

Public Health Then and Now

Virchow, The Heroic Model in Medicine: Health Policy by Accolade

GEORGE A. SILVER, MD

Few stars in the medical firmament have continued to shine with such luster as the German pathologist, Rudolf Virchow (1821–1902), without occasional dimming. Nor have many left a legacy of such enormous volume in writings on so many varied topics, within and outside the field of medicine. Science teachers, teachers in medical schools, proponents of socio-medical theories and proposals, historians of science and medicine quote, commend and advocate Virchow and his scientific, medical and philosophical principles, although only limited access to his voluminous writings have been heretofore available in English. Dr. L. J. Rather, emeritus professor of pathology at Stanford University School of Medicine, a respected historian and Wagner scholar who published a translation of selected essays titled *Disease, Life and Man*,¹ in 1958 has now edited a full translation of the 1879 German edition² of *Collected Essays on Public Health and Epidemiology: Rudolf Virchow*.³ This is quite clearly a labor of love, as is evidenced in the admiring foreword, as well as scholarship. Dr. Rather succinctly places Virchow in the forefront of that host of heroic pioneers, investigators and discoverers, possessors of wide-ranging scientific interests such as those Virchow encompassed: “. . . Virchow remains the sole instance of a full-fledged physician-scientist-statesman in our time.”³

Rather has edited the translation so that it is smooth and fluid, easy to read and, given the content, absorbing. The subject matter is unexpectedly modern, the articles tending to emphasize the similarity of the problems in Virchow's time and ours—yet how different the approaches.

The publication of Rather's translations of these public health papers and essays by Virchow is very timely. Virchow's contributions to medical science continue to receive the respect and admiration of the medical profession. In addition, he has become the exemplar of the social as well as the scientific ideal of the physician. He has become the idol of rebellious and dissident physicians who reject the commercialism and the impersonal and technocratic patterns of modern medical practice, and see their social role in his writings and in his political actions. Unquestionably the admiration for the medical scientist and discoverer rubs off on the radical medical politician and his commitment to social goals.

While the essays and reports, reflecting the wide-ranging interests of the author, need to be seen in the context of the turmoil of the times and the burgeoning of new knowledge, it is the life and philosophy of the man himself and his

multitudinous accomplishments that illuminate them, underscore their message, and speak to us today. It is not possible to do justice to the essays without recognizing both the historic background in which they were written and the historic personage who wrote them.

The collection of Virchow's writings in this book helps us to come to terms with the man and his accomplishments; they also introduce a number of questions. First is the question of merit—does Virchow deserve the unbounded admiration he receives, the respectful central position he holds in medical history, and the worshipful admiration he is granted by the radical and socially minded young physicians today? A corollary question is whether the positions he staked out, in his time, would seem as admirable in the context of today's social problems and today's politics. Second, in historical perspective, were there no other heroic figures of comparable magnitude? Did he stand alone and so earn our everlasting regard? And corollary to that question, are there no heroic physician-scientist figures in our own time who are as worthy



Virchow

Address reprint requests to George A. Silver, MD, Professor of Public Health (International), Yale University, 89 Trumbull Street, Yale Station 14A, New Haven, CT 06520. This paper was accepted for publication by Barbara G. Rosenkrantz, PhD, Editor of the Public Health Then & Now Section.

of emulation as Virchow seems to be from his time? Is Virchow, in other words, uniquely alone as Rather states?

For a look at Virchow's life, the best and most complete biography in English was published over 30 years ago.⁴ Erwin Ackerknecht, the biographer, greatly admired Virchow, and the book is full of comments and anecdotes that illuminate the character of Virchow favorably, and place him in the front rank of physicians and scientists of all time: ". . . at his death Germany would complain of having lost four great men in one: her leading pathologist, her leading anthropologist, her leading sanitarian, and her leading liberal."⁵

From his youth, it would appear, Virchow expressed determination and commitment, as physician, scientist, politician. "A life full of work and toil," he wrote at age 18 in his high school graduation essay, "is not a burden, but a benediction."⁶ After the experiences in the Silesian typhus epidemic, he wrote to his father, "This [experience] has given me the advantage of being now not half a man, but a whole one, whose medical beliefs fuse with his political and social ones. As a natural scientist, I can be but a republican" [as opposed to a monarchist].⁷ He was then 27 years old.

The full weight of the influence he brought to bear is suggested not only by the topics included in these two massive volumes, but by the frame of reference. Many of the epidemiological and public health papers are reports to national commissions and professional committees of which he was member or chairman. Virchow's own life was inextricably woven into the events taking place in Germany and Europe at the time the papers were written. A life so rich and varied—which included the investigation of epidemics, laboratory discoveries in human physiology, pathology, microbiology and parasitology; anthropological explorations and



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the archeological revelations of Troy; participation in actual revolutions in the streets as well as revolutions in thinking and teaching in medical education and practice; skilled political actions as an elected member of city, state and national governments—cannot be narrowly confined to the epidemiologic arena. His giant presence loomed over medicine in Germany and Europe: the *Archiv*, a premier journal of medical studies which he founded and edited, is with us today; his *Cellular Pathology* transformed medical thinking; he organized medical societies and a political party. Not idly was Virchow called the "pope of medicine" in the 19th century!

Virchow was born in 1821 into a middle class, reasonably well-connected Prussian family. His uncle was a high-ranking officer, which may have helped him gain admission into the most prestigious medical school of the time—a military medical school in Berlin with a selective acceptance policy. He did well there, and was considered among the top, if not the most outstanding, of the graduates. At the early age of 27 he was appointed to a government commission to investigate a typhus epidemic in Upper Silesia. (At that time, typhus, typhoid, and recurrent fever were not yet clearly separated diagnostic entities.) The study came at an explosive time in European and especially German history, and his report on the etiology of the epidemic, expressed in radically anti-establishment social and political terms typified the professional radicalism of the period. "The logical answer to the question as to how conditions similar to those unfolded before our eyes in Upper Silesia can be prevented in the future is, therefore, very easy and simple: education, with its daughters, liberty and prosperity."⁸ Among the obstacles to improving life and preventing disease and early mortality, he listed lack of education in the native language, "the Catholic hierarchy," "the great landed proprietors," and the like.⁹ He concluded, "These are the radical methods I am suggesting as a remedy against the recurrence of famine and of great typhus epidemics in Upper Silesia . . . a lovely and rich country, which to the shame of the government has so far been inhabited only by a poor and neglected people."¹⁰

The report appeared the same year as the revolutionary upsurge in Germany which, while defeated in that a conservative authoritarian regime came into power, resulted in marked liberalizing changes in the political and social landscape. Virchow became a leader of the liberal political movement. The professional landscape also was revolutionized, in that a new scientific attitude and climate of discovery already on the threshold, now came to the fore, with Virchow becoming the leader and exemplar in this arena as well.

Virchow's career thereafter went from one success, accomplishment and acclaim to another, as president of the medical society, professor in Berlin, city alderman, state representative and national legislator, scientific discoverer and enunciator of new medical philosophy and principles. Between 1850 and his death in 1902, he participated in every important scientific event in which Germany was involved. His life gives evidence of a consuming curiosity about everything in life and nature. He made notes on the flora and fauna and geographic features of all the places he ever visited. He made important, not dilettante, contributions to anthropology, archeology (he went to Troy with Schliemann, and to Egypt to examine mummies), and public health. In a word, he was German medicine, German science, German politics in the second half of the nineteenth century.

The crucial event of his life was unquestionably his participation in the governmental commission sent to inves-

tigate the medical situation in Upper Silesia in 1848. The uncompromising report he issued not only established his medical, social, and political positions at the time, but set his feet on the road he traveled unswervingly thereafter, and limned the heroic character of dedication to social medicine he holds for us today. A sample of the recommendations should be sufficient to establish the main features of his medical and social philosophy.

As noted earlier, the recommendations included: "education, freedom and prosperity", and "full and unlimited democracy" as well. The villains were governmental neglect and oppression, poverty and religious exploitation, and illiteracy. He proposed education in the Polish language; self-government, separation of church and state; shifting of taxes from the poor to the rich; improvement of agriculture; development of cooperatives; and the building of roads. Hardly a word about medical measures! He concluded, in a fiery summary of the scandalous prevalence of disease and ignorance, the hope that now remedies would be undertaken.¹¹

Following his harrowing experience among the starving and sick peasants, he returned to join the revolutionary events of March 1848. As he wrote his father, "I am no longer a partial man, but a whole one, and that my medical creed merges with my political and social creed."¹²

His application of the epidemiologic and public health concepts in his political role were as important and far-reaching as his scientific explorations into cellular pathology. He took the experiences and teachings of early French and British public health experts and introduced statistics and financial considerations to sell the idea of a sanitary policy to the Berlin community, an early use of "cost-benefit analysis".¹³ Similarly, he praised the United States democratic processes, and proposed hospital reforms taken from US experiences. "The American Republic," he writes, "has amply demonstrated what the people are capable of doing in jointly working for the care of the ill."¹⁴ The essays reveal the imaginative grasp and orderly procedures of his exceptional mind. He concerns himself with legal medicine, and writes on "Responsibility" and "Diminished Responsibility," on negligence in "Technical Medical Errors," and a variety of other topics in forensic medicine.¹⁵

Henry Sigerist, the noted medical historian, commented on the wide range of Virchow's interests, calling attention to his concern for democratic forms: "In Germany . . . [in 1869] . . . the code regulating trades, permitted everyone who chose to do so, to give medical care and collect fees for it, as long as he did not call himself a physician. Only licensed physicians were allowed to use that designation. This queer and at the same time much criticized regulation was largely due to the liberalism of Rudolf Virchow, who justified it by declaring that the individual should have the freedom to select his own healer. He added that since the people were reasonable they would be able to differentiate between a genuine physician and a quack."¹⁶

This strikes a somewhat modern note, as do other of Virchow's efforts in the local, state and national legislative bodies to improve the public health and attend to people's needs for health services and medical care, e.g., sewage disposal for the city of Berlin along modern lines;¹⁷ the laboratory work he initiated on parasites, with particular reference to trichinella, led to legislative action on banning infected foods from the market.¹⁸ And, as a graduate of a military medical school, he continued to be involved in army health and medical affairs.¹⁹

Virchow's high place in medical history therefore derives in no small part from his varied scientific contributions, but much of the attention paid to him these days is a result of his social medical contributions. Sigerist wrote admiringly of his radical social-medical politics, his espousal of social measures in dealing with the illness and high mortality among the poor, along with the medical and scientific values of his epidemiologic studies.²⁰

Marxist medical theorists also find close social identification with Virchow's analyses, solutions and political efforts. "Virchow's studies in 'social medicine' and infectious diseases called for social change as a solution to medical problems . . . Virchow provided . . . views of social etiology, multifactorial causation, the methodology of dialectical materialism, an activist role for medical scientists and practitioners, social epidemiology, health policies and strategies of socio-medical change."²¹

At the same time, the very strength of Virchow's convictions were bound to bring him into conflict with other developments in the medical sciences, some of which apparently challenged the theoretical basis of his socio-medical philosophy. Although he modified his position to some extent in later life, for most of his career he rejected the microbial theory of disease causation, and was strongly anticontagionist. Sigerist writes, "Disease, he taught, was life, though life under abnormal conditions, different from those which promoted health. Pathology was physiology, but physiology contending with obstacles."²² To Virchow, not bacteria, but abnormal stimuli acting on the cells caused disease.

"He was hesitant in his acceptance of the results of bacteriological investigation, protesting, for instance, against the view that the presence of the tubercle bacillus in an organism was equivalent to tuberculosis. Again and again he insisted upon the part played by the cells, even in the pathogenesis of the infectious disorders. What constituted tuberculosis, he said, was not the tubercle bacillus, but the reaction of the organism, that is to say, of the cells, to the bacillus. Since the cells react variously in different individuals, different individuals will sicken from tuberculosis in various ways."²³

Cellular dysfunction, however produced, he felt was responsible for the effect we called disease. The limited knowledge of the time allowed many theories of disease causation to bloom, and the presumption that no individual disease occurred, but simply varied manifestations of cellular disorder was attractive.

There could be differences in the basic etiological circumstances: he distinguished between "artificial" and "natural" epidemics. Typhus, scurvy, tuberculosis and mental illness he considered "artificial", that is, concentrated among the poor, clearly differentially distributed among social classes, while dysentery, malaria and pneumonia were "natural" epidemics, more evenly distributed among the various social classes.²⁴ In the climate of our time, Virchow's focus on the multifactorial causation of illness, with all its implications for social, psychological and stress factors now so prominent in epidemiologic thinking, is viewed as magically prescient and is the source of admiring respect; the less substantial theoretical basis ignored or forgotten.

Although the differential diagnosis of typhus and typhoid was not yet entirely clear, Virchow did distinguish between "simple" typhus (typhoid, usually) and "British" typhus (the war and famine associated, usually louse-borne typhus fever).²⁵ But in neither instance was he prepared to accept an

infectious origin—maintaining stubbornly that *all* crowd diseases “point to a deficiency in society”.²⁶

By the end of the 19th century, Virchow was world famous. In 1873 William Osler, the young Canadian physician who later became the light of the English-speaking medical world, spent three months with Virchow, and “was profoundly influenced, not only in his pathological, but also in his public health interests.”²⁷ In a celebration on the occasion of Virchow’s 70th birthday, Osler praised him highly: “. . . to do honor to a man—whose life has been spent in the highest interests of humanity, whose special work has revolutionized the science of medicine, whose genius has shed lustre upon our craft.”²⁸

Osler also recognized the vital importance of Virchow’s political commitment. “In this country,” he noted, “doctors are, as a rule, bad citizens taking little or no interest in civic, state or national politics,” and he goes on to list the many levels of Virchow’s participation in the political life of Berlin, Prussia and Germany: “A supporter of all reasonable measures for the relief of the people, a strenuous opponent of all class and repressive legislation, and above all, an impacable enemy of absolutism as personified in Bismarck.” Osler concludes, “today he would be called liberal, but . . . then revolutionary.”²⁹

Today, Virchow is revered for the social medicine he espoused by opponents of the political conservatism of the medical establishment. The title of Leon Eisenberg’s speech is revealing: “Rudolf Karl Ludwig Virchow, Where Are You Now That We Need You?”³⁰ Addressed to an elite group of physician novitiates—the Robert Wood Johnson Scholars at their annual meeting—Eisenberg’s powerful and eloquent tribute is a succinct expression of the social medical aims of today’s social physicians. The physician-advocate, doctor for the people, is the role model recalled: “We must insist, as Rudolf Virchow did, that health outcome is the primary concern of health policy. Costs should enter only in weighing the relative efficiency of alternative paths to comparable outcomes.” A modern note may be detected in Eisenberg’s complaint against physicians as failing to perform in a professionally correct manner: a call to repudiate and eliminate unnecessary hospitalization and surgery, useless and repeated laboratory procedures, biomedical research which benefits only the investigator, procedures, substandard practice and procedures.³⁰ Among the medical educators and deans of the medical schools, a more restrained echo of Eisenberg’s stirring call to arms can be heard.³¹

Nevertheless, the adulation is not universal, nor the praise unstinting. There is a beginning revisionist historical analysis of his politics. There is some question as to whether he “invented” social medicine and how much he took credit for what was the invention of others. Some of his 19th century style dicta are uncomfortably conservative when set against modern standards (e.g., anti-feminism, professional dominance). His obdurate anti-contagionism would make some modern scientists uneasy. George Rosen points out that some of Virchow’s stubborn anticontagionism, which alienated him from the progressive movement in the beginning science of microbiology, may well have been over-reaction to a threat to the theory of social causation.³² Virchow may have been no more dogmatic than the then current crop of anti-contagionists, but it led him to excessive opposition to Semmelweis’s position on the infectious nature of childbed fever in 1847. Even in later life, his acceptance of the Semmelweis contribution was “half-hearted,” and his comments “ungenerous.”³³

One ironic consequence of Virchow’s fierce attachment to anticontagionism, and his long opposition to Robert Koch’s identification of the tubercle bacillus as the causative agent in tuberculosis, was the removal of Virchow from the German medical pantheon by the Nazis. Koch epitomized German values to the Nazis; Virchow’s democratic stance, bitter anti-Bismarckian politics, and especially his populist views made him an anathema to the Nazis.³⁴

Virchow’s stubbornness showed itself in other ways. His uprightness became authoritarian and his commitment obstinacy. For years he prevented the development of teaching in a variety of fields like hygiene, legal medicine, or medical history because he thought the topics were adequately covered in his teaching.³⁵

As to his dedication to radical politics, two revisionist approaches have emerged. The first is simply a matter of correcting the record. Some of the critical radical political contributions credited to Virchow were made by others, and are today simply attached to his name. Two associates, Solomon Neumann and Rudolf Leubscher, were responsible for the terminology, definition, and identification of social medicine, and shared in the editing of the newspaper, *Die Medizinische Reform*. The famous slogans—“The physician is the natural attorney of the poor,” on the masthead of their newspaper, and “Medicine is a social science, and politics nothing but medicine on a grand scale”—were formulations with roots in the defiant published statements of Neumann and Leubscher.³⁶ The legislative efforts like the Public Health Law of 1849 which demanded that the government take responsibility for looking after *all* the conditions that might affect health, including work and living conditions, were Neumann’s draft. Leubscher was the one who agitated in the Berlin city council for industrial hygiene laws and social reform measures.³⁷

Many of the 1848 reformers continued their radical political activities after the defeat of the revolution, but Virchow “dropped out.” He had been removed from his Berlin position in 1849 and took up a professorship in Würzburg (the first chair in pathological anatomy in Germany). Whether the “exile” crushed him or he chose deliberately to withdraw from politics at the time is unclear. He turned his hand to scientific investigations, and large-scale editorial activities with great success. He did not take up politics again until 1859, after his triumphant return to Berlin, and the publication of his masterwork, *Cellular Pathology*.³⁸

More serious than the challenge to his originality, or uniqueness in historical perspective, is the challenge to the historical portrait of Virchow as the doctor for the people. The democracy he defined, according to the revisionist historians who attack the principles he espoused, would hardly appeal to socialists today. Figlio writes, “The revolutionary change sought by Virchow might have brought a technocratic, authoritarian state . . . for the formation of a new elitism, legitimized by the need for experts to run society on scientific principles.”³⁹ Even more caustic is the interpretation by Weindling, who sees Virchow as the archetype of the modern physician, seeking total freedom from any social or governmental restraint: “By the 1840s medical reformers were becoming critical of state regulation as oppressive . . . [medicine] as a ‘social science’ was intended to justify the freeing of medical practice from state regulation . . . [that] doctors should be free from social accountability, as attempts to democratise medicine were resisted by liberal leaders of the medical profession.”⁴⁰

Weindling, an historian with access to Prussian archives and state documents, offers an iconoclastic view of Virchow's role and character, expressing a somewhat bitter and even scornful contempt for the whole of the Virchow hagiology.⁴¹ As Weindling sees it, Virchow sought social change through individual initiative, opposing state intervention and thus blocking the improvement of health services for the poor; his anti-contagionist views were dated, in a sense obstructing scientific developments; he plagiarized Remak's discovery of cell division and doesn't deserve the absurd adulation focused on his Cellular Pathology; he was instrumental in getting the state to recognize medicine as a free trade, a "hunting license" for the doctors and locking out the public from involvement in medical care planning and decision making; and that in the end, "freedom really meant freedom of the medical profession from state control." Moreover, "Scientific authority meant that the patient should remain unrepresented."⁴¹

Weindling further claims that the famous social medical document, the Report on the Upper Silesian typhus epidemic, was concocted as a political polemic and was not based on any evidence or studies. The Commission stayed but a few weeks, from February 20 to March 17, 1848, and its members, Virchow included, did few autopsies and failed to distinguish among the diseases involved. The news of the Paris revolution (February 22) and the rumors of upheaval in Breslau (March 6) excited them, and in anticipation of the triumph of liberalism in Europe, they hastened their return. Moreover, until the revolution was defeated, Virchow ignored the Ministry's repeated requests for reports, expecting that a new and more liberal government would be constituted. On July 14, the Commission submitted a brief, 11-page report, which did *not* mention any political basis for the epidemic, but emphasized the endemicity of typhus, and blamed, specifically, only overcrowding. Virchow had begun to publish his newspaper, *Die Medizinische Reform*, in early July and, on August 15, he sent the Ministry a printed copy of the Commission's "Report" already published in the newspaper. It is this 182-page report, ". . . the statement on medical and social conditions . . . that has become the classic text of social medicine."⁴²

In the interpretation of some of Virchow's celebrated recommendations in the Report, Weindling finds evidence of chauvinism: a destructive emphasis on Germanization, statements that the Poles were apathetic, indolent and superstitious and needed a dose of German concentration on work and sobriety; his apparent anti-clericalism is viewed as only a call to rely on doctors instead of priests.⁴³ By December of 1848 there was already a split among the medical reformers, with Virchow on the side of those who favored professional rather than government control. He opposed poor law improvement and state controlled district hospitals, and favored professional over poor law council control over medical services, in contrast to the more radical social medicine group members. He had already abandoned publication of his newspaper in July of 1849 and did not support his colleagues' (successful) efforts to organize workers' health associations.⁴⁴

The body of Virchow's work in epidemiology and public health rebuts much of the revisionist attacks, however, as these essays in Rather's edited collection demonstrate, and the Ackerknecht biography supports. Long after the debacle of 1848, Virchow continued to write, vividly and clearly, about his social concerns and demonstrate his social commitment. His essays are an important and necessary reminder

of the capacity of a man with character and vision to influence his time. What flaws emerge in consideration of his character and behavior only accentuate his humanity. Weindling overstates his case, and underestimates Virchow's powerful role as collator, exemplar and spokesman for the medical reform and social medicine movements. Whether or not he invented the ideas, the slogans, the strategies of social medicine and medical reform is almost inconsequential. He was truly "the mouthpiece of the movement."⁴⁵ "The story of Virchow is an important chapter in the history of medicine and science," Ackerknecht writes. "It is more. It is the story of a rare man whose life mankind can be proud of."⁴⁶

There were others, but Virchow was the leader, and stands out—not uniquely, not the first or the only creative author, but the epitome, the exemplar. "Heroes are those men who draw up into themselves and concentrate the qualities and thoughts of masses of men, who sum up an epoch, or create it, and so render themselves immortal by making themselves the masters of their time."⁴⁷ In the early part of the 19th century, Europe was in ferment. The Industrial Revolution as well as the scientific revolution had a profound impact on the medical profession. As in the 1960s in the United States, an agitation and turbulence throughout society threatened yet promised social and political changes. Physicians shared this emotional climate as well. Virchow reached maturity at a critical point in these developments, and he incorporated in himself the response of his generation to the zesty excitement of 1848; in his sympathetic resonance with the majority hopes and dreams and fears, he expressed *their* attitudes and personified *their* values. The programs he espoused could therefore capture the imagination and loyalties of comrades, colleagues and the public. Scientific medicine was waiting in the wings; he brought it forth. Democratic aspirations were latent in the disarray and revolutionary tumult; he articulated the conditions.

There is some irony in the fact that, today, Virchow is pursued as model and culture hero in his own country, by the opposing political groupings, each claiming to be the heirs of *his* politics and *his* social views, based on their interpretation of his contributions. So the drama of Virchow as a culture hero is played out also in the political arena, as East and West Germany each react to his medical achievements—and both honor him highly. East Germany has adopted him as the country's forerunner for peace, affiliation with the working class, and pioneer in the German scientific developments in medicine.⁴⁸ In West Germany, he is seen as a true democrat.⁴⁹ To both Germanies he remains the paragon of medical leadership of his time, and of ours.

So Virchow continues to evoke respect and admiration. But it is important to remember that Virchow represented *his* time, not ours. There are important differences between our attitudes and values, and the attitudes and values of the 19th century. We worship basic science; Virchow was opposed to "pure science," and believed that science had to be "useful."⁵⁰ In his day, the medical profession was eagerly radical, both professionally and socially. Virchow was not alone. He had a numerous professional following. He spoke and wrote as a representative of the moods and aims of a medical generation. There was no powerful, conservative professional medical organization to support Bismarck; Virchow and his colleagues created and dominated the medical society. And above all, it should be kept in mind that revolutionary aims are inevitably bound by time and culture. Today's eager and passionate disciples may be crediting him with *their*

revolutionary ideas and, given some of Virchow's political sentiments, he might well disapprove of theirs!

Finally, in regard to the gigantic shadow Virchow casts, questions persist: Was he really unique? Were there then, or are there now, others, equally worthy of admiration and emulation? Why are some talented aspirants for fame and enduring worship remembered as epitomes of medicine, science, humanity, and others, equally talented, forgotten? There have been others as near to our own time as Virchow who have demonstrated heroic qualities of social concern, political courage and professional talent. ". . . behind every great man there stand the frustrated and tragic shadows of other men who might have played the role of the great man."⁵¹

- There is, for example, the career and life of Thomas Hodgkin, English physician, scientist, medical reformer, pioneer medical educator, social activist, abolitionist and powerful anti-slavery advocate, as distinguished in his contributions to pathology as Virchow. Hodgkin flourished a bit earlier than Virchow, and died at a much younger age (1798–1866). He remains only an eponym: Hodgkin's Disease. He was ignored, neglected, rejected by the medical establishment of his time, and nearly forgotten in ours.⁵²

- Inexplicable historic forces have all but wiped out the name of a great American scientist and physician and a notable public health reformer and social activist, Hermann Biggs (1859–1923). Biggs could well become an American model for young physicians seeking to establish a social role for the profession. He created the modern health department, fought for comprehensive medical care universally available. If he is remembered at all, it is through his famous Board of Health motto: "Public health is purchasable. Within natural limitations every community can determine its own death rate."⁵³

And then there are living heroes, whom we cannot afford to overlook, whom we can and should take as models. Giants in our time, they remind us that it is both possible and necessary for physicians to be "the natural attorneys of the poor" and take the lead in challenging social evils. Young professionals need to be indoctrinated with social motivations as well as professional skills. It is well to recall the words of Oliver Wendell Holmes, Jr., Civil War hero and wounded veteran, who, in a Memorial Day address in 1884 said, "I think that, as life is action and passion, it is required of a man that he should share the passion and action of his time at peril of being judged not to have lived."

Given the lack of a constituency for the brave and bold, it may be no accident that we do not recognize the Virchow of our time; it is doubtful that anyone in these times could make the kind of impression on the world of medicine, or on politics, that Virchow made in the middle of the 19th century. Not only are the issues more complex and less easily simplified, but the organs of response are less importunate. Our most outspoken medical editor seems, by comparison, more timid and less resolute than the editorial voice of *Der Medizinische Reform*. Those vocal and impassioned critics of the status quo in health affairs are lonely voices. Some may speak for the protection of the public against industrial poisoning and professional and bureaucratic exploitation; others may advocate for children; here and there a solitary voice is heard on behalf of a patient-oriented medical care system; but there is no major professional constituency to carry the burden.

Can you imagine a national professional society official corresponding with Engels, as Virchow did? Can you visu-

alize a state medical society establishing itself as a radical democratic caucus as the Berlin medical society did? Would it be conceivable that three-fourths of America's 500,000 physicians join a radical political medical society like Virchow's General Assembly?

But then, perhaps, we should not look too narrowly at parallels with the past, seeking medical heroes only as they might resemble Virchow in the causes he chose. There is a growing unanimity among physicians that is a counterpart of the kind of consensus that was prevalent among physicians in Virchow's time, but around a different issue. As long ago as 1953, Alfred Plaut recognized the danger to the world of nuclear war, and the responsibility of physicians to speak out against that danger, associating the responsibility with the doctrines preached by Virchow.⁵⁴ In a more recent analysis appearing in the official organ of the American Medical Association, Day and Waitzkin write, "Reagan's public statements have heightened the fear of nuclear war," adding "there is the ambiguity of day-to-day work in medicine while the arms race continues. In the US federal budget, military spending dwarfs the allocation of funds for medical and related human services. . . . Some health professionals have argued that political resistance to nuclear war has become an ethical imperative of medicine."⁵⁵

Virchow's social medical position as exemplified in the scientific context of our times may very well be represented by the International Physicians for the Prevention of Nuclear War (IPPNW), recently awarded the Nobel Peace Prize, and by the Physicians for Social Responsibility, its North American affiliate. In the United States, Bernard Lown's co-leadership of IPPNW is certainly cognate to Virchow's, both in regard to scientific accomplishment and commitment to social and medical reform. Lown's political leadership—calmly ignoring the attacks on his left-leaning politics and refusing to be deflected by demands for "perfect" political positions—focuses entirely on the awesome global threat of nuclear war. In this there is a resemblance to Virchow's single-minded political focus on Bismarckian authoritarianism. Lown's creative clinical medical contributions in cardiology resemble, if they do not exactly duplicate nor range as widely as, Virchow's contributions in pathology and the medical sciences. If Lown should now be able to weld the unified anti-nuclear attitude of physicians to a socio-medical political philosophy, boldly supporting economic democracy as a political issue, thereby utilizing the momentum engendered by the Nobel award, a leader of heroic mold could emerge as the epitome of medicine in our time, as Virchow was in his.

In his Nobel address, Lown suggests assumption of such a role, calling for a universal cooperative effort to rid mankind of poverty, hunger and sickness: "Never before was it possible to feed all the hungry. Never before was it possible to shelter all the homeless. Never before was it possible to teach all the illiterate. Never before were we able to heal so many afflictions. For the first time, science and medicine can diminish drudgery and pain."⁵⁶

Future medical generations may look back on Bernard Lown as typifying the heroic doctor of the late 20th century—the physician who epitomizes social concern and scientific accomplishment in our time. After all, Virchow supported not only disarmament, but abolition of the death penalty!⁵⁷

In his 1891 address honoring Virchow, Osler had some advice for his medical colleagues: "We dwell too much in corners," he said, "and consumed with the petty cares of a bread-and-butter struggle. The lesson which should sink

deepest into our hearts is the answer which a life, such as Virchow's, gives to those who today, as in past generations, see only pills and potions in the profession of medicine, and who utilizing the gains of science, fail to appreciate the dignity and the worth of the methods by which they are attained."⁵⁸

Dr. Rather's worthy contribution to understanding and direction in these stormy times we are living through is this well-translated collection of absorbing essays. They serve to illuminate our professional responsibilities and illustrate the possibilities of useful and effective social action, as exemplified in the life, activities, and perspective of an unusual 19th century physician and social activist. From the lessons drawn of the experiences of Virchow's time, we too should be able to reach out and help rescue our own society from the vicissitudes of our times.

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4. Erwin Ackerknecht: *Rudolf Virchow*. Madison: University of Wisconsin Press, 1953.
5. Ackerknecht, op cit, p 3.
6. Ackerknecht, op cit, p 5.
7. Ackerknecht, op cit, p 16.
8. *Report on the Typhus Epidemic in Upper Silesia*, which appeared originally in the *Archiv* in 1848, is included in pp 205-319, vol I of Rather's *Collected Essays*. This quote is from page 311.
9. *Collected Essays*, loc cit, pp 211-216. Ackerknecht writes, "The report [recommends] not some new drug or articles of food . . . but full and unlimited democracy, or education, freedom, and prosperity." op cit, p 15.
10. *Collected Essays*, loc cit, p 319.
11. *Collected Essays*, loc cit, passim, pp 307-319. Ackerknecht also comments on the powerful impact of the typhus investigation on Virchow (see op. cit. p 15); as does George Rosen, in: *What is Social Medicine*, pp 60-129, in *From Medical Police to Social Medicine*. New York: Science History Publications, 1974.
12. Ackerknecht, op cit, p 16.
13. *Collected Essays*, loc cit, vol 2, pp 193-435.
14. *Hospitals and Hospital Services*, in: *Collected Essays*, op cit, vol 2, p 17.
15. *Penal Legislation* (pp 467-490), and *Forensic Medicine* (pp 493-563), in: *Collected Essays*, op cit, vol 2.
16. Henry E. Sigerist: *Civilization and Disease*, Chicago: University of Chicago Press, 1976 [first published in 1943 by the Cornell University press] p 93.
17. *Collected Essays*, op cit, vol 2, pp 193-220.
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19. *Collected Essays*, op cit, vol 2, pp 125-190.
20. Henry E Sigerist: *The Great Doctors*. New York: W W Norton, 1933, p 340. See also R Taylor and A Reiser: *Medicine as a Social Science: Rudolf Virchow on the Typhus Epidemic in Upper Silesia*. *Int J Health Serv* 1985; 15:547-549.
21. H. Waitzkin: *The Social Origins of Illness: A Neglected History*. *Int J Health Serv* 1981; 11:77-103.
22. *The Great Doctors*, op cit, p 127.
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24. Ackerknecht, op cit, p 127.
25. The complicated history of the effort to distinguish between typhus and typhoid is discussed in Dale Smith: *Gerhard's Distinction between Typhoid and Typhus and its Reception in America, 1833-1860*. *Bull Hist Med* 1980; 54:368-385.
26. Ackerknecht, op cit, p 126.
27. Ackerknecht, op cit, p 23.
28. Rudolf Virchow: *The Man and the Student* (Remarks at a celebration of Virchow's 70th Birthday at Johns Hopkins University, October 13, 1891, by Sir William Osler). Printed in the *Boston Medical and Surgical Journal*, Oct 22, 1891.
29. Osler, loc cit.
30. Rudolf Ludwig Karl Virchow, *Where Are You Now That We Need You?* Invited Address at the National Meeting of the Robert Wood Johnson Clinical Scholars Program, November 7, 1983. Printed in *Am J Med* Sept 1984; 77:524-532.
31. R U Massey: *Virchow's Legacy*. *Conn Med* Jan 1985; 49:49.
32. George Rosen, op cit, *What is Social Medicine?*, p 95. At the same time, the bacteriologists, like Behring, who as late as 1893, in support of Koch's work, "condemned with faint praise" Virchow's contribution of a complex of social and economic factors as causative elements in the 1848 typhus epidemic. (loc cit, p 61).
33. Ackerknecht, op cit, p 117.
34. Arnold Bauer: *Rudolf Virchow*. Berlin: Stapp, 1982. Lammel writes, "The alleged controversies . . . found their culmination . . . in the political and scientific defamation of Virchow". *Virchow contra Koch? Neue Untersuchungen zu einer alten Streitfrage*, H-U Lammel. *Z ges Hyg* March 1982; 28:206-210.
35. Ackerknecht, op cit, p 38.
36. G Rosen, op cit: *What is Social Medicine?*, pp 62-66. Ackerknecht comments that, "Many of his most catchy slogans actually stemmed from his friends, especially Solomon Neumann". And he also remarks, "The great German medical reform movement of 1848 . . . was so large that a history of it, omitting Virchow's contribution, would still show its essential traits". p 17.
37. George Rosen: *A History of Public Health*. New York: MD Publications, 1958, p 255.
38. Ackerknecht, op cit, pp 18-25. Virchow wrote a friend in early 1849, "I hate all waste of . . . time, and if I can do something better than politics, I stick to it. I entertain no political ambitions . . . but profound political convictions". Two years later, he wrote his father, "I do not abstain from politics because I deny my former ideas, but . . . because I do not want to be active in politics now."
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58. Osler, loc cit, 58.