

Health and Medicine on Display

International Expositions in the
United States, 1876–1904

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EXPOSITION INFRASTRUCTURE AND EXHIBITION DISPLAY: AN INTRODUCTION

In its broader sense, the study of hygiene includes the examination of the conditions which affect the generation, development, growth and decay of individuals, of nations, and of races. . . . It is evident, therefore, that hygiene is not only a subject of scientific interest to the student, or to medical men, but that to the political economist and to the legislator its problems and discoveries ought to be of practical importance.

John Shaw Billings, M.D., 1879¹

In 1879, one of America's foremost medical thinkers, John Shaw Billings, M.D., librarian of the Army's Surgeon General, set forth a new approach to health for the last quarter of the nineteenth century. Billings challenged health professionals and society as a whole to consider health in its broadest contexts of growth and decay as it affects individuals and the nation. This was an important precedent for this period, when these ideas on what constitutes the individual's and the nation's health were being formulated, and it is a history which may seem unfamiliar to us today, given our fragmented experience of specialized medicine and privatized health services.

This book follows two aspects of this story as they played out at the period's great international expositions. One is how the expositions' infrastructures and urban settings demonstrated the advances in applied health and medical practice; the other is how their exhibits attempted to connect the public with issues directly related to modern health and medicine. Together they give a more complex picture of how expositions helped foster a public awareness of health and medicine during the critical years of 1876 to 1904, as the country moved from the excesses of the Gilded Age into the early reform years of the Progressive Era.

International expositions were transmitters of a new visual culture through their massive assembling of exhibits and public audiences. While

the literature on expositions is extensive, the story of how they served to connect the public to changing views of modern health and medicine has remained untold.² To construct and operate an exposition entailed providing emergency medical treatment, ensuring access to safe water, and preventing infectious disease for thousands of workers and millions of visitors. While this work had parallels to the contemporary problems facing urban health officials of the period, the experiences of exposition organizers did not have clear precedents and often involved conflicts with both municipal health officials and the existing health resources of the cities in which the expositions were set. Making exposition exhibits that represented issues of modern health and medicine was also not without its challenges. Participation by many inexperienced exposition exhibitors from state health agencies, private health associations, and health care institutions required new skills that took time to evolve. Direct competition from exhibits by well-funded government medical departments of the military services placed additional pressures on these exhibitors to create interesting and informative formats for presenting health and medical issues.

The years between 1876 and 1904 were a dynamic period that coincided with the gradual transition from the sanitarian reform movements begun in the 1850s to what was called “sanitary science,” which emerged by the turn of the century. While the new applied sanitary engineering and laboratory technologies in bacteriology created significant changes in health and medicine, their effects on society were gradual and sometimes uneven. The expositions we are discussing took place against a powerful struggle between the advocates of traditional medical practice and the new professionals responsible for the nation’s health.³ Reflecting this transition was the shift in terminology from “hygiene” to “health,” from “state medicine” to “public hygiene,” from “sanitary movement” to “sanitary science.”⁴ Significant institutional changes were also being made in the care of the mentally ill and in the expanded role of hospitals and their use by the general public.⁵ With the recently emerging fields of state medicine and public hygiene, the stage was set for viewing disease not just as a medical issue but as a responsibility for the whole society.

Significant social, economic, and political changes were also occurring in the United States itself during this thirty-year period. Even while extraordinary growth in urban centers was being applauded as a sign of progress, problems of sanitation, water, and sewage had begun to cause serious concern in communities large and small across the country.⁶ Rapid industrialization was propelling the country forward economically, despite

recurring economic depressions, but workers' health and occupational disease still remained elusive subjects for medical professionals and were on the periphery of public consciousness.⁷ Expansion of international trade activities and proliferating military interventions by the U.S. government, particularly as a result of the Spanish-American War, had serious consequences for the nation's health, with respect to both quarantine and disease. Finally, the transformations caused by massive immigration, expanded transportation, and increasing technology in communications media also had broad repercussions for the nation's health. The confluence of all these changes played out within the four international expositions discussed in this book: the 1876 Centennial Exhibition in Philadelphia, the 1893 World's Columbian Exposition in Chicago, the 1901 Pan-American Exposition in Buffalo, and the 1904 Louisiana Purchase Exposition in St. Louis.

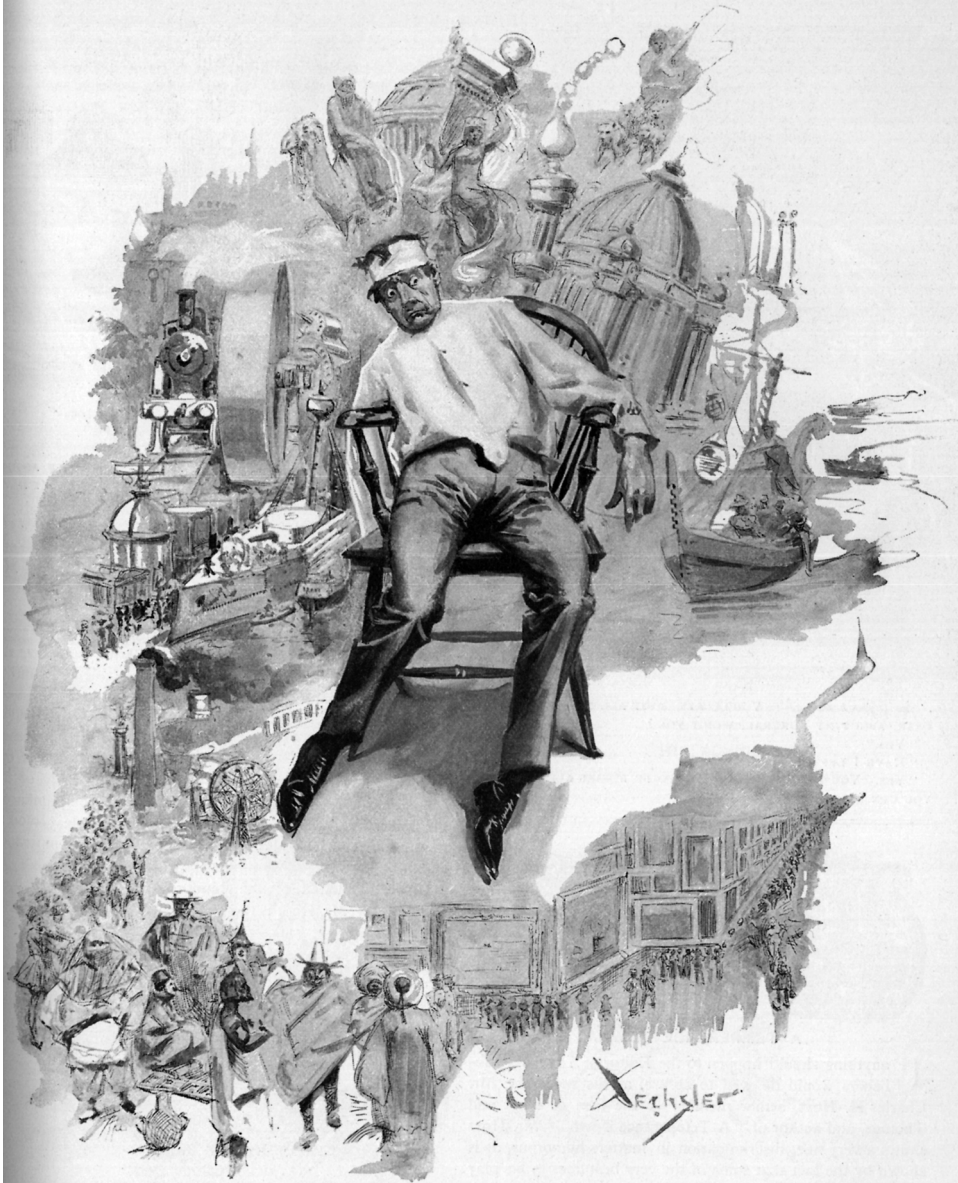
Structuring Health and Medicine in the Exposition Site

The expositions' temporary nature and improvised setting within established urban centers required coordination, if not cooperation, between municipal and exposition organizers over issues of water resources, health services, and other supportive activities. The relationships between these groups were often uneasy, and had to be negotiated anew to set up the health infrastructure and medical services for each of the four expositions under consideration. Although precedents existed in the United States for popular industrial fairs beginning in the 1840s, as well as the more recent fundraising fairs used by the U.S. Sanitary Commission during the Civil War, neither of these had to directly address current health issues in their infrastructure.⁸ And unlike the 1889 Exposition Universelle, in which the city of Paris presented itself as a virtual living museum and display of technological innovation, as Miriam R. Levin has effectively argued, the situation was completely different in the United States.⁹ Here the exposition did not function as a model for civil society, despite the extravagant claims to the contrary. While their European counterparts were government-sponsored, expositions in the United States were run by private corporations despite their use, in part, of public funds. As a result, the corporate agendas of exposition organizers, interested in profits and promotion, were frequently at odds with those of the current municipal health professionals. The conflicts and tensions that sometimes ensued pitted the narrower goals of municipal boosterism against the longer-term perspective of the community's health. Expositions were by necessity integrally

linked to their locations in large metropolitan centers, such as Philadelphia, Chicago, Buffalo, or St. Louis, but they were operated as a separate entity or “a city within a city,” as they were sometimes referred to.

Clearly, exposition organizers had to contend with the same array of health hazards that were rampant within most nineteenth-century urban settings—infectious disease, improper sanitation, impure water, and food contamination—as well as with crime. The most precise characterization of the exposition was as “an artificial city with real problems,” an observation made by Maurice Neufeld in his early study of the 1893 Chicago exposition.¹⁰ Although disease was a more threatening specter than crime, exposition organizers exerted strict controls on the press in reporting on issues of health and safety. As working environments for thousands and as exhibition venues for their visitors, expositions held important health and safety implications for the 9.5 million people who came to Philadelphia in 1876, the 27.5 million visiting Chicago in 1893, the 8 million visiting Buffalo in 1901, and the 19.5 million visiting St. Louis in 1904. Managing huge crowds was always an issue for organizers of international expositions. French exposition organizers, for example, had a particular aversion to the hazards and potential threats of large public assemblies because of their political implications.¹¹ Exposition organizers in the United States, on the other hand, tended to understate their concerns publicly, but their consistent allocation of more resources to police protection than to medical services and disease prevention revealed their unstated priorities as well as their own projected fears and those of society.¹²

The first priority for organizers was completion of the exposition’s construction work, leaving aside the attending issues of occupational safety and health. However, the presence and role of construction workers on exposition sites has often been erased from their histories, as Peter Hoffenberg has pointed out.¹³ Exposition audiences were as yet not fully aware of the potentially harmful health effects of unrestrained noise, smoke pollution, milling crowds, physical stress, and fatigue. Sensory overload from the exposition’s massive scale was even diagnosed as a health hazard for the “brain tired” or neurasthenic, and was parodied in the caricature of the “nervous man’s impressions” at the 1893 Chicago exposition (fig. 1.1).¹⁴ Nonetheless, in the extensive promotional literature produced by exposition publicity departments, there was little real information offered to the public on the nature of the exposition’s health infrastructure or of its effects on the well-being of its audiences.



A NERVOUS MAN'S IMPRESSIONS OF THE FAIR.

| 1.1 |

This caricature of the "nervous man's impressions" at the 1893 Chicago World's Columbian Exposition represented the kinds of sensory overload experienced by exposition visitors from the city's smoke pollution, milling crowds, and the fatigue of endless walls of displays. "A Nervous Man's Impressions of the Fair," line drawing, *Life* 22 (September 28, 1893): 203.

Showcasing Health and Medicine in the Exposition Exhibits

While it may be interesting to speculate about the nature and meaning of the audience's exposition experience, the "things" that people saw in exposition exhibits are the most reliable evidence of their encounters. The exposition was "first and last of all a collection of exhibits," which were the "backbone" and drawing card for its massive audiences, observed Frederick J. V. Skiff, the experienced director of exhibits for the 1904 exposition in St. Louis.¹⁵ With the number of exhibits estimated at 33,000 in 1876, 65,000 in 1893, 3,500 in 1901, and 70,000 in 1904, expositions presented themselves as showcases for the vast array of society's products, artifacts, resources, and services.¹⁶

A necessary order for these thousands and thousands of exhibits was created by the internal framework of the exposition's official classification system. The central matrix of this system assigned a particular hierarchical placement for each exhibited item, including that of health and medicine (see appendix A). The result, not surprisingly, was that exposition exhibits were often characterized as "encyclopedias of knowledge," in the words of Selim H. Peabody, chief of the Liberal Arts departments at the 1893 Chicago exposition and the 1901 Buffalo exposition. Exposition exhibits presented, in his words, "a great mosaic, each element filling a place definitely determined by its inherent relationships."¹⁷ What people saw, however, was not a direct transcription of the world as it was, but rather, as Robert Rydell has cautioned, a highly mediated construction of reality.¹⁸

The construction of this comprehensive "mosaic," juxtaposing all of society's achievements, provided a unique context for exposition exhibits of health and medicine for public viewing. This contextualizing was unlike that of professional medical museum exhibits or even specialized health exhibitions, where viewers were given a more isolated view of the subjects depicted. Another distinctive feature of exposition exhibits in health and medicine was the kinds of exhibitors, including commercial, professional, and governmental participants. These were drawn from a range of divergent interests in health, with dissimilar agendas, diverse means, and often differing outcomes, with the result being a new and broader view than at previous public events.

Within this vast mosaic of exposition exhibits, exhibitors of health and medicine were sorted into three distinct but exclusive official classifications: commercial exhibitors of medical apparatus and equipment; social economy exhibitors representing issues of workers' housing, municipal/

state health boards, and health care institutions; and medical department exhibitors of the U.S. government military services (see appendix A). Noticeably absent were individual medical practitioners, at least those subscribing to the professional code of the American Medical Association (AMA), who were prohibited from any form of direct advertising and commercial promotion.¹⁹ Some explanation of these three groupings of exhibitors will illustrate the reasons for the diversity of the exhibits on view.

Given that industry and commerce were the driving forces and dominant focus of expositions, the high profile of the first grouping (manufacturers of medical and health merchandise associated with therapeutic treatments and medical practice) is not surprising. Among these commercial exhibits, those of anatomical and medical model manufacturers consistently drew the attention not just of medical specialists but of popular audiences. At the 1867 Exposition Universelle in Paris, for example, displays that attracted special public attention included the innovative and award-winning specimen models by Ludovicus Brunetti from Padua.²⁰ The compelling popularity of commercial anatomical museums in the United States, about which Michael Sappol has written, provided a ready-made general audience for exposition exhibits of such commercially produced anatomical models.²¹

The second grouping of health and medicine exhibits had been created initially at Paris's Exposition Universelle of 1855 under the umbrella of "social economy." To show society's larger humanitarian aspirations on behalf of its workers (for housing and so forth) and as an expression of French social theory, social economy displays were an effort by exposition organizers to counterbalance the dominance of industrial and commercial exhibitors. At the following 1867 exposition, for example, the display of a full-scale model of workers' housing was personally sponsored by Emperor Napoleon III, and similar models became a prominent feature at subsequent French expositions in 1878, 1889, and 1900. Frédéric Le Play, social theorist and the 1867 exposition's general commissioner, wanted the display of model workers' housing to advocate for improved conditions for workers in their transition from a rural economy to an industrial one.²² This new classification was an important step in the eventual evolution and expansion of health-related exhibits in the United States created by private and public health agencies, associations, and institutions. Eventually, this exhibit classification encompassed the newer fields of hygiene, sanitation, and public health that mirrored the developments in health and medicine taking place in this country. By the 1900 Paris exposition, social economy in

its exposition presence had come to represent what Daniel T. Rodgers has aptly characterized as “the ambulance wagon of industrial capitalism,” in its efforts to come to terms with the social transformations taking place.²³

Finally, exposition exhibits by military medical departments had the duty of conveying information about the larger health programs for service personnel as well as for the nation generally. Military medicine was focused not only on warfare, but on broader issues relating to the protection of the nation’s health. These highly accessible exhibits were intended as “a report to the people of its work . . . an object-lesson, which even the least educated visitor can understand.”²⁴ In contrast to the meager resources of exhibitors in the social economy section, government departments generally had ample funds for producing exhibits and implementing innovative display techniques, although the money was not always equally distributed between the different departments.

The organizational structure of the government’s exhibitors also differed from that of commercial or social economy exhibitors in that it was the direct responsibility of a government exposition board. This board was made up of members representing the Smithsonian Institution’s U.S. National Museum and each of the thirteen government departments and bureaus that included the medical departments of the Navy and Army (War Department) and the Marine Hospital Service (Treasury Department). All these government departments had directly benefited from the expertise in exhibit-making of the U.S. National Museum, whose work was an initial model and stimulus. Yet a certain tension in this relationship was alluded to by the assistant director of the U.S. National Museum, George Brown Goode, who noted that “the tendency is for them [government departments] to encroach more and more upon the field which was formerly occupied by the Institution and museum alone.” Goode’s view that the educational results of expositions were “chiefly incidental” in comparison to that of museums was openly countered by the rhetoric and promotional strategies of exposition officials, who extolled the educational merits of their events alongside their commercial underpinnings.²⁵

Exhibit-making, even that practiced at international expositions, was not a transparent process but always involved the creation, imagining, and translating of information into a visual form. As Sharon Macdonald has described it, exhibit-making is a process deeply rooted in transactions that “always involve the culturally, socially and politically saturated business of negotiation and value-judgment.”²⁶ Exposition exhibit-making was an essentially re-presentational process, and one that depended on the use of various visual tools that were constantly being evolved to meet the con-

ditions faced by different exhibitors. This was a period of experimentation with new and old media forms that marked an important beginning of a process of communicating directly with the public on issues relating to health and medicine.²⁷ The tools for translating the work of health and medicine into visual form included objects and original artifacts of medicine's physical apparatus and equipment; graphic charts, maps, and photographs for pictorial representation of facts and information; three-dimensional models and replicas for reproductions in miniature and at full size; and live demonstrations for reenactments of work processes. This was an incremental process that evolved over the thirty-year period of the four expositions covered here. Exhibitors, for example, had to see that there was a specific visual and material culture of health and medicine for this purpose. They then had to learn how to manipulate and adapt specific media forms that would best fit their purposes within the context of the exposition.²⁸ Differences in funding, available expertise, resources, and specific agendas gave the various exhibitors an uneven ability to harness this rich toolbox of display devices. In addition, there was always an underlying conflict in the effort to reduce the complex information on health issues into the equivalent of today's sound bites for both publication and exhibition.²⁹ The gap between reality and its representation was a key dilemma for all exhibitors of health and medicine at these four international expositions.

Privileging the visual over the textual was part of a deep cultural shift in this period that was recognized pedagogically as well as scientifically.³⁰ This choice of how to make displays visually effective spilled over into the way that exposition exhibits were made and how they were seen. As early as the Paris Exposition Universelle of 1878, the extensive use of visual graphs and diagrams caused G. Stanley Hall, psychologist and educator, to observe that "the graphic method is fast becoming the international language of science."³¹ Additionally, the official advice to potential social economy exhibitors for the 1878 Paris exposition was to make displays that "speak to the eyes as well as mind."³² Expositions, therefore, provided exhibitors, especially those of health and medicine, the opportunity to experiment with and implement a new visual form of exhibit-making.

In the following three chapters, this book explores how the infrastructures and exhibits at three international expositions brought the public into contact with changing views of modern health and medicine. These chapters are structured chronologically to illustrate what was distinctive about the 1876 Philadelphia exposition, the 1893 Chicago exposition, and the 1901 Buffalo exposition. Each exposition is examined to show the issues faced

by city health authorities and exposition organizers in creating their event, their struggles in implementing a new form of medical service and sanitation procedure, and their efforts to control infectious disease among the massive assembly of workers and visitors. These discussions are followed by a consideration of exposition exhibits on view in order to understand the changing nature of participating exhibitors, the continuing evolution of display formats, and the consistency and prominence of exhibit work by government military medical departments.

These initial three chapters serve as a prequel to the following two chapters focused on the 1904 St. Louis exposition. The chapter on the St. Louis exposition's infrastructure and medical issues offers a closer consideration of the complexities of the issues involved and their relationship to earlier expositions. Similarly, the chapter on the exhibits at the 1904 exposition provides a more detailed description of a selected group of exhibits and explains the reasons for their presence. These two chapters bring together the book's overview of the similarities, changes, and important differences in the ways the issues of modern health were represented in the exposition site and in its displays.

The role that these four expositions played in framing and shaping issues of modern health, however, went beyond merely providing a sanitary environment or exhibiting cultural and physical artifacts. These expositions provided a rich cultural context for enacting the deeper transitions in society and especially for the process that John Shaw Billings had originally envisioned in making hygiene and health an all-encompassing concept that the general public could understand and take responsibility for.³³
