarly outsized great toes in a patient to illustrate the Marfan syndrome.[19]

There is skeletal evidence on the other side of the argument, too. In 1953, anthropologist Harry L. Schapiro compared Herndon's description of Lincoln with exact measurements he made of the features of Lincoln's face from two plaster cast masks created by sculptors Leonard Volk in 1860 and Clark Mills in 1865. Schapiro concluded that "some" of Herndon's observations were "sound," and "others" were not.[20]

In addition to the Volk and Mills life masks, we also have Volk's plaster casts of Lincoln's hands. This first hand evidence (no pun intended) contrasts to the second and third hand evidence about his toes. As Lattimer and others have noted, Lincoln's hands were muscular and his fingers not excessively long and thin as tends to be the case in Marfan patients.[21]

The evidence supplied by the sketch of Lincoln's toes is further qualified by Lincoln's own tracings of the outlines of his feet in socks for a bootmaker. The outlines fail to indicate the presence of extraordinarily long big toes.[22] And in general, anthropometric data indicate that for the mountain areas of Kentucky, Tennessee, and West Virginia the configuration of Lincoln's body was unusual but not unique, except for its length.[23]

In the absence of a description of the naked body of Lincoln, other than that it was lean and muscular even on the deathbed,[24] and before the discovery of X rays, it is difficult, if not impossible, to determine the

[18] Vorhees, quoted in Carl Sandburg, *Abraham Lincoln: The Prairie Years and the War Years*, 6 vols. (New York, 1926–39), 2:303; Schwartz, "Lincoln and the Marfan Syndrome," 473; cf. Statement of Samuel Haycraft to Herndon, Dec. 7, 1866, 1234–35, Herndon-Weik Papers: "Abraham was a tall spider of a boy."

[19] Dorothy Meserve Kunhardt and Philip B. Kunhardt, Jr., *Twenty Days* (Secaucus, N.J., 1965), 46, 291; letter from Harold Schwartz, *The Journal of the American Medical Association* 195 (Feb. 7, 1966): 498; McKusick, *Heritable Disorders*, 78.

[20] Harry L. Schapiro, "Was Lincoln a 'Mountaineer'?" *Natural History* 52 (Feb., 1953): 58.

[21] Lattimer, "Lincoln Did Not Have the Marfan Syndrome," 1806–8.

[22] Outline of Lincoln's feet made for shoemaker Peter Kahler, December 17, 1864, in coauthor's (GSB) possession. Some question remains about the authenticity of this outline though its provenance is excellent. Stefan Lorant, *Lincoln: A Picture Story of His Life* (New York, 1969), 220, has a somewhat similar outline (but one of obscure origins) in which Lincoln's signature and the outline of his feet are so out of proportion as to indicate that they were packed together.

[23] T. D. Stewart, "An Anthropologist Looks at Lincoln," *Smithsonian Report for 1952*, Publication No. 4127, 419–38; Schapiro, "Was Lincoln a 'Mountaineer'?" 56–63, 90.

[24] J. K. Lattimer, "The Wound that Killed Lincoln," *The Journal of the American Medical Association* 187 (1964): 480; and Lattimer, *Kennedy and Lincoln*, 38

Finally, Lincoln had two episodes of double vision in 1860 just after his election to the presidency. Resting on a lounge at home in Springfield, Lincoln saw himself reflected in the glass of a bureau with his face showing two separate images. Bothered by it, he got up and the double image disappeared. When he lay down again, however, the two faces reappeared. Some days later he repeated the experiment. Mary Lincoln, and no doubt many others since, gave the episode a mystical meaning, but it had no further medical consequences.[32]

It is likely that Lincoln's ocular problem was latent crossed eyes since the relevant descriptions indicate *intermittent* jerking of his left eye upward.[33] No biographical evidence for the displacement of the lens is available—though Lincoln's family physician in Washington, Robert King Stone, specialized in eye problems and was a professor of Ophthalmic and Aural Surgery at the National Medical College.[34]

One physician, Edward J. Kempf, suggested that Lincoln's eye problems may have been caused by injury to his brain when he was kicked in the forehead by a mare at age ten.[35] However, Lincoln's firstborn, Robert, also suffered from a persistent inward turning of his left eye.[36] Less firm evidence indicates that Lincoln's father was blind in one eye, that his other eye was weak, and that a Lincoln cousin on the maternal side, Dennis Hanks, suffered from a similar problem.[37] No displacement of the lens, however, was diagnosed in any of the members of the Lincoln and Hanks families.

The episodes of double vision Lincoln had in 1860 were most likely secondary to his crossed eyes, which may have been temporarily exaggerated by the effects of excitement, fatigue, and aging.[38] Such occur-

[32] Noah Brooks, "Personal Recollections of Abraham Lincoln," *Harper's Monthly* 31 (July 1865): 224–25; and Noah Brooks, *Washington, D.C. in Lincoln's Time*, ed. Herbert Mitgang (Chicago, 1971), 199–200; Ward H. Lamon, *The Life of Abraham Lincoln; from his Birth to his Inauguration* (Boston, 1872), 476–77.

[33] Shastid, "My Father Knew Lincoln," 227–28.

[34] J. K. Crellin, "Robert King Stone, M.D., Physician to Abraham Lincoln," *Illinois Medical Journal* 155 (Feb. 1979): 97–99.

[35] Basler, ed., *Collected Works of Lincoln*, 4:62; Edward J. Kempf, "Abraham Lincoln's Organic and Emotional Neurosis," *Archives of Neurology and Psychiatry* 67 (Apr. 1952): 419–33; See also Kempf, *Abraham Lincoln's Philosophy of Common Sense, An Analytical Biography of a Great Mind*, 3 vols. (New York, 1965). Kempf reports on the Marfan syndrome, 1:1–4.

[36] Shutes, "Mortality of the Five Lincoln Boys," 10–11; Randall, *Lincoln's Sons*, 10, 13, 33–34, 55, 332, 339.

[37] Elizabeth Crawford's interview with William H. Herndon, Sept. 16, 1865, in Emanuel Hertz, *The Hidden Lincoln: From the Letters and Papers of William H. Herndon* (New York, 1940), 367; Charles Snyder, "Abe's Eyes," *Archives of Ophthalmology* 75 (1966): 294; Schwartz, "Lincoln and the Marfan Syndrome," 478.

[38] E. E. Holt, "Abraham Lincoln," *Ophthalmic Record* 23 (1914): 389–93. We thank Rosa A. Tang, M.D., Neuro-ophthalmologist at the University of Texas Medical School at Houston for discussion of this and the other ophthalmological problems.

done today which has given me any pleasure—I have . . . made two people happy."[43]

Schwartz suggested that the throbbing foot indicated excessive pulse pressure, the cold hands and feet, poor circulation. Together they were the signs of aortic insufficiency and cardiac decompensation—symptoms of the Marfan syndrome.[44]

Such use of evidence combining disparate sources warms the heart of the historian. Furthermore, among others, *Time* magazine, whose editors presumably know something about photography, reprinted the Gardner photograph together with Schwartz's diagnosis.[45] And yet, appealing as the Schwartz argument is, it must be questioned on both historical and medical grounds.

The Gardner photograph does not readily tell us whether Lincoln did or did not move his foot. Because of the slow film speeds of the time and the reliance on natural light, photographers usually used a wide lens aperture to obtain a good exposure in a tolerable span of time. A narrow plane of focus resulted, with a sharp image existing only within a depth of a few inches. Everything in front of and behind this plane, generally the plane of the face, was increasingly blurred. There was good reason for this: by making the background and foreground soft, the photographer could draw attention to the face. We still take photographs thus, though equipment has improved, permitting wider planes of focus. In the Gardner photograph of Lincoln, the other foot, though closer to the focus and on the ground, is also somewhat blurred, and so is the checkered pattern of the floor on which the foot rests.[46]

Brooks's confirmation of Lincoln's leg movement does not necessarily help us either. He is a questionable witness, his memory having proved faulty, in a significant way, in another story he told about the same photograph in the same memoirs.[47] Even if Lincoln's foot-moving experi-

[43] Joshua Speed to William H. Herndon, Jan. 12, 1866, 500–502, Herndon-Weik Papers. Schwartz, "Abraham Lincoln and Cardiac Decompensation," 2, quotes a somewhat doctored version of this letter from Sandburg, *Lincoln* 6:213. See also Orville H. Browning, *The Diary of Orville Hickman Browning*, ed. Theodore Calvin Pease and James G. Randall, 2 vols. (Springfield, Ill., 1925–33), 2:7–8; Earl Schenck Miers et al., eds. *Lincoln Day by Day*, 3 vols. (Washington, 1960), 3:320.

[44] Schwartz, "Lincoln and Aortic Insufficiency," and "Lincoln and Cardiac Decompensation."

[45] *Time*, May 22, 1978.

[46] This paragraph is based on notes of a conversation with F. Jack Hurley, Nov. 1979. David Payne, photographer to the University of Texas Medical School at Houston suggested the same explanation. Another conversation with William Frassanito, probably the leading expert on Civil War photography, on Jan. 25, 1982, helped refine the paragraph. Frassanito suggested that Gardner's camera lens may have contributed to other blurred areas such as the right side of the chair in the photograph.

[47] Brooks, *Washington in Lincoln's Time*, 252–53, and "Personal Reminiscences," 565, provide explicit detail about how the president on his way to Gardner's studio went "down the stairs of the White House," turned around, hurried back to his office, picked up the

ment did take place, it only duplicated what any healthy individual can do by crossing his legs. Depending on how one crosses his legs, the slightly pulsating movement of the foot can be avoided or reproduced.[48] Though it might be possible through further analysis or image enhancement to determine whether Lincoln's foot moved in the Gardner photos,[49] the import of the matter for the diagnosis of Lincoln's health is too small to justify the expense of such analysis.

Should one nonetheless conclude that the Gardner photograph and the Brooks memoirs prove the presence of an uncontrollably throbbing foot and that Speed's recollection about Lincoln's cold hands and feet indicates congestive heart failure, aortic regurgitation is only one explanation for such phenomena. In an article on Lincoln's health and habits, Emmett F. Pearson of the Southern Illinois University School of Medicine compiled a list of other possibilities. He suggested that Lincoln may have suffered from tuberculosis. Herndon wrote that Lincoln himself believed he tended to consumption, and one of his sons, Tad, most likely died of that disease in 1871, at age eighteen.[50]

As a young man Lincoln had been a champion wrestler of the backwoods. Indeed, one of the sentences Gordon edited out of Herndon's physical description of his partner states: "Physically he was a very powerful man, lifting, as said, with ease four or six hundred pounds."[51] Years later, in the White House, Lincoln still showed a fondness for performing physical feats. A few weeks before his assassination, he astonished ob-

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proof sheet of Edward Everett's Gettysburg oration, took it to the studio, and thus in the photograph in question it lay on the table next to Lincoln's hand. Everett's diary, however, makes clear that his speech could not have reached Lincoln in time for him to take it to the studio, even if the photographic session took place as late as Nov. 15, 1863. David C. Mearns, "Unknown at this Address," *Lincoln and the Gettysburg Address* ed. Allan Nevins (Urbana, Ill., 1964), 122–24. For the question whether the photograph was taken on Nov. 8 or 15 see Lorant, *Lincoln*, 332. Before learning the above facts one of the coauthors (GSB) listened to a distinguished professor of history at Harvard (albeit not a specialist on Lincoln or the nineteenth century) develop the thesis—based on Brooks's recollections, the Gardner photograph, and presumably additional reading—that Lincoln's Gettysburg Address was *merely* a summary of Everett's address. Cf. Basler, *Collected Works of Lincoln*, 7:245n.

[48] Lattimer, "Lincoln Did Not Have the Marfan Syndrome," 1811–12, covers some of the same ground about the Gardner photograph, though we have worked independently. See note 40 above and also, for example, G. S. Boritt to Stefan Lorant, May 12, 1980, copy in coauthor's (GSB) possession.

[49] Leslie Stroebel, professor at the College of Graphic Arts and Photography, School of Photographic Arts and Sciences, Rochester Institute of Technology, to G. S. Boritt, Dec. 28, 1982, in coauthor's (GSB) possession.

[50] Pearson, "Lincoln—Health, Habits, and Doctors," 140; Shutes, "The Mortality of Lincoln's Sons," 6–7; *Herndon's Lincoln*, 257. Shutes, *Lincoln and the Doctors*, 74, also suggested tuberculosis. The connection suggested by Harriet Durham between the death of the three Lincoln boys and the Marfan syndrome is untenable. The best study remains Shutes, "The Mortality of Lincoln's Sons."

[51] *Herndon's Lincoln*, 448–50; Herndon, "Lincoln [the] Individual," Herndon-Weik Papers; cf. Gordon, "Lincoln—A Medical Appraisal," 250–51.

servers by vigorously chopping at a log, making the chips fly everywhere, then holding the ax out horizontally with his arm extended—all this after hours of exhausting visiting and handshaking at a hospital for wounded soldiers. The reporter present thought that not a man among the onlookers, "strong men . . . accustomed to manual labor" could have repeated the feat.[52] However that was, the president's activity was not compatible with hypotonia or congestive heart failure.

But to take the final step in our discussion of the aorta, even if we presume that the president did suffer from aortic regurgitation, such a diagnosis would not necessarily indicate the Marfan syndrome. There are many causes of aortic regurgitation, and the one involved in the Marfan syndrome, cystic media degeneration of Erdheim (a disease of the middle portion of the wall of the artery), is histologically very specific as well as rare. Rheumatic heart disease or syphilis would have been statistically much more likely causes.[53]

The fourth and last major feature of the Marfan syndrome is that it is usually inherited as an autosomal dominant disease with incomplete penetrance. Gordon suggested that the disease was transmitted via Nancy Hanks, Lincoln's mother, because he saw nonspecific skin streaks present in some cases of the Marfan syndrome in two non-obese male Hanks family members who were his patients. This, however, is weak evidence in favor of the proposition that Lincoln was a Marfan because such skin streaks occur in many conditions.[54]

In contrast to Gordon, Schwartz suggested that the abnormal gene was transmitted to Lincoln via the paternal side of his family. Schwartz described as a case of the Marfan syndrome a seven-year-old boy and then provided an inferential pedigree of two branches of the Lincoln family that pointed to a common ancestor of the affected boy and the president. In each branch, traced through eleven generations, there is one person whom Schwartz considers proven to have suffered from the Marfan syndrome. One of these two persons is the boy so diagnosed by Schwartz, the other is the president. In the remaining generations Schwartz found only persons whom he considered as either having the

[52] F. B. Carpenter, *The Inner Life of Abraham Lincoln: Six Months at the White House* (New York, 1868), 289; see 113–14 for a similar demonstration of strength by Lincoln in 1862. The original newspaper report appeared in the *N.Y. Independent*.

[53] Jack Segal, Harvey W. Poctor, and Charles Hufnagel, "A Clinical Study of One Hundred Cases of Severe Aortic Insufficiency," *American Journal of Medicine* 21 (1956): 200–210.

[54] Gordon, "Lincoln—A Medical Appraisal," 249–53; A. B. Loveman, A. M. Gordon, and M. T. Fliegelman, "Marfan's Syndrome: Some Cutaneous Aspects," *Archives of Dermatology* 87 (1963): 428–35; H. Finkus, M. K. Keech, and A. H. Mehregan, "Histopathology of Striae Distensae, with Special Reference to Striae and Wound Healing in the Marfan Syndrome," *Journal of Investigative Dermatology* 46 (1966): 283–92.

presently accepted are based primarily on clinical differences and their hereditary occurrence. Unfortunately, the property of a gene to manifest itself in multiple ways—genetic heterogeneity—is common in human disease, and definite identifications need biochemical and/or chromosomal criteria.[59] Thus one can confidently expect further changes in the classification of these entities as the chromosomal abnormalities and the chemical and morphological changes caused by them in these syndromes are better and better defined. It is possible that these definitions will be made in such a way as to make Lincoln's skeleton a useful piece of evidence. Should that occur, the president's remains will still be available at Oak Ridge Cemetery, in Springfield, Illinois. Unfortunately, because of a bizarre attempt to steal those remains in 1876 they now lie in a steel cage, enclosed in tons of iron, stone, and cement.[60]

McKusick in his latest review of the Marfan syndrome has suggested that "although certainly there are some persons having true cases of the Marfan syndrome without ectopia lentis [displacement of the lens] and without other less equivocally affected members in the family, the lack of both of these features leaves the diagnosis in question in many instances."[61] It is regrettable that only a necropsy limited to the head was performed after Lincoln's tragic death and that examination of the eyes was only passingly reported.[62] A complete and thorough postmortem examination could have supplied enough information to determine whether Lincoln suffered from the Marfan syndrome. As it is, the diagnosis is left in question. But in history, as in science, the burden of proof rests on those proposing a new theory or setting forth a new explanation. The available evidence does not indicate that Lincoln suffered from the Marfan syndrome. If our findings had been positive, we would have had the opportunity to attempt to delineate the effect Lincoln's illness had on public policy and thus on history. Denied that opportunity we can do no more than question what perhaps is the newest of the Lincoln myths.

Beyond this we have learned some things about the nature of working on the medical history of a figure from the past. Successful work is likely to be facilitated by cooperation between historians and medical scientists. The latter examined the subject of Lincoln and the Marfan syndrome by themselves and make an urgent case for the need for cooperation. Their solo work indicates an ignorance of elementary historical techniques. The popular assumption that history is a field that any intelligent layman can fully understand, and also research with competence, appears to be false.

[59] Victor A. McKusick, "On Lumpers and Splitters, or the Nosology of Genetic Disease," *Persp. Biol. Med.* 12 (1969): 23–31.

[60] A good brief summary of the theft attempt is in Mark E. Neely, Jr., *The Abraham Lincoln Encyclopedia* (New York, 1981), 310.

[61] McKusick, *Heritable Disorders*, 201.

[62] Lattimer, "The Wound that Killed Lincoln," 480–89; and *Kennedy and Lincoln*, 34ff.

For example, some medical scholars tended to take the poet Carl Sandburg as the ultimate authority on Lincoln. They did not seem to know how to verify historical evidence or how to differentiate between primary and secondary sources. The prominent researcher who decided to undo Schwartz's work saw fit not to use two of his opponent's three pertinent articles and instead based his argument on *Time* magazine's summary of those articles. A reputable medical journal, in turn, published this work. And we have the four able scientists who assigned a case as belonging to the Lincoln family because the mother of a patient said that the distinguished ancestry pertained.

Of course historians, who did not dare approach this field where medicine and history meet, invited such an outcome. They can do better. Though this paper could do no more than put a subject in perspective, one might hope that this professionally almost untouched field contains exciting opportunities for advancing historical knowledge.

From the viewpoint of the medical scientist, the greatest problem to be faced is the lack of access to the "patient." It is true that the physician to the historical figure does often know the ultimate result of his case and that can be an advantage. In the case of Lincoln and the Marfan syndrome, however, no such comfort is to be had. Thanks to John Wilkes Booth we do not know what the natural course of Lincoln's life would have led to.

From the viewpoint of the historian, too, the greatest problem centers on data—the paucity of it. As recently as the 1960s, for example, when Lord Moran revealed the extent of Winston Churchill's illness during his second term as prime minister, historians and gossips may have been delighted, but an uproar shook the medical world. Western society has long considered illness subject to taboo, a private matter to be kept from snooping eyes. Still at times the historian can penetrate this private world. Lincoln's physician in the White House, Robert King Stone, for example, kept careful case books for the years 1863 to 1869. The record of his most famous patient, however, was presumably kept separately. It does not appear to survive.[63]

The state of medical knowledge in earlier times, in the mid-nineteenth century for example, was extremely poor by our standards. Therefore, even when records survive, what they reveal is sharply limited. Nor is it always easy for the physician in the last fifth of the twentieth century, accustomed to making diagnoses on the basis of batteries of modern tests, to comprehend fully the medical judgments of another age expressed in an earlier language and via more primitive conceptualizations. In the case of Lincoln and the Marfan syndrome, the president died in 1865, while the rudiments of his supposed disease were diagnosed more than three decades later.

[63] Crellin, "Robert King Stone," 97.

Our case demonstrates not only that the state of the medical knowledge of earlier times can be an obstacle to historical-medical work, but also that the same can be true of the current state of medical knowledge. In 1982 we still do not know enough about the Marfan syndrome.

And what of the popularly prized image of Lincoln the Marfan? Among other things, the link between the great man and "his syndrome" reflects a morbid fascination with disease and a curiosity about the secrets of the famous. More fundamentally, however, the Lincoln-Marfan link exhibits the common desire for simple explanations of the complexities of history. This in turn leads to the related tendency for elevating scientific factors to the place reserved in the past for spiritual ones, thus making a religion of science. For above all, Lincoln the Marfan suggests the persistence of the search for a genetic explanation of history (which itself is based on a misunderstanding of genetics) and, more narrowly, for a genetic explanation of the rise from the Kentucky log cabin to the White House and apotheosis. "How much of Lincoln is Lincoln and how much is Marfan's syndrome," Doctor Gordon asked at the start of the investigation, and soon a Sunday magazine indicated that the question had been made explicit: "Did strange malady make Lincoln great?"[64]

Lincoln the Marfan, then, is the appropriately complex contemporary version of Lincoln the Illegitimate. Historians have long ago disposed of the myths about the sundry supposed sires of Lincoln—from George Washington and John C. Calhoun to the father of Jefferson Davis. Indeed Lincoln the Illegitimate, if not quite dead, is dormant. But that folk imagination lives which permitted even Herndon to wonder about the circumstances of Lincoln's birth and impelled him to bestow on posterity Lincoln's supposed confession from 1850 or 1851: "My mother was a bastard—was the daughter of a nobleman—so-called of Virginia." The oft quoted latter part of this confession seemingly carried much piety: "God bless my mother; all that I am or ever hope to be I owe to her." In context, however, the meaning is: All I am or ever hope to be I owe to her *noble bloodline*. This, in short, provides the genetic reason for his rise. Of course Herndon, who loved Lincoln, and America, did not understand that he thus deprived the nation's apostle of democracy the courage of his convictions.[65]

[64] *Newsweek*, June 11, 1962; *St. Paul Sunday Pioneer Press*, Feb. 10, 1963. No evidence links Marfans to high intelligence, but a widely shared impression to the contrary persists. At the meeting of the Organization of American Historians where this paper was presented Dr. Schwartz argued so.

[65] Herndon to Ward Hill Lamon, Mar. 6, 1870 (LN 366), Herndon-Lamon Papers, Huntington Library; *Herndon's Lincoln*, 46–47. The second part of the quotation is reproduced in its commonly cited version, as it appears in the book. In Herndon's original letter the sentence reads: "All that I am or hope ever to be I get from my mother—God bless her." Elsewhere Herndon wrote: "And now again, who was the father of Nancy Hanks, the mother of the President of the United States? Will some gentlemen, some lady tell me? The father of Nancy Hanks is no other than a Virginia planter, large farmer of the highest and best blood of Virginia, and it is just here that Nancy got her good rich blood, tinged with genius." "Nancy Hanks, Aug. 20, 1887," Hertz, *The Hidden Lincoln*, 412.

Of the many universal meanings of this Lincoln myth a central thread is reasonably clear. "The American God," as Lloyd Lewis wrote in the 1920s,[66] or, in the parlance of more recent scholarship, the principal symbol of American Civil Religion, with his origins lost in the mists of the heights, is a kinsman of the carpenter's son who descended from the House of David and God, and a kinsman, too, of myriad savior-heroes from the world over.

Lincoln the Marfan, or Lincoln the Illegitimate, however, also has a particularly American meaning. Perhaps no belief of the past century and a half of United States history has been stronger than the American Dream, and Lincoln grew to be the greatest symbol of the faith that in *this* land all may rise in life. This faith makes large demands on Americans. It requires of them success. It affirms that whoever is good enough can follow the open road from the log cabin to the White House—from however lowly a place to however high a one. Like all demanding faiths this, too, nurtures antagonistic forces. Thus underneath the dominant Lincoln image, of the successful liver of the American Dream, there was, and Lincoln the Marfan tells us, remains a countervailing, mitigating image, somewhat shadowy, surrounded by doubt, but forever present, of the Lincoln whose rise was genetically determined.

[66] Lloyd Lewis, *Myths After Lincoln* (New York, 1929), 405.