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# Books as Disease Carriers, 1880-1920

# Gerald S. Greenberg

Though evidence is slight that books ever helped spread the epidemics of smallpox, tub erculosis, and scarlet fever that raged in American and European cities at the turn of the century, fear of such a possibility led public libraries to adopt extraordinary measures in efforts to decontaminate books that had circulated to infected borrowers. In many cases library officials elected to destroy suspect books rather than attempt to return them to the collection. In both Britain and America, the problem proved a challenge for the public health and library movements—both in their infancy. While the former turned to the legislatures for power to enforce health regulations, the latter felt compelled to take whatever steps were necessary to win the confidence of the public, without which it could not continue to function.

## Introduction

When Andrew McC lary addressed the issue of books as carriers of disease in the fall 1985 *Journal of Library History* ("Beware the Deadly Books: A Forgotten Episode in Library History" [20/4]), he revived a subject that had apparently passed into obscurity. Indeed, *Library Literature* used the subject heading "Books as carriers of diseases" only three times in the past forty years and has apparently discontinued its use entirely, electing to index McClary's article under "Books."

Approaching the issue basically from a medical/scientific viewpoint, McClary established that medical doctors were divided on the danger posed by infected books, while research scientists proved the presence of microbes but could do no more than theorize about how they were transmitted to readers. While insisting library books were not dangerous, librarians undertook burdensome disinfection of books and detailed record-keeping procedures to insure circulation safety. Drawing on previous research concerning America's cleanliness fetish, McClary theorized on causes for the fear of infected books, questioning whether actual disinfection of books by libraries did not fuel the panic.

The following paper, while substantiating much of McClary's medical/ scientific findings, answers no to the above question. A more comprehensive, detailed look at what actually happened during the height of the book scare leads one to believe that the extraordinary actions taken by libraries (burdensome as they undoubtedly were) very likely helped maintain and/or restore public confidence in book safety. Of crucial importance were the social forces that gave rise to the public health movement in Britain and America—a movement mat virtually paralleled the rise of public libraries. By effectively calling on the legislatures to mandate healthful practices and procedures, public health legislation—of national dimension in Britain was passed. These laws (specifically inclusive of public libraries) and their subsequent enforcement helped bring about the decline of infectious disease and the accompanying public panic.

In practical terms it is evident that public health officials and legislators as well as librarians in both Britain and America deserve credit for the control and eventual resolution of the great book scare.

## Libraries and Disease: 1880-1900

The question of whether infectious disease is likely to be transmitted by books circulated among the populace has had a long and enduring life. Greatest concern, however, was given to the problem by British and American librarians and public health personnel in the two decades before and after the turn of the century as evidenced by the amount of literature on the subject. This was a time when epidemics—tuberculosis, smallpox, and scarlet fever in particular—took a fearful toll in urban areas. With the germ theory generally accepted as fact, quarantines were enforced in order to protect the healthy from the diseased. Could not books, as fomites, transmit disease as effectively as any other inanimate object?

When W. F. Poole, Chicago public librarian, reported hearing the previous question raised at a library directors' meeting in 1879, the subject was a new one. Not only could no one present offer an answer, but hardly anyone had ever before heard the questions posed. Consequently, Poole wrote to America's foremost medical authorities as well as librarians in the nation's largest circulating libraries and asked the same question. Of the nineteen responses received, only Surgeon General Dr. John S. Billings had ever heard of a disease supposedly transmitted by a book (he believed the case occurred in London). The consensus of opinion among the other respondents was that infection from such a source was possible but unlikely. Several doctors recommended that books not be loaned to houses sheltering infected individuals. Dr. Henry Lyman, however, professor at Chicago's Rush Medical College, expressed his belief in the futility of extraordinary and unnecessary health measures by sarcastically advocating hiring of 15,000 sanitary policemen to bar everyone from infected homes, deliver children to school in glass cages, and sterilize all U.S. mail.<sup>1</sup>

By 1888 we hear of the first in a series of technological responses to the theoretical problem of disease transmission by books. Sheffield, England, employed a disinfection technique using carbolic acid crystals heated in an oven. The resulting vapor apparently both disinfected and cleaned the books exposed to such treatment.<sup>2</sup>

Great Britain was suffering from a smallpox epidemic in 1888, and even precautions such as those described in Sheffield could not restore confidence in the safety of circulating books. In Brad ford the library was furnished with a list of all infected persons by the medical authorities. The library compared the list to its own register of borrowers, thereby identifying all possible infected book holders. Books held by such borrowers were seized by the medical authorities and transferred to the local hospital for use by patients there. (Previously such books had been destroyed.) If the infected borrower was holding no books, he was informed he would not be permitted to borrow any until his house was certified disease-free.<sup>3</sup>

During this same period, Britain's library journal, the *Library*, was criticized for ignoring the danger posed by infected library books. Its editors responded by asserting that any intelligent physician would promptly order the disinfection and return of public library books found in the possession of a patient and report the disease to both library and public health authorities (as required by law).<sup>4</sup>

In America W. F. Poole had continued to investigate the subject, uncovering nine more doctors who knew of diseases transmitted by books. These included Dr. H. W. Baker, who reported scarlet fever spread by both book and letter, Dr. J. D. Plunkett, president of the Tennessee Board of Health, and Dr. C. F. Folsom, secretary of the Massachusetts Board of Health, who cited cases of smallpox spread by books. Professor Joseph E. Winters of the City University of New York's Medical College advocated providing infected patients with books that might be destroyed after use without great loss to the collection. Winters also recommended sulphurous acid gas and live steam as disinfectants. Poole also reported that a prominent bacteriologist favored sulphur, live steam, and dry heat (up to 120 degrees F.) as disinfecting processes—in that order.<sup>5</sup>

In 1895 the *Library Journal* reported the death of one Miss Jessie Allan of tuberculosis widely believed to have been contracted from a contaminated book. Stating only that Miss Allan was associated with a "delicate organization" that did "much good work in a good cause," *LJ* sought to assure the library community (many of whom knew Miss Allan) that the real danger in such sad news lies in overestimating actual health risks posed by circulating books. The article pointed to the fact that life expectancy of city-dwellers compared favorably to that of country inhabitants, proving mat heavily populated areas are not in and of themselves unhealthy.<sup>6</sup>

In Britain the editorial staffs of the *Library* and *Science Siftings* began a running debate over the likelihood of contracting infectious illness through books. The editor of Science Siftings apparently fired the opening salvo when he was reported by the library as declaring he believed that "the bulk of disease among educated classes is spread in this way." The Library challenged the editor to prove the veracity of his bold assertion, adding that its own poll of medical officers failed to uncover a single case of infectious disease traced to a book (though admitting later in the publication that tests at Dresden revealed that soiled book pages rubbed with wet fingers vielded many microbes). Retort from *Science Siftings* was not long in coming. Pronouncing the Library editorship to be out of its element, Siftings advised Library to restrict its opinions to weighty matters such as literature or "the ethics of logrolling." The Library's editor retaliated by citing a bizarre experiment he conducted three years earlier involving monkeys at the Brown Institute that were fed milk served on fragments of filmy books previously handled by infected readers. No illness in the primates resulted. In summation, the *Library* angrily declared mat no danger exists to the ordinary library user, but (citing the Dresden study) that anyone who moistens fingers to turn book pages might well be infected-and deservedly so! The Library's wrath was founded in the belief that semiscientific overstatements were fueling the fires of opponents of the public library movement still in its infancy. Not to be deterred, Siftings seized upon *Library's* acknowledgment of the Dresden study's findings to claim victory in the debate.<sup>7</sup>

News of further scientific investigation reached American library literature in 1896 when the *Lancet* reported on the experiments of Drs. du Cazal and Catrin of France. Books used in hospital wards were soaked in bouillon, added to various culture media, and inoculated into animals. Streptococcus, pneumococcus, and diptheria bacillus were effectively transmitted in this manner, while typhoid fever bacillus and Koch's tuberculosis bacillus were not. Disinfection with "formic aldehyde" or by autoclave was recommended, but difficulty of application of the former and damage to book bindings with the latter were acknowledged.<sup>8</sup>

Dr. Elmer Grant Horton of the University of Pennsylvania successfully employed vaporized formalin (a formaldehyde solution) to disinfect contaminated books. Findings indicated 1 cc of formalin to 300 cc of air required no more man fifteen minutes to achieve the desired effect. Books were undamaged by the procedure.<sup>9</sup> In Britain the *Library*, apparently

losing patience with spirited dialogue, advocated outright destruction of books in the possession of infected borrowers, thus obviating any further rejoinders on the subject.<sup>10</sup>

It appears that public libraries were unable to put to rest the question of contagion via book circulation. The medical community continually asserted that such disease transmission was possible—though not necessarily probable—and the fear resulting from such reports only added to the dread already felt by the citizens at risk. It began to appear as if destruction of suspected books was the only sure way to assuage the incipient panic and preserve the public library movement. Accordingly, news of such drastic action became more frequent in the library literature. In London it became common practice for library books in infected homes to be returned directly to public health authorities for destruction, though such procedures required an amendment to the Public Health (London) Act of 1891.<sup>11</sup> In the United States the Western Massachusetts Library Club felt books mat had been exposed to scarlet fever, diphtheria, or smallpox (and possibly tuberculosis and typhoid) should be burned.<sup>12</sup>

The Infectious Diseases (Notification) Act of 1889 had empowered local authorities in Britain to gather pertinent information on all cases of infectious disease in their districts. Employing such information received from the medical officials, libraries established an efficient reporting system in which both the public health department and the ill borrower received notices. The borrower was instructed to turn over books in his possession to the health authorities. The Health Department was told which of the infected citizens were in possession of library books and was empowered to dispose of said books as it saw fit.<sup>13</sup>

The public library movement saw its worst fears realized in January 1900 when the health department in Scranton, Pennsylvania, terminated library circulation in the city in order to preclude possible spread of scarlet fever. Public libraries had long since voluntarily adopted the policy of refusing to loan books to infected borrowers, and the scarlet fever outbreak in Scranton did not appear especially severe. Nevertheless, the city's public health officials felt compelled to take drastic action because they were suffering substantial criticism for their inability to prevent the spread of the most recent epidemic, which came on the heels of a similar outbreak of diphtheria. Book circulation remained suspended for about three weeks, during which time all returning books were treated with formalin vapor for thirty-six hours before being returned to the collection.<sup>14</sup>

In Britain it was suggested that all library books be routinely treated with heated vapor of formalin before being reshelved.<sup>15</sup> Though, to this point, libraries and public health boards were sharing the responsibility of insuring that books did not transmit disease, it is interesting to note that London's Public Health Act of 1891, Section 68, allowed for fines up to five pounds for anyone suffering from a contagious disease who willingly loaned a book to another.<sup>16</sup> In addition, localities such as Croyden sought to shift the burden to the reader by assessing fines against anyone who returned to the library any book known to have been exposed to infection.<sup>17</sup>

#### The Public Health Movement

Paralleling the rise of the free circulating library in England and America was the development of the public health movement. Before the 1880s disease was widely believed to be caused by dirt, and the embryonic public health movement was almost solely concerned with public hygiene. The term "public health" appears to have been used for the first time in Britain's Public Health Act of 1848. In both this and the Public Health Act of 1858, focus was on punishment of offenders, who were perceived as those who lived in the dirtiest conditions—the

poor. Improvements in Britain's public health policies grew as the franchise was extended.<sup>18</sup>

England's Public Health Act of 1875 represented landmark legislation. It consolidated existing laws and directed public attention to preventive medicine. It also was to become the model for future public health policy on both sides of the Atlantic. Section 126 sought to preempt epidemics:

Any person who-

- (1) while suffering from any dangerous infectious disorder wilfully exposes himself without proper precautions against spreading the said disorder in any street, public place shop inn or public conveyance without previously notifying to the owner, conductor or driver thereof that he is so suffering; or
- (2) Being in charge of any person so suffering, so exposes such sufferer, or
- (3) Gives lends sells transmits or exposes without previous disinfection, any bedding clothing rags or other things which have been exposed to infections from such disorder, shall be liable to a penalty not exceeding five pounds. ...<sup>19</sup>

Section 68 of London's Public Health Act (1891) is a virtual restatement of the above, and it was apparent that books would easily qualify as one of the "things" proscribed from circulation after exposure to infection. Section 59 of Britain's Public Health Acts Amendments Act of 1907 spoke directly to the issue of infected library books:

Provisions as to library books-

- (1) If any person knows that he is suffering from an infectious disease he shall not take any book or use or cause any book to be taken for his use from any public or circulating library.
- (2) A person shall not permit any book which has been taken from a public or circulating library, and is under his control, to be used by any person whom he knows to be suffering from an infectious disease.
- (3) A person shall not return to any public or circulating library any book which he knows to have been exposed to infection from any infectious disease or permit any such book which is under his control to be so returned, but shall give notice to the local authority that the book has been so exposed to infection, and the local authority shall cause the book to be disinfected and returned to the library, or to be destroyed.
- (4) The local authority shall pay to the proprietor of the library from which the book is procured the value of any book destroyed under the power given by this section.
- (5) If any person acts in contravention of or fails to comply with this section, he shall be liable in respect of each offence to a penalty not exceeding forty shillings.<sup>20</sup>

Not only is the circulation of a potentially infected book dealt with in great depth and detail, but compensation to the library for destroyed books is provided for.

In America one finds no comparable national effort to address such public health problems. According to the Constitution, such efforts are reserved for state and local authorities to address. While states possess power to limit individual freedom and/or seize property to protect the public welfare, they have usually delegated health enforcement to cities and towns.<sup>21</sup> Without national leadership on the issue, progressive local leaders often had to battle

disinterested and/or corrupt political organizations that were well entrenched and determined not to surrender any of their power. New York City serves as a case in point.

In 1857 New York had the highest death rate of any large city in the world (36.8/1,000 as compared to London and Berlin's 25/1,000). Boss Tweed's Tammany Hall political machine consistently defeated public health bills placed before the state legislature. It was not until a cholera epidemic wreaked its havoc in 1866 that such a bill was pushed through the state body by Dorman B. Eaton and Stephen Smith (who later went on to establish the American Public Health Association). Based on England's sanitary system, a Metropolitan Board of Health was instituted, empowered to act within New York City.<sup>22</sup> In the 1870s the Board actively attacked public health problems by instituting and enforcing sanitary codes dealing with problems ranging from quarantine of smallpox and typhoid to citations for faulty plumbing. In 1885 the New York State Legislature enacted legislation equivalent to England's 1875 Public Health Act requiring areas that were not already doing so (New York City, Brooklyn, Yonkers, Albany, and Buffalo were excepted) to institute proper methods of inspection and control of persons and "things" in order to guard against spread of infection.<sup>23</sup>

# Libraries and Disease after 1900

Vapor of formalin remained the disinfectant of choice for those seriously concerned about the threat posed by contaminated books after the turn of the century. Dr. Andrew F. Currier, trustee of the Mt. Vernon (N.Y.) Public Library, presented a paper testifying to the efficacy of such treatment.<sup>24</sup>

The British took note of the Miguel method employed in France and publicized in a paper read before the Académie de Medécine in Paris. A disinfectant solution of two parts formaldehyde to one part calcium chloride was found somewhat effective.<sup>25</sup> The French are also credited by the American library community with introducing a series of suggestions intended to prevent book contamination. In a 1907 dispatch from Paris, Drs. Jose Badia and Nicholas V. Greco advocated introducing wash bowls at the entrance and exits to library reading rooms for patron usage; scrubbing of floor and furniture with antiseptic; employing "sterilizable moisteners" for readers addicted to finger wetting to turn book pages; and distributing glass plates to be placed over book pages while reading, thereby preventing book contagion through sneezing or coughing.<sup>26</sup>

Formaldehyde advocates received a blow from an article appearing in the *American Journal of Public Hygiene* in 1908 touting steam as a more efficient disinfectant due to its penetrating power.<sup>27</sup> Steam, however, might injure books. W. L. Beebe announced a solution to this dilemma in 1911, advocating the use of 2% carbolic acid in gasoline as a disinfectant solution. Books were soaked and dried without injury. The author recommended use of peppermint, wintergreen, or cinnamon oil for those who objected to the gasoline odor.<sup>28</sup> Unfortunately, L. B. Nice of Harvard Medical School could not replicate Beebe's excellent results. Nice theorized that Beebe did not permit the contaminating culture to dry on the book pages adequately before soaking in the solution. Nice preferred moist hot air as a disinfectant agent.<sup>29</sup>

While the anxiety over handling germ-laden library books remained a constant concern, by 1910 there did not appear to be any significant impetus to the fear. One might say the panic seemed to be losing momentum. Certainly there was no noticeable increase in serious illnesses being reported among library workers or patrons. Nor did it appear mat epidemic-related death

rates were higher among these groups of people. Some began wondering why handling library books should represent any more of a health hazard than handling paper currency. Of course libraries still routinely routed books in the possession of contagious borrowers to public health agencies (the New York Public Library adopted this procedure as well in 1908), but the issue appeared under control. The worst was over.

It had to be all the more disheartening, therefore, when an alarmist article by William R. Reinick appeared in the *American Journal of Pharmacy* exceeding all predecessors in fantastic claims and bizarre investigations.<sup>31</sup> Cases recounted by Reinick included smallpox contracted from a book; a fatal blood poisoning episode mat occurred when a translator transferred mold from a Turkish manuscript to an open facial cut (a Hungarian physician diagnosed the tragedy but was unable to save the unfortunate victim); several incidents of gonorrhea traced to books; and severe colds suffered from inhaling book dust. The author also warned of the possibility of readers contracting cancer by coming in contact with malignant tissue expectorated upon the pages by patients. To emphasize the danger, Reinick reported the death of forty guinea pigs inoculated with dirty book paper.

Such esoteric accounts could only serve to obscure the fact that outbreaks of disease were not being traced to libraries. Libraries themselves were becoming more confident of their own health—so much so mat we encounter the first report of books in the possession of scarlet fever patients being returned to the shelves without treatment.<sup>32</sup> No further cases resulted.

Still, in 1914 the New York Public Library was continuing to receive a daily list of persons infected with contagious diseases from the Board of Health. The Library identified borrowers from the list and notified them not to return books to the collection. When such borrowers notified the Library of books in their possession, it transmitted the information to the Board of Health, which subsequently collected and destroyed them. If a patient's books were returned to the Library before the Board of Health could act, New York's branch librarians routinely tossed them into the furnace rather than accumulating them for later pickup by the Health Board.<sup>33</sup> Such behavior speaks of a lingering fear very much alive among library personnel. Perhaps the libraries were doing a better job in dismissing the public's fears man they were in dispelling their own.

The New York Public Library had good reason to review its policies regarding treatment of books in the possession of contagious patrons. Early in March 1914 a Brooklyn Assemblyman named Karpen introduced a bill before the New York State Legislature in Albany requiring disinfection of every book returned to public and school libraries in the state before recirculation. Edwin Anderson, director of the New York Public Library, declared that "the enactment of such a law would put all public libraries out of business at once."<sup>34</sup> Anderson turned to Dr. John S. Billings, who was now both director of the Bureau of Infectious Diseases and medical officer of the New York Public Library. Responding upon request in his first capacity, Dr. Billings declared the proposed disinfection of books to be unnecessary (because formites rarely transmit infection), ineffective (because formaldehyde did not penetrate book leaves), and harmful (because moisture necessary to the process damaged bindings and illustrations).<sup>35</sup> Brandishing Billings's letter, Anderson announced his readiness to mount a citywide protest of Karpen's bill, if necessary.<sup>36</sup> But by 14 March William Watson of the New York State Education Department was able to report that the Public Health Committee had unanimously rejected the proposal.<sup>37</sup>

Once again, public librarians and public health authorities had acted quickly and responsibly to protect library service—this time from a panicky, overzealous legislator.

In Britain Henry R. Kenwood, professor of hygiene at the University of London,

concluded the risk of contracting tuberculosis from books to be very slight even under the worst possible circumstances (heavily soiled books) after conducting a series of experiments.<sup>38</sup>

By 1916 we read of doctors assuring the library community mat exposure to sunlight provides all the disinfection mat books require for safe usage.<sup>39</sup> Dr. Walter Brown of the Massachusetts Department of Health reported that the chances of books transmitting disease were almost nonexistent.<sup>40</sup> In 1920 the Advisory Committee of the National Tuberculosis Association consisting of national authorities on the disease could state:

The common use of recreation rooms, library facilities, and occupational aid facilities by tuberculous and non-tuberculous patients is without hazard to the non-tuberculous in any general hospital where ordinary sanitary precautions are instituted and efficiently enforced. The same principles would govern the use of the library and other recreational facilities of a hospital as are usually applied to public libraries and public places of amusement from none of which ambulatory tuberculous patients are excluded.<sup>41</sup>

Sanitary common sense was deemed sufficient in dealing with the health threat posed by circulating libraries.

Yet the question would not die. After all, bacteria were indisputably present in books. Though they are unlikely to be present in sufficient quantity to pose a serious health threat, investigations by the medical community continued throughout the 1930s and 1940s in Britain, America, and even Japan. Public health agencies also continued to address the issue. Summarizing the medical problem for the library community in 1950, William Hill, a British hospital librarian, indicated the jury was still out on the actual threat posed by infected books.<sup>42</sup> Anxiety had subsided because risk was nil, but in theory, at least, the possibility remained.

The drastic decline of the very diseases that gave rise to the panic makes it unlikely that contagion by books will ever again become a crucial issue.<sup>43</sup> Indeed, greater attention is given today to the future existence of the book as a communication vehicle than to the public health threat posed by the print media. Nevertheless, the contagion issue was one that activated the library, legal, and medical communities in opposition to what was perceived as a genuine threat—one that could have ended the public library movement almost before it had begun. Libraries in Britain and America demonstrated proper concern and instituted practical procedures and safeguards aimed at countering the apparent threat of contagion. As a result, public confidence in the libraries was maintained and the future growth of the movement made possible.

#### Notes

1. W. F. Poole, "The Spread of Contagious Diseases by Circulating Libraries," *Library Journal* 4 (July-August 1879): 258-262.

- 2. Library Journal 13 (March-April 1888): 105-106.
- 3. Butler Wood, "Infectious Diseases and Circulating Libraries," Library Chronicle 5 (1888): 24.
- 4. Library 1 (1889): 171.
- 5. Library Journal 16 (March 1891): 80.
- 6. Library Journal 20 (October 1895): 338.
- 7. The point and counterpoint of this debate are to be found in Library 7 (1895): 221-222, 290, 330, 336-337.
- 8. Library Journal 21 (April 1896): 150-151.
- 9. Library Journal 22.(August 1897): 388.
- 10. Library 9 (1897): 34.

11. Library Association Record 1 (June 1899): 385.

12. Library Journal 24 (December 1899): 684-685.

13. William J. Willcock," Notification of Infectious Disease and the Public Library," *Library World* 2 (1899): 89-91.

14. Henry J. Carr, "Disinfection by Formalin at Scranton Public Library," Library Journal 25 (1900): 71-72.

15. Library Association Record 2 (May 1900): 249.

16. Tho mas Aldred, public librarian at St. George-the-Martyr, quoted the relevant section in correspondence to *Library World* 2 (1900): 198.

17. L. Stanley Jast, "'Infected' Books," Library World 3 (1900): 146.

18. See Harley Williams, A Century of Public Health in Britain (London: A. and C. Black, 1932), pp. 10-23.

19. Public Health Act, 1875, 38 and 39 Vict., C.55.

20. Public Health Acts Amendment Act, 1907, 7 Edw. 7, C.53.

21. See Lloyd Ackerman, Health and Hygiene (Lancaster: Jacques Cattell Press, 1943), pp. 297-298.

22. See Wilson G. Smillie, Public Health (New York: Macmillan Company, 1955), pp. 288-293.

23. Laws of the State of New York (Albany: Banks and Brothers, 1885), ch. 270d.

24. Andrew F. Currier, "The Sterilization of Books by Vapor of Formalin," *Library Journal* 27 (October 1902): 881-883.

25. Library Association Record 9 (February 1907): 92.

26. Library Journal 32 (October 1907): 442.

27. Burt R. Rickards, "The Disinfection of Books," American Journal of Public Hygiene 18 (1908): 325-328.

28. W. L. Beebe, "Carbo Gasoline Method for the Disinfection of Books," *Journal of the American Public Health Association*, 3rd ser., 1 (1911): 54-60.

29. L. B. Nice, "Experiments in Book Disinfection," *Journal of the American Public Health Association*, 3rd ser., 1 (1911): 775-777.

30. New York Times, 8 March 1908, sec. 6, p. 61, col. 6.

31. William R. Reinick, "Books as a Source of Disease," American Journal of Pharmacy and the Sciences Supporting Public Health 86: 13-25.

32. Library Journal 38 (January 1913): 27-28.

33. Secretary to Chief of Circulation Department, 10 March 1914, Record Group 6, Director's Office, New York Public Library Archives.

34. Edwin H. Anderson to William R. Watson, 13 March 1914, Record Group 6, Director's Office, New York Public Library Archives.

35. Billings to Anderson, 10 March 1914, Record Group 6, Director's Office, New York Public Library Archives.

36. Anderson to Billings, 14 March 1914, Record Group 6, Director's Office, New York Public Library Archives.

37. Watson to Anderson, 14 March 1914, Record Group 6, Director's Office, New York Public Library Archives.

38. Library Association Record 17 (September 1915): 415.

39. Wisconsin Library Bulletin 12 (November 1916): 390-391.

40. Library Occurrent 4 (April 1917): 178.

41. Elizabeth Koehler, "Are You a Phthisiophobist?" Special Libraries 11 (June 1920): 149.

42. William Hill, "Books and Infectious Diseases," Library Association Record, 4th ser., 17 (May 1950): 146.

43. Andrew McClary, "Beware the Deadly Books: A Forgotten Episode in Library History," *Journal of Library History* 20/4 (Fall 1985): 431-432.

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The Library forwarded the list of books reported by infected borrowers to the Board of Health, which routinely collected and destroyed them.

(Courtesy of Rare Books and Manuscripts Division, New York Public Library, Astor, Lenox, and Tilden Foundations)





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