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SCHOOL OF MEDICINE



MERRIMON LECTURE

by

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THE MERRIMON LECTURE

The Watershed of the 1970's

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THE MERRIMON LECTURESHIP IN MEDICINE

This Lectureship was established by the late Dr. Louise Merrimon Perry "in respect and honour of the Great Traditions of the Science and Practice of Medicine". It was inaugurated in 1966. Dr. Perry had proposed that the lectures be given to medical students and all others interested, and that they be concerned with "the Origins, Traditions and History of the Medical Profession and of that Ethical Philosophy which must dominate this Field of Human Endeavour". It was her intent and is our purpose that the Merrimon Lectures be given by men and women distinguished not alone for scientific or clinical skills, but also for their notably humane attitude toward Medicine.

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The Watershed of the 1970's

I use the word "watershed" to mean a dividing line of a crucial turning point in the history of our country. During such a period, definite and sometimes abrupt changes in the life of our country and its institutions take place. I believe we are in such a period now. I have a private theory, that the historical occurrence of watershed periods has come in forty-year cycles. I believe we're in one right now, 1970. We had one in 1930, and we had one in 1890, 1850, 1810, and 1770. Those are the periods of the watersheds, when in the following ten years, marked changes occurred in our political and institutional life. Certainly, we experienced "watersheds" in the 1770's, culminating in the Declaration of Independence; the 1810's, culminating in the era of Jacksonian democracy, the Industrial revolution, and massive westward expansion; the 1850's, culminating in the Civil War and the period of Reconstruction; the 1890's, culminating in the Progressive Era of increasingly active government; the 1930's, with even more governmental intervention; and now the 1970's.

I would like to focus on our more recent past. In particular, three times in the past eighty years, our country has been stricken with what the physician might call, "a global failure of the heart," or "a national loss of nerve," first in the 1890's, then the 1930's, and now the 1970's. Our people and our institutions responded in the 1890's and the 1930's, and were successful. With resolution of the crisis, our country acquired new strength and new virtues. Just as individuals, as their life cycle unfolds, resolve progressive crises in their own existence and by successful resolution acquire the strength of new virtues, I believe the 1970's will see us resolve successfully the most threatening crisis our country has ever faced, weighted as it is with the oppressive threat of thermo-nuclear war, over-population, lawlessness, racism, and finally violence. Successful resolution depends on the responsiveness of our nation's institutions—political, economic, social—and the capacity of our leaders to supply sorely needed leadership.

The crisis now is one of values, as much as anything else, and generally we can thank the students, the vast majority of whom are struggling to make change in peaceful evolution and not bloody revolution, for the constructive role which they have played.

Heeding Santayana's caveat, that he who knows no history is doomed to relive it, and agreeing with Louis Brandeis, who said, "One page of history is worth a volume of logic," I would like to begin my odyssey in the 19th century, for herein lie the roots of our modern dilemma. Briefly stated, the struggle between the forces of frontier individualism, and those of social intervention through government describes in essence the history of our country. This is the tension between liberty and equality—one man's liberty may become another man's inequality, and another's equality may become a loss of liberty

for his neighbor. The conservative individual and the liberal social planner, or the traditional Republican, and the prototype Democrat, have fought this ideologic battle with more fervor in recent times. Any description of this struggle results in over-simplification, and one must continually avoid the fallacy of reductionism and the use of absolutes. However, the resultant imbalance between the virtues of liberty and equality, or those of individualism and of successful social planning through governmental legislation, describes one country's attempt to reach the "promised land" of democracy, as defined in 1776, by the Declaration of Independence, and in 1787 to 1791, when our Constitution and its Bill of Rights was ratified.

In 1850, Herbert Spencer wrote his book called, *Social Statics*. It is said that his only American influence was Emerson's essay on *Self-Reliance*. The American edition appeared in 1865; as late as 1905, Justice Oliver Wendell Holmes said that "The Fourteenth Amendment [which had to do with "State's Rights"] does not enact Mr. Herbert Spencer's *Social Statics*." Spencer said emphatically that the state must not regulate, among other things, industry, or professions, nor should it maintain schools, minister to the poor, improve sanitation, or legislate public health measures. For, as he said, "Society advances by survival of the fittest." Therefore, one must not attempt to improve or prolong the life of the unfit, nor interfere in any way with the environment of the individual. This was written well before Darwin's *Origin of the Species* (1859), and the *Descent of Man* (1871).

It would appear that Darwin was slightly more temperate in his outlook, although he did list, in his *Descent of Man*, some dysgenic factors by which inferior beings are kept alive by the fittest. His examples were: exemption of the physically unfit from warfare, public assistance for the poor, and medical assistance for all. He believed that smallpox vaccination saved the constitutionally inferior from obliteration, while the hardiest would survive such epidemics and improve the racial stock. Therefore, vaccination should, in fact, not be practiced. Spenserian concepts of social Darwinism and the survival of the fittest meshed nicely with the ethos of the nineteenth-century American.

E. L. Youmans and John Fiske were among his disciples in this country, and they pushed Spencerian views of inevitable progress, doctrinaire individualism, self-reliance, self-help, independence, and freedom. As Commager, the American historian, states, "Between them, Darwin and Spencer exercise such sovereignty over America as George the III had never enjoyed." In this country, an Episcopal rector turned Professor of Political Science and Sociology at Yale, William Graham Sumner, pushed Spencerian beliefs in fighting what he termed, "the major evil of American life," and that was egalitarianism. Sumner stated in no uncertain terms that the social classes, in fact, owe each other nothing, and that when the 'haves' undertake the care of the 'have nots,' both end up losing their freedom. Spencerian individual.

ism was Sumner's medicine against plutocracy. His hero of civilization was the savings bank depositor, who sacrificed immediate satisfaction and referred his gratifications for the accumulation of capital and progress. (One can only imagine what Sumner would think today, in the present era of the credit card and deficit spending).

One should note in passing that this ethic persists and pervades the American view of the poor, directly inherited from Adam Smith, to say nothing of Spencer and the Elizabethan poor laws. Although we recognize the poor peoples' need for assistance, we look mainly at the adverse effects of the resultant welfare state, in terms of an erosion of individual initiative, a generally supine citizenry, and an ever-expanding, overweening governmental bureaucracy.

The nineteenth-century Americans' roots were deeply embedded in English and European soil. It was readily admitted by all Americans that our Declaration of Independence stemmed from John Locke's "Second Treatise" on government. As the settlers pushed westward, their national character took on the unique characteristics of their new country. The view was expansive, optimistic, ruggedly individualistic. The open spaces beckoned to the adventuresome, the enterprising, and the hopeful. The invitation was to mobility, inventiveness, independence, and self-reliance. Their view turned away from the mother country, as they looked to the future and avoided, even scorned, the past. E. L. Godkin noted that the American developed, in his westward expansion, his "prodigious contempt for experience and for theory." His frontier spirit accentuated his materialism, as well as his dislike for history—indeed his alienation with the past and his generally anti-intellectual, anti-cultural feelings. He thrived on hard work, and condemned shiftlessness. He worked with his hands, and his rewards were material. "Making it" meant material, not necessarily moral or ethical, prosperity.

Even to this day, the American saying, "It's got to be big to be good," still pervades our culture. The American quantified everything, whether money earned, children sent to school, or bushels produced; sheer size, like his westward expanse, gave him sheer pleasure. He was intensely practical in all matters, and his inventiveness astounded the world. The cotton gin, the telephone, the telegraph, the steamboat, the six shooter, the air brake, the refrigerator car, the sewing machine, the barbed wire fence, the reaper, the cash register—are but a few of his most useful inventions. After all, one of our American maxims is to this day, "Necessity is the mother of invention." In recent times, with scientific and technological advance in a consumer society, we have now reversed the maximum: invention becomes the mother of necessity.

De Tocqueville, in visiting this country in the 1830's, noted the average American's desire for success, freedom, self-reliance, and hard work. He also noted that his appetite was absolutely insatiable for

health, in contradistinction to the European culture. He was gregarious and invented the front porch to symbolize his hospitality, while turning the word, "stranger," into a friendly greeting. He admired Emerson's self-reliance, and Benjamin Franklin's common sense, while distrusting the theoretician or the expert. In all matters, he was practical and utilitarian.

His original philosophy, peculiar to America, was Pierce's "Pragmatism," popularized by William James, and turned to instrumentalism by John Dewey at the turn of this century. His religion was Protestant. This was an evangelical form of Protestantism in the "Great Awakening" of the 1740's, which became more liberal in the early nineteenth century. He originated the practical religions of Mormonism and Christian Science.

His Protestant ethic concerned itself with rewards in this world and salvation through hard work. He softened Calvinism, and ultimately "pious" and "Puritan" became derogatory terms in his language, which, like his manners and his clothes, was rough and direct, to the dismay of his European forebears.

His schools and colleges prepared him primarily for a useful job. He simultaneously developed the biggest and probably the best school system the world had seen to that date. He was the first to establish public libraries in any country of the world, and he was the first to allow women to qualify for higher education. He held intellectuals in contempt; witness his caricature of the absent-minded professor, and in more recent times the specter of "McCarthyism," which was a return to anti-intellectualism in the early 1950's; and in the early 1970's, with some of the protestations of the Vice-President and the wife of the Attorney General of the United States. Anti-intellectualism, as Hofstadter has noted in an entire book devoted to the subject, is peculiar to American life, and weaves its thread into our national culture periodically.

While he professed the egalitarian ideal, which he achieved in some instances, he astounded the rest of the western world with his treatment of the southern slave and the western Indian. He tolerated cheating in politics and business, but not in baseball. His humor was rough and tall. The story of Mark Twain was typical. Mark Twain said, among other things, "Be good and you will be lonely." He also decided that the best Christian was a man with four aces in his hand. Cartoonists address themselves naturally to pompous politicians, and being individualistic and practical, he looked constantly for the short cut to freedom, fortune, and even heaven. As he softened the old Calvinist masochistic approach to life, he developed a Puritan asceticism, which allowed him to keep a practical eye on the affairs of this world and made it big, while he simultaneously kept one eye on the "altar" and the hereafter. "Do unto others as you would have them do unto you, but do it fust!"

Carelessness, with unbounded faith in the future, led him into deep trouble. As Commager has written: "Dazzled by the concept of infinity, prodigal of the resources of nature and of his own resources, greedy and restless, he did more damage in a century than nature could repair in a thousand years. From Maine to Oregon, he left forests in ruins; instead of cultivating, he ruined the soil; he killed off bison and pigeon, polluted streams, wasted coal, oil, and gas. His habits of waste, he transmitted to a generation, that could no longer afford them; his refusal to think beyond the present encouraged a hostility to planning that was to prove almost disastrous."

He enjoyed Thanksgiving on the farm, while he listened to the tunes of Stephen Foster. He tolerated the "village idiot," and did not sequester and isolate him. He read Mark Twain, and McGuffey readers. He went to church on Sunday, and generally astounded his European forebears by the way he pampered his children. He valued education only for its practical and utilitarian benefits. His universities did not develop until Gilman of Johns Hopkins, and Elliott of Harvard, developed graduate education patterned after the European, particularly German models in the late nineteenth century. Union College initiated the use of electives as part of a college curriculum in the mid and later parts of the nineteenth century.

In July, 1893, at the tender age of thirty-two years, Frederick Jackson Turner, who was born and raised in a little place called Portage, Wisconsin—the area where you go between Green Bay and the Mississippi River—read a paper before the American Historical Association entitled, "The Significance of the Frontier in American Life." It was then and is now hailed as a classic of historical analysis. He said briefly that with the disappearance of the frontier, the end of a "great historic movement" had come to a close. He wrote, "Thus the advance of the frontier has meant a steady movement away from the influence of Europe, a steady growth of dependence on American lines . . . this perennial rebirth, this fluidity of American life, this expansion westward with its new opportunities, its continuous touch with the simplicity of primitive society, furnish the forces dominating the American character." The frontier produces individualism, and "frontier individualism has from the beginning promoted democracy. . . . Four centuries from the discovery of America, at the end of one hundred years of life under the Constitution, the frontier has gone; and with its going has closed the first period of American history."

Generations later, Vannover Bush was to use the values of frontierism, when he successfully petitioned the federal government for support of scientific research in his "Science the Endless Frontier." More recently, our thirty-fifth President symbolized his administration as "The New Frontier."

The Watershed of the 1890's was marked by the close of this first phase of American history. The turning point seems abrupt in historical

perspective. On the one side, an agrarian society of rugged, highly individualistic, self-confident, optimistic frontiersmen, artisans, and merchants; on the other, an urban, industrial society of increasingly anxious and confused individuals beset with new, complex social and economic problems. The closing of the frontier; the excesses of the Gilded Age with massive concentration of wealth in the hands of a few; unbridled corruption in business and government and the question of *laissez faire* versus government control; the new waves of immigration and the continuance of *de facto* black slavery confronting Americans with their racial prejudice; excessive exploitation of natural resources; and ultimately successful stirrings of the labor movement accompanied by strife and class conflict; the emergence of America as a world power; the realignment of political parties with the decline of the Republican, as the Democratic party ultimately found its roots in the Populist platform and later the labor program; and finally, the panic due to the great economic depression of 1893—all these issues and changes came to a head in the 1890's. The problems were met satisfactorily in many instances, but the problems were ones which would find the American of the 1970's still concerned—those of *laissez-faire* versus government planning; of conservation and the wisest use of natural resources; of balancing the interests of labor and business (or management); of assuring all Americans, with special reference to blacks, equal opportunity, equal rights; of renewing and humanizing urban life; of alleviating poverty while maintaining the promise of America—equality, freedom, upward mobility, and inevitable progress; of rationalizing the foreign policy of the United States as a world power; and finally, the problems seemingly inherent to *laissez-faire* capitalism—periodic economic breakdown with swells of inflation and unemployment.

The American Industrial Revolution astounded the Western world. Coal and iron were brought together by railroads. The Americans had invented the air brake in 1869. The methods of Bessemer in England, and Kelley in this country were consolidated in 1866 to make cheap steel. Potentates and corporations replaced individual entrepreneurs, artisans, and frontiersmen. The new breed of "Robber Baron" began to grow and the names of Carnegie, Rockefeller, Morgan, Vanderbilt and Gould achieved prominence. Mark Hanna and William Vanderbilt could say with impunity, "The Public be damned." The alliance between big business and government was corrupt. *Laissez faire* favored the few and exploited many. Racism was rampant, despite the post-Civil War era, and the period of "reconstruction." Lynchings numbered in the hundreds annually.

McKinley was the last Civil War General to run for the presidency. He was elected in 1896. Backed by Mark Hanna, he was generally amicably disposed to big business. Class conflict came to our country at this point. The old Knights of Labor were followed by

Samuel Gompers and what was ultimately to be the American Federation of Labor. The Pullman strike in 1894, the Harvester strike and the Haymarket riot brought social and class conflict. The Populist platform of 1892, which was to become the root of the "New Deal," decried the fact that there were only two classes of citizens in the United States, "tramps and millionaires." Finally the Panic of 1893 hit the country, with the great drought of 1886, the collapse of the tobacco and cotton market in the south, general inflation, and rising unemployment. Jacob Coxey and his army of the unemployed marched on Washington and camped in almost the same place where the Communists camped in 1930, and where another march, led by Martin Luther King, camped in the 1960's.

By 1900, one-third of all the farmers were tenants, as the mortgage companies moved in and Jefferson's fear appeared to be well-founded. "In God we trusted, and in Kansas we busted" was the saying as the Eastern mortgage companies foreclosed. What was supposed to be good for the private interest was not necessarily good for the public interest. Massive immigration continued and between 1860 and 1900 the population more than doubled from 31 to 76 million. Towards the end of the century, the vast majority of the immigrants settled in the cities.

To resolve the crisis and maintain a healthy balance of public and private interest, the country turned to social legislation, private philanthropy, and voluntary social reform.

The resolution of the crisis of the 1890's saw America move into the "Progressive Era"—that period between 1900 and 1917 when the American people (i.e., largely a coalition of wage earners, farmers and small businessmen) came to grips with the problems of unregulated industrialism. The stirrings of the positive State and new social legislation, the development of social reform through voluntary associations and the "socialization of Christianity" as the new humanism arose, the founding of the great private philanthropies—all worked to resolve critical problems of urbanization, poverty, health and social welfare. The trick was how to have it both ways—how to maintain the virtues of individualism, *laissez faire* and the workings of (*enlightened*) self interest while developing the positive State with social legislation to ameliorate human misery and spread the benefits of democracy to more of its citizens. To the Progressives, the major disease of American life was the corrupt alliance between big business and government.

In addition to the Interstate Commerce Act of 1887 and the Anti-Trust Act of 1890, the Forest Reserve Act of 1891 paid heed to the necessity of developing a conservation program. But it wasn't until Teddy Roosevelt and the "Square Deal" that reform through legislation began in earnest. With the aid of such magazines as McClure's, the muckrakers—so named by Teddy Roosevelt—influenced wide audiences. The new papers of Pulitzer and Hearst exposed political cor-

ruption and bombasted the public with political cartoons. Lincoln Steffens exposed corruption in municipal government and as managing editor of McClure's wrote the articles beginning in 1901 which were later collected and published in book form as "The Shame of the Cities." As municipal government was reformed, so too was state government. The election of United States Senators was the responsibility of the State legislatures, thus allowing for control of Federal patronage and for the concentration of undue power and influence. The 17th Amendment to the Constitution provided for the direct election of Senators by the people and was ratified in 1913.

Upton Sinclair published *The Jungle* in 1906, in which he exposed the abysmal conditions in the Chicago meat-packing plants. What was good for the meat packers wasn't necessarily good for the people. Congress responded by passing the first Federal meat inspection law. Samuel Hopkins Adams "muck-raked" the patent medicine industry and the Pure Food and Drugs Act was passed by Congress the same year (1906).

Teddy Roosevelt's "Square Deal" began striking at industrial interests. The Interstate Commerce Commission was strengthened by the Hepburn Act passed in 1906 which allowed the Commission to set rates for shipping (heretofore the Supreme Court had settled every appeal in favor of the plaintiff—over-ruling virtually every attempt by the Commission to set equitable rates). The Panic of 1907 which saw some of the New York banks in precarious condition fostered more intense attempts to stabilize the national economy. The Aldrich-Vreeland Act passed by Congress in 1908 ultimately resulted in the Federal Reserve Act of 1913 which provided for Federal supervision of what remained private banking. U. S. currency was stabilized and established on a sound basis. (This was one of the most important pieces of reform legislation passed during Woodrow Wilson's two terms—1913-1921). Anti-trust activity was strengthened in 1914 by the Federal Trade Commission Act (to investigate possible monopolies and violations of anti-trust laws) and the Clayton Act (which prohibited price discrimination and interlocking directorates amongst other provisions).

Roosevelt—the rugged activist and outdoor enthusiast—took advantage of the Forest Reserve Act of 1891 to protect remaining timber land from the rapacious axes of the robber barons. Our country began with 850 million acres of virgin forest. By 1920 all but one fifth had been exploited for various purposes. He set aside 150 million acres of government timber land as a forest preserve. Another 85 million acres in Alaska and the Northwest was set aside for studies by the U.S. Geological Survey on mineral and water resources. Gifford Pinchot was our country's first professionally trained forester, and he became T. R.'s supervisor of national forests within the Department of Agriculture.

The miserable state of working children was exposed by the muck-raker John Spargo in "The Bitter Cry of the Children." (For example, children were put to work in the coal mines at age 10 and paid 35c a day). The Progressives took up the cry. Child-labor laws or amendments to ineffectual laws were passed in 43 states between 1902 and 1909. In 1912, the U.S. Children's Bureau was established, the new fact-finding arm of the Federal Government which would ultimately have great influence on all aspects of health and welfare of infants and youth.

In 1905, New York State had passed a law that no bakery could hire anyone to work for more than 10 hours a day or 60 hours a week. In *Lochner v. New York*, the Supreme Court invalidated the law, saying that it interfered with freedom of contract protected by the Fourteenth Amendment and exceeded the police power of the State (i.e., the power to protect health and welfare).

In one of his most famous opinions, Oliver Wendell Holmes dissented, making the point that judges must set aside their own prejudices when deciding a case. He said:

The Fourteenth Amendment does not enact Mr. Herbert Spencer's *Social Statics* . . . United States and State statutes and decisions cutting down the liberty to contract by way of combination are familiar to this court . . . Some of these laws embody convictions or prejudices which judges are likely to share. Some may not. But a constitution is not intended to embody a particular economic theory, whether of paternalism and the organic relation of the citizen to the State or of laissez-faire. It is made for people of fundamentally differing views, and the accident of our finding certain opinions natural and familiar or novel and even shocking ought not to conclude our judgment upon the question whether statutes embodying them conflict with the Constitution of the United States.

In other words, keep an open mind! Implicit is the criticism of dealing in the absolutes of Spencerian social Darwinism and the plea for a pragmatic approach.

In a famous "Brandeis brief" where Louis Brandeis spent two pages on legal analysis and 110 pages on social, economic and historical facts, the Supreme Court ultimately reversed itself in 1908 in the case of *Muller v. Oregon*. The decision allowed State regulation of working conditions for women—an extension of such powers which it had allowed for children—but would not allow for men until 1917 when a ten hour working day was upheld by the Supreme Court in *Bunting v. Oregon*. Although women were favored on working conditions, they were not allowed to vote until the 19th Amendment was passed in 1920.

Perhaps the most important piece of legislation (and probably the most revolutionary) accomplished by the Progressives (during Taft's tenure) was the 16th Amendment to the Constitution, ratified in 1913, and providing Congress with the power "to lay and collect taxes on incomes, from whatever source derived, without apportion-

ment among the several States, and without regard to any census or enumeration."

Women became increasingly active in social reform. The General Federation of Women's Clubs grew from a membership of 50,000 in 1898 to over 1,000,000 in 1914. Particularly interested in working conditions for women and children and in public health and safety conditions, they were quick to espouse many good causes. Flemming has written: "The characteristic professional outlook for unselfishness before Darwin had been the Christian ministry. But this was no answer for the growing number of women who were looking for careers." For man, relief from the acquisitive struggle of the Gilded Age and a new outlet for the desire to serve was provided by attendance at the new graduate and medical schools. Scientific medicine had become a grave challenge to Spencerian values, for the humanitarian doctor was concerned with the weak and with the alleviation of pain and misery, all of which flew in the face of natural selection and survival of the fittest. In addition, medical educators agreed that ne'er-do-wells and charity patients were needed for instruction if society at large was to be served by doctors who were well educated and trained. Those graduate students who travelled to Europe to obtain their M.D. and Ph.D. degrees were exposed also to new forms of social science, antithetic to Spencer's views. A new awareness of some of the possible benefits of statism and central planning was stimulated by the new forms of social responsibility and public health developed in Germany, for example.

For women, participation in social reform through their activist clubs or social work provided the main outlets. Flemming states: "The general historical consequence of unselfish careers in America—from the Christian ministry for men only before the Civil War, through trained nursing for women as a legacy of the war, to scholarship, scientific medicine, and social work for both sexes as a form of revulsion from the Gilded Age—can actually be seen telescoped in the life-experience of certain individuals." Jane Addams (1860-1935) began thinking of missionary work, turned to the study of medicine temporarily, and finally found her calling when she established Hull House in Chicago. This was to become the leader of the settlement house movement in America. Lillian Wald (1867-1940) went to nursing school, founded the Henry Street settlement in New York, developed the profession of visiting nurses, and successfully forced the City of New York into hiring the first school nurse in 1902. Florence Kelly (1859-1932) after graduate study in Europe worked with Jane Addams and then went to join Lillian Wald in New York. Her ultimate aim was to improve the social position of women and children. She and Lillian Wald teamed to stimulate the establishment of the Children's Bureau in 1912.

Organized charities and philanthropies grew in earnest during the Progressive Era. Although the roots of Community Chest, Federated Jewish Philanthropies, and other charitable aid societies were established in the last half of the 19th century, the American Red Cross, founded in 1881 under the stimulus of Clara Barton was the single most important organized charity.

Large-scale philanthropy began in earnest during the Progressive Era. John D. Rockefeller had already begun to give his money away in 1889 when he helped found the University of Chicago with a gift of \$600,000. In 1900 and 1901, he gave two million dollars more. Further large gifts established the Rockefeller Institute for Medical Research in 1901 and the General Education Board in 1902. The Rockefeller Foundation was chartered by the state of New York in 1913 and would give away \$763 million over the next 50 years. Andrew Carnegie founded the Carnegie Institute of Technology in 1900, endowed the Carnegie Foundation for the Advancement of Teaching in 1905 and in 1911 give his largest gift to the founding of the Carnegie Corporation. Both Rockefeller and Carnegie looked to social amelioration through education and research and *not* through hand-outs to ne'er-do-wells. Other prominent millionaires (and there were some 14,000 of them in 1900) gave their names and money to philanthropic foundations such as the Milbank Memorial Fund (1905) and Russell Sage Foundation (1907).

Other organizations founded during the Progressive Era for the purpose of improving American society were the Boy Scouts, Girl Scouts, American Cancer Society, National Association for the Advancement of Colored People, and the National Urban League—to name but a few. Another form of charitable giving took shape when Bishop William Lawrence was drafted by President Eliot of Harvard to organize the first major alumni fund drive. Voluntary agencies and private philanthropy were to grow particularly rapidly after World War II. By the 1960's, there were over 100,000 voluntary health and welfare agencies to which should be added the health and welfare interests of some 100,000 fraternal, civic, and veteran's organizations and those of the 300,00 churches in the United States. By the end of the 1960's it was estimated that some 13 billion dollars would be contributed annually for philanthropic purposes of which one quarter would be used for health and welfare, the remainder for religious interests (50%), education and other purposes. As of 1964, annual charitable and philanthropic giving had increased from about \$2 billion in 1928 to over \$10 billion, and this represented a doubling in the decade, 1954-1964. About 80% of this money is given by individuals, 8% by foundations, and 6% each from charitable bequests and business corporations. One half of the annual giving goes for religious purposes, 17% for education, 14% for welfare, 12% for health, leaving 8% for miscellaneous uses. Certainly tax laws favored such giving but even more

important it reflected the American's deepest social interests and his capacity for giving.

Medicine had organized itself in the 1840's when the A.M.A. was founded. Since its inception it had been progressive, and it participated fully in the resolution of issues during the Progressive Era. The A.M.A. exposed quacks and nostrum producers. Long before the Flexner report of 1910, and in the pages of their newly founded Journal, the A.M.A. began to expose proprietary medical schools and drive out proprietary interest in medical education. They were directly responsible for the commissioning of Abraham Flexner by the Carnegie Foundation. His report in 1910 exposed proprietarism and reduced the number of medical schools from one hundred and sixty to eighty-eight as the proprietors were driven out and the schools joined the universities. The A.M.A. had repeatedly petitioned the government to play a stronger role in the evolution of the United States public health service and had attempted to support an expanded federal role in health. It supported the Federal Food and Drug Act and the establishment of the Children's Bureau.

Another aspect of the Watershed period was the emergence of imperialism. The new era began with the Spanish-American War of 1898, with Dewey at Manila Bay and "Remember the Maine" in Cuba. The United States emerged at the turn of this century as the world power it was destined to be.

The philosophical roots of the progressive era were supplied by Lester Ward, the doyen of American sociology and a fervent believer in the beneficent state, and by the development of pragmatism and instrumentalism. The balancing of the extremes of individualism and paternalism, laissez faire and government regulation, private enterprise and socialism—could only go one way and the weights had to be added to the balancing pan of government. Ward's beneficent state was based on an educated citizenry and the development of the social sciences—the good and best society would be reached by planning, based on social and economic knowledge. The Progressive Era saw the expansion of government—and the major political leaders of the era—Bryan, La Follette, Roosevelt, and Wilson—all fostered it. La Follette was the first to use a "braintrust" largely of economists and social scientists at the University of Wisconsin in helping to shape public policy—advice to be sought again by Franklin D. Roosevelt and the New Deal.

We deal increasingly in ideological disputes and the too frequent use of absolutes. All of us as Americans should occasionally remind ourselves of our American heritage of a totally American philosophy—William James' "radical empiricism," more popularly known as pragmatism. In James' view, truth is forever in the making and never single or absolute, but always plural and contingent. He stated emphatically as he shook his cane at the photographer on his farm in

New Hampshire, "Damn the absolute!" He stressed tolerance and hospitality. He wanted the virtues of both mysticism and idealism, without their paralyzing monism. He stressed scientific loyalty to facts, criticism without inhumanity or irreligion, confidence in human values, as well as a rationalism that did not disdain the concrete or exclude human joys or sorrows. James, as Commager stated, "confronted all dogma with skepticism and made skepticism a dogma." It was quite clear that pragmatism was a philosophy of expedience, and if ideas worked, they were true. What worked was "true instrumentally." Hence the American philosophy of instrumentalism, which was a totally democratic and individualistic philosophy. John Dewey took pragmatism and stressed the social good. "Instrumentalism" emphasized social activism and social reform. It was practical, democratic, individualistic, opportunistic, and optimistic.

The Progressive Era saw the country strengthened by a combination of private effort (through voluntarism and private philanthropy) and public effort through social legislation. Pragmatism and instrumentalism provided the philosophical levers for social melioration.

Just as the 1890's represented a watershed in the domestic life of the United States, culminating in the emergence of the "beneficent State" and the voluntary reform movements of the Progressive Era, so 1917 represented a watershed in American foreign policy. Repeated World Wars followed by limited wars, continuing hot and cold wars, revolution and violence—would be the order of American and "world" life for the next half century and probably beyond.

The decade of Harding ("back to normalcy"), Coolidge, ("the business of America is business") and Hoover ("rugged individualism") was a decade of "Red scares" and suppression of civil liberties; repression of minority groups; the rejuvenation of the Ku Klux Klan to a membership of four and one-half million in 1924 and the enlargement of its orbit of hate to include the Jew and the Catholic in addition to the Negro; the mass migration of the black population from the South to the Northern cities (between 1910 and 1930, the Northern black population quadrupled to 2.4 million) which resulted in a renewal of racial violence; the 18th Amendment and prohibition (1920) which succeeded only in blinding a number of Americans with methyl alcohol and converting many more to a life of crime in bootlegging; the Scopes trial which pitted the Bible belt of Protestant fundamentalists represented by William Jennings Bryan against the Darwinists represented by Clarence Darrow—(Scopes was found guilty of teaching Darwinian evolution in the schools of Tennessee and fined \$100—but religious interests were dealt another body blow by the new science); Lindbergh's flight to Paris in 1927 and the development of commercial aviation; the automobile, whose numbers grew from 9 million in 1920 to 30 million in 1930; high tariffs and active encouragement of business by government while the labor movement flagged

and Coolidge and later Hoover vetoed Senator Norris' bill to make Muscle Shoals a public project; and finally, the stock market crash of October 29, 1929 and the most horrendous depression in the history of the country. "My God! How the Money Rolls In," sung with great gusto in the 1920's was replaced by a subdued "Brother, Can you Spare a Dime?" in 1932. Disaffection of the intellectuals, a torrent of social criticism directed by H. L. Mencken and brought to full flower in the novels of Sinclair Lewis (the first American to win the Nobel prize in literature in 1930), the development of the movie, jazz, and the radio (KDKA-Pittsburgh was the first commercial station—1920) rounded out the decade.

The country was beset by another "watershed period" in the late 1920's. Herbert Hoover hung on as best he could, but the depression persisted and deepened. One out of four workers were unemployed. There is substantial reason to believe that Hoover was struggling to retain the virtues of individualism and laissez-faire while recognizing the necessity for collective action and the intervention of government. Over three billion dollars of public money was pumped into the economy for public construction during his term in office. The balancing act which would retain the virtues of both individualism and State control was difficult to engineer. Two events conspired against any rational compromise:—one, the persistence of the depression through Hoover's first term and the inadequacy of his measures to alleviate the crisis, and two, the degeneration of Statism (or paternalism) into fascism in those countries, such as Germany, which had rigorously pursued State planning and controlled economics.

The depression gave rise to seething resentment. Instead of Jacob Coxey and his army of the employed of the 1893 depression, the Bonus Expeditionary Force—some 15,000 Veterans who collected from all parts of the country—marched on Washington to demand payment of their war-time bonuses. General Douglas MacArthur and his aide, Major Dwight D. Eisenhower, were ordered by Hoover to disperse the unruly lot. The Communist party saw its opportunity and under William Z. Foster increased its membership drive. As before during the 1890's and into the Progressive Era the majority of Americans were not interested in totalitarianism, believing firmly in pluralism and the great American dream of upward mobility. In 1930 the Communist Party had 6 thousand members which reached a mere 12,000 in 1932. (Nonetheless, Foster received 102,000 votes in the 1932 election.)

The election of Franklin D. Roosevelt was a mandate by the people for government to solve the problem of a bankrupt economy. The roots of the New Deal stretched back to the Populism of the 1890's and the Progressive Era of the first two decades of the 20th century. Roosevelt asked for broad emergency powers in his inaugural address on March 4, 1933—similar to those granted the chief executive in time of war . . .

Henry Steele Commager summed it up. Under the New Deal, "government resumed the road toward 'sociocracy' which Lester Ward had charted half a century earlier. As one measure after another came before Congress, organizing industry, agriculture, labor, banking, transportation, hydroelectric power, and centralizing, directing and controlling the national economy, the air was filled with the laments of rugged individualists. Unreconstructed disciples of Sumner raised again the old battle cries of rejuvenation, bureaucracy, paternalism, and dictatorship, and identified all these indiscriminately with communism or fascism Planning was identified with totalitarianism, legislation with paternalism, and the executive power with tyranny; competition was equated with liberty, states' rights with constitutionalism, and individualism with the American system. There was thunder, too, from the left. Embittered victims of the business cycle, outraged critics of capitalism, deluded disciples of Moscow, undisillusioned technocrats, and visionary planners, all charged the New Deal with betraying the faith by feeble and insincere compromises and envisioned a shining goal of a planned economy certain to usher in a new Utopia." (Commager-American Mind op. cit. p. 220).

The Emergency Banking Act put the banks back in business. The National Industrial Recovery Act, although ultimately declared unconstitutional in 1935, provided for collective bargaining rights for labor, and established maximum hours and minimum wages for the nation's work force. The Tennessee Valley Authority was created, empowering the government to continue the work at Muscle Shoals in harnessing the Tennessee River. Seven States and 40,000 square miles of land would be affected by the most ambitious and successful development ever attempted under public auspices. The PWA provided jobs for public construction projects. The Securities Act and the Securities and Exchange Commission (SEC) was created to regulate the market for securities, prevent unfair practices and manipulations. All these governmental programs and pieces of legislation were enacted in the first 100 days of Roosevelt's regime. By 1935, the Social Security Act was passed. In the same year, the National Labor Relations Act (or the Wagner Act as it was called) was passed and provided for collective bargaining rights for labor. Although labor strife both internal to the movement and external in the form of strikes ("sit down" strikes were a popular form) was a constant problem, membership expanded. In 1938 the Fair Labor Standards Act was passed and provided a minimum national wage of 25c an hour and a maximum work week of 44 hours. Finally, in 1934, the Federal Housing Administration was established to lend money to middle-income families for improved housing.

The Welfare State was fully established. The Federal bureaucracy expanded from 600,000 workers in 1932 to more than a million in 1940. At the same time the national debt doubled as deficit spending and

a controlled economy became the order of the day. The crisis had been resolved and for better or worse, the country had its head up and its hopes high as the decade of the 1940's opened.

The Social Security Act of 1935 had been enacted over the staunch resistance of the American Medical Association. Franklin D. Roosevelt himself backed off very rapidly at the request of the officials of the AMA who sat on the advisory committee to the SSA that medical care be excluded. The last great act of the AMA in terms of social consciousness and paying heed to national social issues, came in 1932 when Ray Lyman Wilbur, as the chairman of the Committee on the Costs of Medical Care, submitted the report. If you changed the dates, this same report could be submitted essentially unchanged, to the American people. The report stressed group practices, hospital based; expansion of the educational and training system for doctors, and other health workers; the extension of health insurance; and support of preventive medicine. Ray Lyman Wilbur was Secretary of Interior under Hoover, and later became the President of Stanford. He was a past President of the AMA in 1923. The report was roundly attacked and denounced by the AMA which described group practice as a form of "medical soviets."

In the 1930's, we entered the present era of almost uncontrolled (and conspicuous) consumption, a controlled economy, and deficit spending. Again, through a combination of private and public action we alleviated our national heart failure in that watershed period, strengthened ourselves, and moved on.

World War I, which interrupted the Progressive Era was a tragedy as was World War II, as was the Korean War in 1950 to 1953. Despite these three confrontations, the country in each instance was united. Americans understood the necessity to go to war. In the post World War II period, we astounded the rest of the world with the Marshall Plan—a tremendous credit to this country in terms of humanitarianism.

We entered in the 1950's the Eisenhower "Era of Tranquility." One can only wonder in amazement how a country and its leaders could have been so blind and indeed oblivious to the cauldron of problems which would boil over in the turbulence and strife of the 1960's. Perhaps the American people needed a period of consolidation and conservatism after 20 years of the New Deal and the Fair Deal—just as they had chosen a "return to normalcy" after the Progressive Era. The "Era of Tranquility" came to a close and we launched into the 1960's—a decade which has to be called the most incredible period in the history of this country. The 1960's was termed aptly by W. H. Auden, the Age of Anxiety.

It was the age of the military industrial complex, to which President Eisenhower called our attention in his farewell address. It was the era of unbridled inflation; of civil rights and civil strife; of moon shots, and our medical equivalent of the moon shot, the heart trans-

plant. It was the era of Viet Nam. For the first time in the history of our country, a foreign war fought on foreign shores, widely divided our country, and does to this day.

It was the era which saw the climax of the fifty year march to some form of compulsory health insurance, the United States of America being the last developed country of the entire world to enact some form of it. With the enactment of Medicare in 1965, compulsory health insurance was now available for those twenty million people, age sixty-five and over. It was the decade of urban renewal, of violence and political assassination, or pornography, of the awakening to the fact that fifteen million people went to bed hungry and malnourished in the United States of America. It was the age of credibility, as well as generational gaps. It was the era of service workers strikes, and the change from an industrial economy to a service economy. In the early 1960's, Mike Quill and the transit workers of New York, successfully paralyzed ten million people for nearly three weeks, and, instead of carrying out the Condon-Wadlin Act which was on the legislative books of New York State, the politicians and judges repaired with all due haste in that season of discontent to the State legislature, and, instead of carrying out the law, changed it in Albany. This was followed hard upon by something one could never believe would happen, and that was service workers' strikes in hospitals. This was apparently completely acceptable to the American people, at least judged by their degree of apathy. Striking a hospital was acceptable, and, in some instances, provision for transferring patients out to some other hospital was the only apparent inconvenience! One wonders how the patients fared.

It was the decade of television, and we awakened to the fact that seventeen thousand hours are spent in front of the television set by our students in America, who spend simultaneously twelve thousand hours in school. The television set made us all like a great Greek Chorus, groaning and moaning at everything that transpired all around the world, as it happened. We could no longer shut it off and pretend that there was no Biafra, or Viet Nam, or the Near East. As Marshall McLuhan said, the television set has made the whole world a "stage." Its power for good and for bad has yet to be realized.

For the first time in American life, we experienced a phenomenon which had everybody absolutely buffaloed including those at Harvard, who had six straight years to prepare for it. Everything you know that happens in this country starts in the west and comes slowly, with the weather, to the east. We all read about the free speech movement at Berkeley in 1964, and said, "It could never happen here," and sure enough six years later with lots of advance notice we were completely and totally unprepared for the student strikes, dissents and busts that occurred in every university in the greater Boston area.

We also simultaneously saw the return of anti-intellectualism and anti-science. All of a sudden, bursting upon the scene, two new issues hove into view, which some people had worried about for a long time: the two 'P's', pollution and population. Suddenly *ecology* became a household word, a newly discovered, wonderful word, meaning "house" —from the Greek, *oikos*, which means "house" or, I suppose, more broadly the human house or environment. For the first time it became clear to everyone that everything we do to and everything that happens in the living as well as nonliving environment has an effect on the whole, and has a cost that has to be accounted for. And, therefore, we came to a screeching halt after three hundred years of continual faith in the future and in the inevitability of progress, realizing that we were beginning to have to pay for the "bads" along with the goods, and that something had to be done in terms of planning.

We also recognized that the crisis of the 1960's was different than the previous crisis in 1930 in that the problems in 1930 were primarily economic and responded to economic solution. The problems of 1960 involved values; problems of dignity; the distribution and sharing of power; racial, culture class, and generational conflicts; conflicts amongst the sexes; things that are always less tangible, and the solutions to which are much more elusive.

So we emerged into 1970, in what I believe the historians will call "a Watershed Period" in the history of the United States. Solutions to the crises were attempted with a number of acts, and the biggest bolus of social legislation in the history of this country was passed in the 1960's.

We began to study what was happening to American life more objectively. We found that violence was, in fact, as American as cherry pie. We were witness to the assassination of one of our presidents, followed by the televised killing of the killer. This was followed by the killing of the President's brother, followed in turn by the murder of several civil rights leaders, and then by the massacre of students at Kent State.

All of a sudden a number of us became deeply concerned about the quality and values that we were facing in this country. In 1968, Armageddon seemed to be upon us. The Eisenhower Commission was appointed and indeed produced the figures that the homicide rate in the United States is around 6.0 per one hundred thousand people, roughly three times the rate of the next country in the world which has the rate of about 2.5 per one hundred thousand in one of the Scandinavian countries, and Australia. In England the homicide rate was 0.7 per one hundred thousand, and the ownership of guns is extremely small compared with this country. After the assassination of Robert F. Kennedy in Los Angeles, it was estimated some five to ten thousand small arms were sold in that area over the next several weeks. The estimate is that there are ninety million small and large arms owned

by the two hundred million Americans. Some 52 per cent of white Southern families own firearms. In England, where the police generally do not carry firearms, and where firearms are not so easily available, the rate of homicide was 0.7 per cent.

We passed a Civil Rights Act in 1964, a hundred years after the Civil War, and along with the Voter Registration Act, the hopes of millions of Americans were raised. By 1967, civil strife had reached such proportions that the Kerner Commission could only conclude that white racism was rampant and threatened the very foundation of the country.

The Elementary and Secondary Education Act of 1965, the Urban Renewal and Housing Act of 1968 and 1969, the Model Cities, the establishment of the Office of Economic Opportunity, the Anti-Poverty Act—all paid heed to the major crises of the decade and domestic problems of American life. In the field of medicine, Medicaid and Medicare were enacted.

From 1930 to 1970, we had seen essentially a forty year cycle of nearly continuous liberalism. As we approached 1970, many of the above programs turned out to be failures. Taxes were up, spending had increased, inflation was rampant, and the inexorable tragedy of Viet Nam added frustration and anger to an alienated middle class and an impoverished lower class. Crime and violence mounted precipitously. Student dissent and activism was the manifestation of the crisis of confidence in our system and its ability to meet the problems, as felt by a younger generation. There was a crisis of values while, simultaneously, a radical redistribution of power was going on in universities, and other institutional political structures.

The reason I suspect for my coming here was not to try to be a poor man's historian. I apologize to those of you who are scholars of American history for a somewhat superficial, but I hope, meaningful attempt to relate the history of our country to what the subject is tonight.

In medicine and health in 1970, severe inflation was matched by abysmal health statistics. There were three major issues besetting the American people. One was the issue of cost, second the issue of quality, and third, the issue of equality of access to health services. Let's begin with costs. In 1950, we spent some eighteen billion dollars on health services, total health expenditures which by 1960, had reached twenty-eight billion dollars. From 1960 to 1970, we more than doubled the amount to a total in 1970 of seventy billion dollars. Now if you take the eighteen billion dollars in 1950 and the seventy billion dollars in 1970, and break it down, as the economists have done, you will find that over fifty per cent of this increase was lost to the forces of inflation. This was not all bad however, because, traditionally, we had grossly underpaid hospital and health workers. I remember when I interned at the Massachusetts General Hospital. Your Dean, Ike Tay-

lor, was the Chief Resident there. He greeted me and told me I would be paid \$18.75 per month, and asked, "Did I want it in war bonds or cash?" I remember complaining about something, and he said, "Knowles, get back to your post"—which I did! This is quite different from the reaction of students who come into my office today and want more "participatory democracy." It was much simpler in those days and perhaps not as rational or even desirable in certain ways.

Twenty-five per cent of the cost increase was used to serve an expanded population. The other twenty-five per cent went to improve existing services in both quality and quantity, and to structure new services. Between 1960 and 1970 for example, Massachusetts General Hospital expanded from one intensive care unit of eighteen beds in a thousand bed hospital, to ten intensive care units of about one hundred forty beds in a total of eleven hundred beds.

If we break down the cost, we find that in 1950, we spent roughly 0.7 per cent of that total expenditure on health and medical research, which by 1970 had grown to the sum of 1.6 billion dollars on a total expenditure of seventy billion. This is not a lush or irresponsible investment.

Typical of the tide of anti-intellectualism, which is the same as saying anti-science, or anti-knowledge, a harassed citizenry and the political representatives were somehow convinced that we in the medical world with all our science and acquisition of knowledge were the cause of trouble. Certainly the steady acquisition of new knowledge causes trouble, but ignorance, since the beginning of time, has caused far more trouble.

We spend seventy billion dollars a year in defense work of which ten per cent, or seven billion, is spent on research and development of weaponry. We spend some sixty-five billion dollars annually on education in this country, public and private. We spend some two or three hundred million dollars and even less than that, in fact, on research in what we are in fact producing with this system of education. In health, we spend 1.6 billion dollars on a total of seventy billion, and this is modest. Show me an industry at the cutting edge of science and technology that spends only three percent or less on research and I'll show you an industry going out of business.

Of the total expenditures, we find that about twenty-four billion goes to hospitals, and over thirteen billion goes to physician services. The next largest call on the American health dollar is over six billion dollars spent for drugs. Now if you take the twenty-four and the thirteen and the six, you get forty-three billion, or roughly seventy per cent of the total expenditure on personal health services in this country. Over five billion dollars are spent on dental services and nearly four billion on extended care facilities and nursing homes.

Now we spend over three hundred dollars per capita on every American in this country and for those 20 million Americans over the

age of sixty-five, we spend over seven hundred dollars annually per person. We spend about seven per cent of our gross national product—more than any country in the world—on health. If the present trend continues, by 1976, the two hundredth anniversary of our "Declaration of Independence," we will all be in the "poor house." By 1976, we will reach the figure of almost a hundred billion dollars at the present rate of rise over the last twenty years, and particularly the last ten.

Looking at the money we spend, we have a right to be concerned as tax payers, or ordinary citizens, for we find that our health statistics do not live up to and, indeed, belie our massive expenditure on health. Therefore, something must be wrong. We look at the four leading causes of death—heart disease, cancer, stroke, and accidents. Active prevention of such diseases has been neglected. We know we killed a hundred and twenty thousand people a year in the United States in accidents, of whom about seventy thousand are killed by that great American weapon, the automobile. Probably half the deaths due to automobile accidents are related to the ingestion of alcohol.

We knew that suicide for example, is the single largest cause of death in American students, and that twenty-five thousand people commit suicide annually in the United States. For every successful attempt at suicide, there are ten to twenty people who have been unsuccessful. A conservative figure is that a quarter of a million people attempt some form of suicide annually in the United States.

Increasing rates of juvenile delinquency and the apparent increase in the incidence of mental disease in children and youth, is cause for concern: as are our infant mortality statistics. Epidemic use of drugs and alcohol is staggering. The single largest cause of death in children between the ages of ten and fifteen in the city of New York is heroin poisoning. Three to four hundred children have died of heroin poisoning in the past year—before they have even reached their fifteenth birthday. The richest country in the world finds itself suffering new epidemics of venereal disease.

The largest single cause of maternal mortality in New York City was criminal abortion, until the abortion laws were repealed. Again we have mentioned malnutrition and hunger in some 15 million Americans. In fact, our health statistics put us between tenth and twentieth of the developed countries of the world, in terms of longevity, infant and maternal morbidity—all this despite our massive expenditures. Clearly, something is wrong with our system of health services—their quantity, quality and the access to them.

The second issue that disturbs the public is the quality of the care. For the money spent, the people have a right to expect high quality. In this present season of discontent, the courts of the United States are awarding such high damages to those of the citizenry who have suffered malpractice at the hands of the medical profession, that many insurance companies have stopped selling liability insurance for phy-

sicians. In California, it can cost fifteen to twenty thousand dollars in premiums a year to get liability insurance, particularly true for some types of surgeons. Obviously this cost is passed on to the patients. Obviously it also results in over-diagnosis and over treatment. A constant eye is kept on the lawyers and the ambulance chasers. One has to be sure nothing is missed—over-use of technology and tests raises the cost of medical care. Numerous studies have demonstrated grossly uneven quality of medical care. The public *should* be concerned.

We know that the financing of health services has a lot to do with the quality of the care. A study of the Federal Employee's Health Benefit Program showed that those served by traditional fee-for-service physicians under Blue Cross, Blue Shield programs has much higher rates of hospitalizational surgery than those served by salaried physicians under prepayment plans, where what the physician did had no direct effect on his own personal income. Prepaid, capitation arrangements apparently do away with unnecessary use of high-cost facilities and unnecessary surgery. Without the vested interest of fee-for-service, it would appear that marked savings are to be had without sacrificing quality. This is not a blanket indictment of the medical profession in the United States, and it does not say that physicians are mischievous, avaricious, dishonest, or adhere to the tenets of George Bernard Shaw's "Introduction to the Doctor's Dilemma." (Shaw made the point that he could never understand how a doctor could decide whether to take a man's leg off or not, when his own income depended on that decision.) All I can say to my colleagues in the medical profession is, if the shoe fits, wear it, and do something about it.

Finally, as relates to quality, we realize that peer review amongst professionals, whether it be politicians, Supreme Court justices, doctors, or lawyers, simply cannot work optimally in the public interest. Aristotle said, "The guest will judge better of the feast than the cook." You can not both provide the service and simultaneously determine the quality of that service, nor its proper utilization and necessity, all by yourself. Any sociologist will tell you that a professional group is notoriously inadequate to the general public interest in doing and simultaneously evaluating and deciding what it is doing and how good and how necessary it is.

The third issue is that of equality of access. It must be understood that there are forty million Americans or twenty per cent of our population in this country who are essentially bereft of health services. This is our Achilles heel. These forty million people qualify as impoverished, according to the social security definition of an income of \$4,380.00 per year for a family of four. Their health statistics are abysmal. The majority are found in urban locations and as black.

Passing from these three public issues to new concepts and perceptions which have emerged, we have mentioned the word "ecology." We know that there is an ecology of health. In order for an individual

to be healthy, he must have decent housing, civil rights, employment and available jobs, food, air to breathe, adequate transportation, and at least adequate food during infancy so that the brain can develop. The individual cannot enjoy complete health if he is impoverished or hungry or without a job, transportation, or decent housing.

At the same time, we must realize that the effects of pollution and over-population are of central importance to health. I think that President Nixon may well go down in history for one major reason and that is, he was the first President of the United States to call attention in a major policy address to the hazards of the inexorable expansion of population. We know that as population density increases, disease increases—mental, physical, and social disease. We have an annual rate of three hundred thousand illegitimate births in the United States, and this is a virtual guarantee that the welfare rolls will expand. The illegitimate child has the very best opportunity to end up on the welfare roll. Many of us believe that the time has come to worry about the quality of life in the United States. Life cheapens in its abundance. Man's numbers have outstripped his wisdom. We must put a brake on the inexorable expansion of population in this country. Coming from Massachusetts you can be sure that I am serious and also that I will never be running for political office. I believe that the abortion laws should be repealed in every state of the United States, and I would predict that in due course they in fact will be. I am convinced that this can do as much for health in a variety of ways as almost any other measure. Family planning services must be available to all, in addition.

I believe that we must come to the realization that physicians must also be citizens. Howard Mumford Jones said that the hazard of producing too many experts is that the expert can function quite well, earn his living, receive his status and be completely happy without any moral commitment to anything outside his area of expertise. This is a major weakness of a society of experts and technicians. The physician as expert can no longer be exempted from the obligations of citizenship and from participating in the broader issues of health, whether they relate to housing, civil rights, food, population control, or pollution. Who better to take action in the public arena to improve health in its broadest connotations?

There is another "watershed" issue and that concerns utilization of existing knowledge versus its continued acquisition. We will have to increase our efforts to use knowledge while we continue to acquire and transmit it. Recently the Carnegie Foundation has filed a report on "Higher Education and the Nation's Health" (1970), which stresses more assiduous attempts to utilize existing knowledge to prevent disease and improve health. A brief review of the evolution of medical education is in order here.

Before the turn of this century, the American Medical Association had begun to root out quacks and nostrum producers and to expose the deficiencies of proprietary interests in medical education. With AMA support, the Carnegie Foundation commissioned Abraham Flexner to report on the state of medical education. His recommendations in 1910 revolutionized American medical education by establishing it as a full and proper function of the university. The biomedical sciences were recognized as essential to the physician's training which should include laboratory work as well as clinical instruction under supervision of the universities' professors. Proprietary medical schools were driven out of business and the AMA's Council on Medical Education helped to set and enforce the new standards of accreditation. Pre-medical requirements stressed the natural sciences to the exclusion of the social sciences. Medical education evolved to two years of the sciences basic to medicine followed by two years of bedside instruction in the clinical specialties. Postgraduate training in teaching hospitals consumed another four years before final practice as a certified specialist.

The resultant advances in medical science and technology have been accompanied by rising expectations and rising costs. Despite massive expenditures on health, our health statistics belie the investment, and along with the renaissance of anti-intellectualism (or anti-science), we find ourselves severely short of medical manpower and with an inability to utilize optimally our hard-won knowledge. The financing of universities and medical schools is in abysmal disarray.

The Carnegie Foundation has once again entered the fray with a thoughtful report. In contrast with the one-man effort of 1910, the present report is signed by 19 individuals of national renown. The AMA is notable by its absence and of some 38 consultants, only one was identified with the interests of organized medicine. Rapprochement between organized medicine and the medical schools is sorely needed, lest we become a nation of reports and no action.

The report notes that "the Flexner, or *research* model" with all its tremendous benefits has produced two major weaknesses: (1) expensive reduplication of scientific effort between medical school and parent university, now extending itself from the biomedical sciences to the social sciences; and (2) neglect of the problems of utilizing medical knowledge and of the public issues of cost, quality and accessibility of health services. The report applauds recent efforts of some medical schools to extend themselves into the community to develop new "health care delivery models" and to develop "integrated science models" in the university whereby the university has one instead of two basic science divisions.

The report recommends the development of more university "health science centers" and 126 "area health education centers"—affiliated with health science centers for the purpose of regional train-

ing and of making high quality services available. It calls for increased Federal and State support for private medical schools while suggesting that costs can be reduced and manpower increased by reducing medical school requirements from four to three years and doing the same for residency training. In addition, combining science in the medical school with that on the campus; reducing the faculty to student ration; admitting two classes a year, teaching during the summer, and having a minimum class size of 100 to effect economies of scale; and expanding the numbers of allied health personnel to increase the productivity of physicians are valuable recommendations.

The report is in. Exceptions can be taken to some parts, but overall it is comprehensive and rational. Will the resistance or apathy of medical and other university faculties be exceeded by that of organized medicine or will they both be put to shame by unresponsive State and Federal governments? We have enough reports. We must have action. The question of who is going to implement what and how?

There are four major ways of improving the health of our people: improving the use of and increasing the manpower supply; rationalizing the financing of health services; improving facilities; and finally planning for new ways of delivering health to the American people—ways which will stress prevention of disease and maintenance of health.

Before I discuss these four areas, I would like to say that we have almost become a nation of special commissions and reports—and no action. These reports are notable for their consistency in advocating change—and it would seem that words and exhortations have become a convenient substitute for action. Much of what is said today was said in 1932 by the Committee on the Costs of Medical Care. The pull and tug of various vested interests in conflict has slowed desirable change. The decade of the '70's must see us do what obviously must be done. In fact, here at the University of North Carolina, you have already met the "Watershed" and taken a new direction with any number of things which relate to these four issues. We all have more to do.

Turning to the manpower problem, we recognize that we need more physicians and we must rationalize the role of existing physicians. We have severe shortages of doctors in particular locations in this country—the South, rural areas, and inner city ghettos. Within the field of medicine, we have staggering shortages which adversely affect the quality of medical care in this country. For example, we have some eight thousand radiologists who staff seven thousand hospitals in this country. We have a severe shortage of academic radiologists, as well as community, practicing radiologists. We have some three to four thousand board certified anesthesiologists, while we have twelve thousand nurse anesthetists. Both of them are desperately needed, and their shortages jeopardize the best care of patients. The specialty is a young one and by 1980 the attrition rate is going to accentuate the shortages of both academic and practicing anesthesiologists.

We are severely short in pediatric urologists and pediatric psychiatrists. We have more than enough practicing neurosurgeons, but we are severely short of academic neurosurgeons. We must be discriminating in our attempts to relieve shortages.

When it comes to all the other health workers we must keep in mind that doctors comprise only eight per cent of the total health manpower in this country today whereas twenty years ago, physicians constituted fourteen per cent of the total number. It is estimated today that we need at least another two hundred and sixty thousand people (beside nurses) to work in the hospitals and other health facilities of the United States. We know that we are short of some one hundred and fifty to two hundred thousand nurses. Technical help is in increasingly short supply; for example, radiologic technicians. Dental care is grossly deficient and we need roughly twenty thousand more dentists. Much is being done to expand the output and if the Carnegie Commission report is implemented we will have taken a giant step forward. In addition, attempts to increase the productivity of health workers have proliferated. The use of nurse clinicians and physician assistants are cases in point.

Turning to the second issue, of financing, many continue to believe that all is well in the financing of health services. Unfortunately it is not. We have two forms of health insurance in this country, public and private. In the public sector, Government either provides direct health services or purchases them. The Federal government provides direct health services to veterans, in the Veterans' Administration; the Department of Defense provides services for members and retired members of the armed forces; and the Department of Health Education and Welfare runs everything from Saint Elizabeth's Hospital in Washington, D. C. to the Indian programs, to the care of narcotic addicts in centers such as Lexington, Kentucky. It is estimated that some thirty million people of our two hundred million population could qualify for care under these Federal systems. These three areas—the Veteran's Administration, Department of Defense, and the HEW spend about three billion dollars annually to serve some ten to twelve million Americans. In addition, government purchases care from the private sector largely under the Medicaid and Medicare programs. The government spent about six billion dollars this year under Medicaid and about seven billion dollars for Medicare beneficiaries. The grand total of governmental spending for health services is between sixteen and seventeen billion dollars. The public sector now pays for nearly forty per cent of the total health expenditures.

Beginning in the 1930's, a massive system of private health insurance has evolved. Today the seventy odd Blue Cross-Blue Shield programs insure seventy-one million Americans. The private insurance companies insure another one hundred and four million people. The independents, like the Kaiser-Permanitic, the Group Health Associa-

tion, and the Health Insurance Plan of Greater New York, take care of some eight million Americans. The figures may sound good but the mix represents a peculiarly American mixed bag. There is a giddy plurality of options and many defects: varying deductibles, and co-insurance features; the complexity of eight hundred different private insurance packages to choose; the lack of standardization and inadequate or nonexisting quality controls. Coverage becomes progressively less as you move out of the hospital. Preventive and rehabilitation services, psychiatric and dental care, nursing home and extended care, and office care are all woefully inadequate in their coverage. Out-of-pocket coverage may amount to as much as sixty per cent of the total bill, and that "ain't insurance in my book."

There are roughly one hundred and seventy million Americans under the age of sixty-five. Of these, one hundred and sixty million have hospital insurance, one hundred and forty-eight have surgical-expense coverage, one hundred and twenty-two have regular medical expense (which includes office visits, diagnostic tests and so on out-of-hospital), and sixty-five million have major medical insurance. The trouble with major medical insurance is that there may be a \$500.00 deductible and a twenty per cent co-insurance feature. So if you come to my hospital for twenty days with major medical, and think that all is well, such is not the case. For twenty days in Massachusetts General for an ordinary illness, you will have a hospital bill of at least \$2200.00. If you pay a \$500.00 deductible and a twenty per cent co-insurance factor, you might have to be readmitted to the hospital when you faced the facts or have to go to the "local poor house." Therefore, many Americans have come to the conclusion that we must rationalize the financing of health services and that the answer is compulsory health insurance for all Americans—health insurance which standardizes broad coverage; does away with deductible and co-insurance factors; provides for strict quality controls; stimulates prevention of disease and the use of lower cost facilities; and provides incentives for the producers in terms of rational utilization and cost controls. I am not for socialized medicine in that I am not for governmental ownership of health facilities and doctors hired under civil service and paid strictly by government, but I am for legislation which accomplishes the above. Bear in mind William James and pragmatism when he said, "Damn the absolute!" After all, North Carolina has a system of socialized medical education and medical care. The University of North Carolina at Chapel Hill which today stands as one of the leading institutions in this country in medicine has not suffered by comparison with Duke—a private institution. Both of them live quite happily side by side I am told. When you mention Duke and Chapel Hill, everybody in American medicine knows exactly what you mean and knows that these institutions stand for excellence. The University of North Carolina is socialized and Duke is private. This is not to say I am for

socialization, but I refuse to deal in absolutes. Turning briefly to the third issue—facilities—look at systems of socialized medicine in this country. You start with the municipal hospitals, go to the state mental institutions, and on to the federal establishments, and your spirit is not lifted nor is your pride touched. These facilities must be restored and, at the same time, the system of Civil Service must be revised, for it is anachronistic.

I do not wish to hand it all over to the insatiable appetite of the Federal leviathan with its incredibly ever-expanding, increasingly unresponsive bureaucracy, which finds it difficult to tolerate pluralism, and which leads to an erosion of individualism and self determination by the people of a region. The fine hand of self-determination and enlightened self-interest must continue to play a strong role in human affairs, lest we all lie down and wait for Big Brother to do it.

Finally the planning for the delivery of the system must pay heed to the development of high benefit to cost services such as preventive medicine, rehabilitation services, health education, and ambulatory, accessible services. We know that we should put more emphasis on extended care facilities, chronic hospitals and accessible health centers, if we are to contain costs, enhance quality, and improve the nation's health.

In fact you are doing many of these things at the University of North Carolina. You are extending yourselves out into your community. The students at this university, on their own and recognizing that bureaucrats like Dean Taylor and myself were invented to interfere with their activities, steered clear of all these people, went ahead and developed two accessible health centers—one in Chapel Hill and one in Edgemont. The centers are serving a purpose. The students have learned a lot about the ecology of health and have enlarged their view of the health services that people need.

Finally we have enough models in the Kaiser system, The Group Health Association of America, and the HIP, all of which show that salary arrangements based on capitation and with financial incentives for physicians (and where the physician's income is not tied directly to the decision as to whether he is going to admit a patient and take out his gall bladder) keeps both doctor and patient much happier in the long run. Costs are contained, quality and comprehensiveness is enhanced.

Returning to William James and "pragmatism" and believing that the truth is plural and contingent and believing that pluralism is a virtue in American life, I have great faith in the people of this country and capacity to make change—desirable change which gives full recognition to the watershed issues in American medicine.

Medical schools and university medical centers, such as your own, are already participating in the new direction in health services and health education in this country. Public health interests at the state

and federal level, as well as teaching hospitals and urban hospitals and urban hospitals such as the one I represent, indeed all the health workers and their associations; as they look at the ecology of their existence and the object of their affection are coming closer together rather than being divided. We have a wonderful American heritage of "activism" and "pragmatism" and rugged individualism. We need a renewal of private effort and self-reliance, and we have shown that we are, at the same time, capable of enacting legislation for social improvement.

With all our faults, we have struggled to maintain a healthy balance between public and private interest. The tension between freedom and equality; of private versus public interest; of Republicans and Democrats, honest conservatives and honest liberals; and the pendulum swinging back and forth. The route to the "promised land" is circuitous and at times tortured but it is not all as bad as you might think from the rhetoric of the late 1960's. I am absolutely convinced that this "Watershed" has seen us enter a new age of reason, not of revolution or destructive anarchy. Alfred North Whitehead stated, "The greatest ages in the history of man have been the turbulent periods." The Good Lord knows this must be one of the great ages. Francis Bacon said over three hundred years ago, that the forward retention of custom is as turbulent a thing as change. It is in fact much easier to change than it is to throw the anchor out to 1920 and hang on for dear life. The arch-conservative lets the world pass him by.

Paul Tillich made the statement that religion is a state of being grasped with an infinite concern. I think we have entered a new phase of national development in which all Americans will be grasped with some infinite concern about who we are, where we have been, what our historical roots are, what our strengths are, what our weaknesses are, who we want to be, who we are, where we want to be in the future. This will lead to a renewal of effective private and public action. New ways of harnessing our incredible energy to solve our monumental domestic problems will be found.

I have great faith in the students. The students here were hospitable, they observed amenities without being obsequious, they met me as an equal, they were not over-awed with me any more than I was over-awed with them. They were polite, serious, intelligent, full of energy, hope, and good humor. The country is in fact in good hands. Reinhold Niebuhr said, "Humor is a prelude to faith and laughter is the beginning of prayer." He said that the juxtaposition between faith and humor emanates from the fact that both deal with the incongruities of our existence. Humor is concerned with the immediate incongruities of life and faith with the ultimate ones.

If there is any message to be left after this rather long and circuitous odyssey, I would say: "Have faith and be of good humor."

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