

lators than they are in the welfare of the farmer and the consumer, say, "You cannot regiment nature." Doubtless after Joseph had been storing grain for two or three years and had found it necessary to build more warehouses, his critics became numerous and loud. Doubtless the Egyptian fore-runners of those respectable citizens who act so hopelessly when confronted with the variability of nature said: "This fellow Joseph is crazy. We have had unusually good weather now for three years and Pharaoh must be crazy too for still believing in Joseph's foolish dream. It is labor thrown away to build warehouses to store up mountains of grain which will turn to dust and never be used." Of course, Joseph didn't mind people of this sort because he had despotic authority.

Fortunately for us in the United States, we are not under the despotism of a Pharaoh. We carry all our responsibility under a democratic form of government. But the droughts of 1930, 1934 and 1936 must by now have caused millions of people both on the land and in the cities to think about the advisability of some modern adaptation of the Joseph plan to the United States.

"You cannot regiment nature," say the reactionaries. True enough; but neither can you regiment death or fire or windstorms or earthquakes. We cannot regiment nature, but we do not have to let nature regiment us. The things which cannot be regimented by individual man are the very things which become the concern either of government or of such great co-operative institutions as insurance companies. The cry, "You cannot regiment nature," while true enough, is the cry of little men lost in primitive superstition. Joseph had a bigger vision than they. He didn't regiment nature but he did prepare for the whims of nature. [*Talk at Great Lakes Exposition, Cleveland, Ohio, August 19, 1936.*]

VI: 1937

Two of Wallace's earlier addresses in 1937 dealt with a situation which until recently few up-and-coming Land Grant College graduates cared to contemplate: Rural Poverty. In his weekly radio talk on January 22, "To triumph over the evils of farm tenancy," he said, "will be to achieve a national ideal that has stirred the hearts of the American people since our beginning as a nation." And if, he told a General Assembly of State Governments in Wash-

ington on January 23, the rural people are really the "backbone" of our national structure, then the backbone is weakening.

"We have been indulging in romantic thinking about the beauties of a farm background. The actual picture has acquired grimly unpleasant aspects. We are proceeding with a program of security for industrial workers, while among our farm population security is gradually declining. A million American farm families have an average total income of less than four hundred dollars a year. A half million families live on land too poor to warrant continued cultivation."

In February, appearing on a radio program with Harper Sibley, President of the United States Chamber of Commerce, and William Green, President of the American Federation of Labor, he expressed fear of two dangers: "One is that in their insistence on their own particular rights the largest [pressure] groups, being more skilled in running to Washington, may profit at the expense of the small units in the unorganized groups; and my other fear is that such pressure may bring about a condition of progressive scarcity and therefore a smaller national income."

In April he delivered a series of three lectures, the Weil Lectures at the University of North Carolina; and these were published in pamphlet form under the combined title, *Technology, Corporations and the General Welfare* by the University Press, Chapel Hill, that year. Lecturers in the series during previous years had included Jacob H. Hollander, William Allen White, Henry Noble MacCracken, Harold J. Laski and Felix Frankfurter.

TECHNOLOGY, CORPORATIONS AND THE GENERAL WELFARE

The biggest single fact in the modern world of economics is the recent growth of technology. Ever since the beginning of the nineteenth century, when new textile machines were introduced into England, when mill workers began to see that their jobs were insecure, and landowners and sheep growers sought protection against the threatening advance of cotton, the impacts of technological change have periodically baffled economists and statesmen. The early battles against the rise of the machine were battles against the inevitable. Today we readily accept the benefits of technology but find ourselves incapable of grappling effectively with the trail of economic insecurity and waste of human and natural resources.

The forward march of technology in industry is well known. Not so many people realize that technological change has come with equal speed on the farm.

I well remember my astonishment some twenty-seven years ago, when

taking a walking trip across Iowa, in discovering from the farmers themselves that the countryside had been to some extent depopulated during the previous thirty years. They told me how there used to be forty children at their country school, whereas at that time there were only ten. The farmers of Iowa in 1910 were producing more than in 1880, but there were fewer of them. Many of the farmers in 1910 felt that the tremendous changes which they had seen take place were about to come to an end. They were satisfied with the binder and the two-horse cultivator and the gang-plow, and had no desire to look forward to the tractor, the combine, and the two-row cultivator.

And now today, in the year 1937, we look back sixty years to the time when it took twenty-five hours of man labor to produce twenty bushels of wheat, as compared with ten hours today. Eighty hours of man labor would produce forty bushels of corn in 1880, while today only forty hours are needed. In the cotton belt in 1880, a bale of cotton required about three hundred hours of man labor as compared with a little over two hundred hours today. New machinery and new methods have not been quite so helpful in improving the efficiency of the corn and cotton farmer as they have been in improving the efficiency of the wheat farmer, but everywhere the influence has been felt.

During the first hundred years of our national existence the efficiency of the average farmer was increased about fivefold. During the past fifty years the average farmer has about doubled his efficiency.

Looking ahead fifty years, we know that it is possible again to double the efficiency of the average farmer. We cannot be certain of this, however, because there is no assurance as yet about the city unemployment problem. If unemployed people are forced back on the land, the efficiency of the average farmer will be tremendously cut down. Technologically it is possible that in the year 1987, when Philadelphia holds her bicentennial celebration of the signing of the Constitution, the average farmer will be producing twice as much as today and twenty times as much as the farmer of 1787. In 1787 it required nineteen people living on the land to support one person in town. Today nineteen people on the land support fifty-six people in the towns and cities of the United States, as well as from five to ten in foreign countries.

Looking toward the future, I can conceive of conditions under which agricultural efficiency per farmer would not increase. A combination of insect pests, diseases, drought, flood, declining soil fertility, and unemployed people from the city going back on the land might produce a condition under which the agricultural output per farmer in 1950 would be actually less than today. I think it much more likely, however, that the

weather during the next fifty years will be about the same as it has in the past fifty, although the fluctuations from one extreme to the other may be somewhat more violent. Furthermore, I believe that the Federal and State governments will continue to support research looking toward the control of insect pests, diseases, and soil erosion, and that eventually the intelligence of man will triumph splendidly in all of these fields of activity. Solving the unemployment problem in the cities is more difficult than taking care of insect pests, diseases, and soil erosion; but I would anticipate, if proper measures are adopted, that even this problem ten years hence would not be quite so bothersome as it is today.

Offsetting the forces that work toward reduced efficiency per farmer, there are powerful forces on the side of increased efficiency. Take the corn-hog situation, with which I am intimately familiar by reason of personal experience. I am certain that five or six years from now, if the weather is normal, the yield of corn in the corn belt will be at least 200 million bushels greater than would otherwise be the case on the same land, merely as a result of the widespread planting of hybrid seed. It is now definitely known, as the result of thousands of tests, that on the better land in the corn belt, adapted hybrids one year with another will outyield the old-fashioned corn by at least ten bushels an acre. At the same time, better rotations and more labor-saving machinery are being used. Within twenty years the improved rotations should increase yields on that part of the corn belt which is properly handled at least five bushels an acre.

With equally good weather, it should be possible thirty years hence to produce the necessary corn in the corn belt with about half as much land and labor as was required during the decade of the twenties. We will not need as many bushels of corn in the future as in the past because of the improvement which we shall make in the efficiency of our livestock and the improvement in our methods of feeding. It will be a long time before we improve the efficiency of our beef cattle so very much, but within thirty years we should have strains of hogs which will produce a hundred pounds of gain for seventy-five pounds less feed than required today, a reduction of nearly a fifth.

Since the World War we have learned to produce about forty percent more milk with an increase of only fifteen percent in dairy cow numbers. We have increased our pork and lard production eighteen percent with nine percent fewer hogs. Our chickens today have the capacity to turn one hundred pounds of feed into more eggs than could the chickens of twenty years ago. Thus far the greatly improved animal efficiency is largely the result of better methods of feeding and sanitation, but better

breeding from now on will count for more and more, especially in chickens, dairy cows, and hogs. Inasmuch as eighty percent of our corn is fed to livestock, it would seem to be possible thirty years hence to avoid plowing all land subject to erosion, and to put into corn only such a percentage of the land as will result in maintaining the soil fertility of the corn belt at a higher level indefinitely.

The cotton belt faces about the same prospects in technological progress as does the corn belt. In the future it may easily be that three-fourths of the agricultural products entering commerce will be produced by one-third of the farmers. It is equally possible that the other two-thirds of the farmers, producing only one-fourth of the commercial agricultural output, will be producing three-fourths of the children which will supply the next generation. As methods now stand, these children will be raised and trained under miserable conditions. One of the most difficult things about the unequal application of the benefits of modern culture and education is the effect it has of exaggerating the differences between man and man. My guess is that the genetic or inborn differences between farmers are exaggerated perhaps tenfold by the differences that are derived from the training, education, proper food, and the possibility of getting a little capital as a send-off.

The children of the farmers at the bottom of the pile are usually poorly educated and poorly fed, and more than half of them drift to town to work in the factory. Here, because of poor education, they are subject to exploitation of many kinds and easily fall for modern variations of the old rabble-rousing cry, "Bread and circuses." Both State and Federal governments may well ask what their proper duties toward the poorer farmers are, and especially toward the education of their children. Agricultural technology with all its boasted glories, realized and to come, sharpens this problem and makes it even more acute.

On the whole, it seems clear that in industry as in agriculture a rather high percentage of the benefits of increased productivity, resulting from new inventions and new methods, goes to the people who are already better off. Organized labor tends to benefit more than unorganized labor, and the well-to-do farmers benefit more than the poor farmers. Corporations, and especially large corporations, tend on the whole to benefit more than the small corporations and individual businessmen. There are plenty of exceptions, but on the whole technology exalts the dominance of those already on top and makes more hopeless the position of those at the bottom of the pile. Unfortunately, the landless, the homeless, and the unemployed have nearly twice as many children as are necessary to replace

themselves; therefore, the problem seems to grow as the machine becomes more triumphant.

There is nothing inevitable about this situation. It is possible to make the machine the servant of man and not the master. But it is going to be necessary sooner or later to change many of the governmental rules of the game as they apply to agriculture, to labor, to industry, to our natural resources, and to the distribution of our national income. All civilizations have had to face this problem in one form or another as they approached maturity, but no nation has ever had to face it in such a sharply focused form as the United States, because no nation has ever had such a powerful technology accentuating the differences in power and income between those at the top of the pile and those at the bottom.

* * *

Beginning in a big way seventy years ago, corporations have more and more dominated the business and political world.

Today, everyone lives in the sunlight or the shadow of corporations. More than ninety percent of the workers in manufacturing, transportation and mining work for corporations. For a long time the family-sized retailing establishment resisted the chain store and the mail-order house remarkably well, but in the last fifteen years the retreat of the small businessman before his big corporate competitor has been almost continuous. More than ninety percent of agriculture is still conducted by family-sized units, but even here the trend of technological development is bound to give the corporate form of organization many of the advantages it must have in order to compete successfully with cheap family labor.

The proportion of total assets controlled by the two hundred biggest corporations of the country is constantly increasing. It seems probable, assuming a continuation of the conditions of the past fifteen years, that by 1950 the 200 largest corporations then will own seventy percent of all corporate wealth.

Thus far, the people of the United States on the whole have been rather friendly to corporations, just as they have been friendly to labor unions and farm organizations. But from now on it would seem that the general public will become more and more critical of special grants of Federal or State power to particular groups. It is not enough that in the past the great corporations should have furnished most of the people of the United States with automobiles, telephones, electric lights, and radios.

I am not one of those who cares to raise prejudice against corporations. It is a mistake to condemn all corporations as ruthless monsters seeking to plunder defenseless competitors and gouge the public. The directors of

great corporations are usually earnest gentlemen, well versed in the rules of the competitive profit game and oftentimes unusually skilled in the management and technology of their particular enterprise.

It seems to me that very few of us can criticize the corporation directors for lack of knowledge of their particular business, but we can criticize many of them for having very little knowledge about the relationship of their business to the general welfare over a period of years. True it is that many of the big corporations have shown a splendid attitude with respect to their labor and with respect to the charities in the cities where they are located. Individually they have done wonders in building up-to-date factories to expand production, but collectively they have not yet learned the secret of expanding consumer purchasing power as rapidly as production. Corporations, until they have learned how to co-operate together or with the government to keep consumption in step with balanced expansion in production, will be one of the dominating factors in causing the alternating period of boom and depression.

Previous to 1929, very few people felt that corporations had even a partial responsibility for booms and depressions. But now we know that corporation policies having to do with production, employment, prices, and savings are dominating factors in the business cycle. True it is that the individual corporation is almost powerless to do anything about it, aside from displaying ordinary common sense and decency. It seems to me, however, that the directors of the great corporations might show a more enlightened attitude toward the government in its efforts to see that corporate management does not produce such wide fluctuations in production, employment, savings and profits. It seems to me that corporations must more and more be prepared to accept the doctrine that capital and management have received from government a grant of power which entitles them to make profits on condition that certain rules of the game are observed with respect to production, prices, wages, and savings.

Both the Federal government and the corporations are rather inexperienced in thinking about this kind of thing, because it was not until 1931 that anyone realized what extraordinary power big corporations have over production and prices.

To nearly everyone, the big corporations have been in a position to say, "Take it or leave it," and the public had to take it even when it meant millions of men walking the streets, even when it meant thirty-cent wheat, even when it meant prices for manufactured products which had been cut very little.

In some ways the situation with the big corporations today is like it used to be with respect to individual banks and the central bank. In the

old-fashioned bank panic the individual banks invariably did the things which made the panic worse. In the mad scramble of suddenly called loans and rapidly withdrawn deposits, everyone got hurt. In the banking world we have learned enough so that the central banking policies of the Federal Reserve System enable us to avoid the barbarism of the old-fashioned bank panic. We learned that central banking principles in certain respects had to be almost exactly the reverse of local banking principles—that in time of stress the central banks must be liberal and in time of prosperity hard-boiled. In the field of corporate organization the ingenuity of man has not yet developed a central clearinghouse for increased balanced production. If such a central clearinghouse were developed I am convinced the principles governing it would be as different from the principles governing a particular corporation as the principles of a central bank differ from those governing a local bank.

The relation of the big corporations to the general welfare is an even more complicated problem than the relation of local banks to central banking policy. There must be the most careful study, therefore, in every field of industry, of price, wage and production policies, and relationships between these policies in one industry and the policies in another industry.

It would be a fine thing if businessmen representing all of the heavy industries could get together and survey the business outlook not only for the ensuing year but also for the ensuing three or four years. They might say, for example, "This building boom is coming on fine now, but it can't go on this way indefinitely. What is going to happen to us when it breaks? Can we co-operate with the government to prevent it from getting out of hand? Can we co-operate with the government to be sure that the government has a sufficient volume of public works and subsidized housing to take care of the situation when the boom finally does break? Are there interrelated industries which could, under some appropriate assurance against loss, undertake a program of production over a period of years so as to contribute to stability of employment?" Or representatives of the heavy producers' goods industries might perhaps meet with the representatives of the consumers' goods industries and survey the outlook for the ensuing year. They might say in this conference, for example, "The activity in heavy producers' goods is now climbing up faster than the activity in consumers' goods. This cannot be sustained for more than a year or so without a break. We believe the unusual activity can be sustained, however, if consumers' goods are stimulated. To do this means the adoption of policies which increase consumers' buying power. We therefore recommend to the government so and so and so and so."

Businessmen with the individualistic attitude they have had in the past

will undoubtedly be slow in starting anything of this sort. But it is to be hoped that they are not too slow, because one of these days another 1929 will be upon us and in the haste and flurry of a moment like that it is difficult to act sensibly.

Corporations in their policies are not alone in their neglect of the general welfare. Organized labor and organized agriculture, insofar as they have the power, act in a somewhat similar way. Labor tries to get higher wages per hour and to make higher wages more certain by cutting the hours of work per week. In like manner farmers want higher prices per bushel, backed up if need be by production control. Obviously, if the price, wage and production policies of all three groups are completely successful the result will be to give everyone more and more money and less and less goods. Modern technology means increased production, but the rate of increase is undoubtedly being held down by these organized pressure groups which are striving for profits and wages and not for increased output of goods. The organized groups, having no suitable machinery to enable them to co-operate for their mutual welfare, fight each other and promote the general "ill-fare."

When we think and act solely in terms of wages per hour or prices per unit, superficially there seems to be conflict among the interests of farmers, laborers, and business, for higher prices and profit per unit for one group seem to mean higher costs and reduced standard of living for the others. This conflict is unnecessary. It arises from an overemphasis upon prices alone, and from a failure to realize that each individual's income depends not only on how much he makes per unit, but also upon how many units he sells. Sometimes the biggest gains can come from lower prices per unit, together with an increased volume sold. Such gains can be realized, however, only with a wise balancing of production, so as to get most of the increases in those products, such as housing and industrial products generally, where human wants and needs are least well satisfied. Policies which result in moderate costs and profits per unit, either of farm products, labor, or manufactured products, but also in a balanced expansion in the total number of units sold per producer, can increase the income of each group at the same time without being burdensome to any of the others. Viewed in these terms, there is thus an essential unity among the interests of all three groups. Only by developing our national economic policy in terms consistent with this fundamental unity can all profit at the same time.

It is appropriate that agriculture and labor should not rest until they get bargaining power equivalent to that enjoyed by the corporations. But after they have obtained the power it is even more important that the

attention of all three groups be directed at once to co-ordination in the production of ever-increasing quantities of the right kinds of goods.

At the moment there are many misunderstandings, but nevertheless the productivity trend of the United States seems to be steadily on the upgrade. Many people are deeply concerned about the temporary misunderstandings. Serious as they are, I am inclined to think that they are relatively unimportant compared with the growing appreciation on the part of the labor, agricultural and industrial leaders of the necessity of co-operating with each other and with the government to increase production in a balanced way.

* * *

Is it now conceded that the function of government is somewhat more than that of an economic salvage crew? Is the cost of salvage, of cleaning up the wreckage from boom and depression, now so great that government should be asked to prevent some of the destruction from ever occurring? If the answer to these questions is "Yes," then of course government must exert an integrating and stabilizing influence in our economy.

Corporations, labor unions and farm organizations are continually making decisions which affect both production and prices. Many of the decisions made by corporations, labor unions and farm organizations are made with the knowledge or actual help of the government. More and more the government is being made aware of the way its monetary policies, tariff policies, regulatory activities and Federal expenditures affect the general welfare. A new science of government is in the making, the broad outlines of which are just beginning to appear.

There is a tendency for organized groups to believe that by exerting pressure they can get from society more than is there. They have had enough temporary success with the use of pressure to be encouraged in this belief. It is easy for farmers to feel that with the help of government they can get two dollars a bushel for their wheat year after year. It is easy for industrial corporations to feel that through monopolistic tariffs and rigid prices they can rake in excessive profits year after year. It is easy for labor to feel that because corporations have frequently accumulated excessive profits, organized labor has only to put on the screws and obtain, year after year, increasingly higher wages and shorter hours.

It is perfectly true that any one group can for a time get a larger share of the national income, but it doesn't work when all try it at the same time. Sooner or later the pressure game will blow up in our faces unless we provide a constantly larger national income to divide up. This is really

a matter of simple but intensely practical arithmetic. Unless we learn it, our future is black indeed.

If government is to be partly a policeman, partly a co-ordinator, partly a clearinghouse, and partly a stimulator—all on behalf of the general welfare—the problem of economic democracy becomes supremely important. If government marches into the economic field decisively and directly at the top, the result can be a regimentation of all types of activity in a manner completely abhorrent to the American temperament. Carefree exploitation without thought of the consequences is, of course, delightful to the American temperament. But that has come to an end and we now have to do some searching thinking about serving the future by the processes of economic democracy.

Economic democracy means that the various economic groups must have equality of bargaining power. But going along with this *right*, there is also the *duty* of serving the general welfare.

Fundamentally, the most significant things in a modern economy are ideas, technology and natural resources. Secondary to these are the corporations, the co-operatives, the labor unions, the farm organizations and other organizations through which a true economic democracy can express itself. Here in the United States, at the moment, we have by far the best opportunity to work out an economic democracy which can serve as a model for the entire world. The new world of the general welfare is beckoning. New opportunities await the men with a bent for public service, whether in government, in labor or in management. The rewards in terms of satisfaction are far beyond those which any captain of industry in the nineteenth century could dream of. The world to which I refer is not fanciful or unreal. The foundation is now being laid, and it is to be hoped that no disturbance abroad will distract our attention from the real job here at home. [*Conclusion of the Weil Lectures, University of North Carolina, April 4, 1937.*]

RECONCILIATION OF CONFLICT

Reconciliation of conflicting interests was a great purpose and accomplishment of the Constitutional Convention, and it remains a great necessity today. It is possible to scorn unity and reconciliation, and to permit disunity to prevail. It is possible for each great economic interest to be defiantly selfish, and to ridicule the claims of the general welfare. It is possible for business, labor and agriculture to fight each other first with

economic weapons and finally with clubs and guns, and so to achieve what seems, for a moment, to be victory and glorious independence. It would then be possible for each of these great interests to split up within itself into an increasing number of warring groups, each struggling for control.

All of these things might conceivably happen, but we know that the result would be the end of democracy and the most violent period of anarchy this nation has ever seen. No man of deep convictions likes to yield even a fraction of his beliefs; no group long used to supreme economic power likes to see that power slipping out of its hands; no group which believes it has suffered long-continued injustice likes to stop short of Utopia. Nevertheless, as the compromises of the Constitutional Convention itself suggest, it is possible for men of good will to submerge their own deep convictions, their own group interests, and their own feelings of injustice to the imperative and supreme need for national unity.

And, in the light of the first 150 years of our history as a nation, can anyone today say that the Founding Fathers should *not* have made sacrifices in order to form a union? Should the merchants of New York and the shippers of Massachusetts and the planters of Virginia have clung obstinately and jealously to their individual convictions and interests, even if by so doing they prevented the birth of the nation?

There are leaders in other lands who would like to see the forces of disunity conquer in this country. They would like to see democracy fail, in order that their own nervous belief in dictatorship might be strengthened. They jeer at democracy, and say a democratic government acts only when it is too late. In their minds there can be no progress and no unity in a democracy. For them there are no men of good will; there are only men of force.

The world is tasting the fruit of their philosophy today. Men of force are ruthlessly attacking whole civilizations. No man can say what the result will be beyond this: that democracy, as never before, will have to prove itself by deed as well as word. Democracy in the United States must be made to work. In a world war-torn and beginning to burn, it is essential that democracy in the United States be made to live and to grow by appealing to the unifying principles of 1787. [*Constitution Day radio address, September 17, 1937.*]

THE POWER OF BOOKS

It is worth while from time to time to speak in awe and reverence of the power of books. There are, of course, strong books and weak books, beautiful books and ugly books. Tonight I propose to confine my comments to some brief observations concerning a few of the books which, regardless of artistic merit, have had a powerful effect upon the Western and especially the American world of affairs. Some years ago a gentleman addressing the annual meeting of the New York Library Association listed fifteen books as having had a more decisive effect on human history than Creasy's fifteen decisive battles. In his list he undertook to set off the *Iliad* against the battle of Marathon, Shakespeare against the defeat of the Spanish Armada, and Darwin's *Origin of Species* against the Battle of Waterloo. Such suggestions are stimulating but in no way accurate. In some ways certain books are more powerful by far than any battle and it is about a few of the many books of this sort that I wish to talk tonight. These are books which have given direction to the Western human spirit throughout the ages. They have changed human institutions and some of them have caused the shedding of much blood. Many of these books have broken up old disciplines and have offered new freedoms, which in turn have resulted in new disciplines, which later on offered a shining mark for a revolutionary new book.

Undoubtedly the most powerful book of all the ages is the Bible. It has caused the shedding of millions of gallons of blood and has soothed hundreds of millions of aching hearts. The fiery example of insurgent prophets shouting, "Thus saith the Lord," has caused many a man to battle for social justice with superhuman strength. The humble example of the long-suffering Christ has caused many millions to live calmly and hopefully in the most difficult circumstances. The vigor of a Saint Paul has given extraordinary energy to many thousands of evangelists. Yes, here is a book which has proved itself more potent by far than any decisive battle or army or empire. Reinforcing the Bible with great power in producing a Christian discipline are such books as Saint Augustine's *City of God*, and Thomas à Kempis' *Imitation of Christ*. In this last we find the individual human soul striving desperately to discipline itself by continuous meditation into that which was conceived to be the Christian mold. Thomas Aquinas, the great Dominican Scholastic, in his *Summa* assembled the most powerful, logical presentation of the Christian doctrine that has ever been put together in one book. The *Summa* today not only has a most

powerful effect in the Catholic Church but also in Neo-Scholasticism, which is having something of a revival outside of the Catholic Church.

It seems as though all powerful systems of thought inevitably set up their oppositions and so we find the careful scholasticism of the Middle Ages provoking many books to make fun of the detailed reasoning of the scholars and the corruption of the clergy. Of these the most influential perhaps was the Erasmus book, *The Praise of Folly*. Many were the books in the sixteenth century which endeavored to break the old molds. *Don Quixote* laughed chivalry out of court. Translations of the Bible into the native tongues freed the spirit of theological inquiry. John Milton in England wrote his *Areopagitica* in defense of free speech, and ever since that time English-speaking people have had a tolerance for freedom of expression which cannot be found elsewhere in the world. The Protestants who reached out for a new freedom found it necessary to impose on themselves a new individualistic discipline. To this end Calvin wrote his *Institutes* and John Bunyan his *Pilgrim's Progress*.

The books which really launched the human spirit of the Middle Ages into the field of matter more effectively than any others were Francis Bacon's *Novum Organum* and Copernicus' book on the revolutions of heavenly bodies. These two books, coming shortly after the discovery of America, aroused the imaginations of men in a new direction. From such books, and Newton's *Principia*, have sprung the scientists whose devotion to truth is as pure and lofty as that of any priest.

With the rise of the scientists also came the rise of the humanists who, like Rousseau, Thomas Paine and Voltaire, wrote their books on the rights of man. Paine and Voltaire had in them a streak of sarcasm, bitterness, satire and humor which stirred men's minds. Thomas Paine's pamphlet, *Common Sense*, probably did more to arouse the Americans to revolution against England than any other book. He was a hell-raiser. Alexander Hamilton and James Madison were builders. The *Federalist* essays which they wrote were a determining force in bringing about the ratification of the Constitution.

In the late eighteenth and early nineteenth centuries the doctrine of individualism and competition was set forth in a really powerful way for the first time. The economists and the rising manufacturers rebelled against the limitations of mercantilism, and their views were expressed by Adam Smith in his *Wealth of Nations*, by Ricardo and by John Stuart Mill. Darwin in his *Origin of Species* and Herbert Spencer in his *Social Statics* both expounded the doctrine of natural selection and survival of the fittest. Thus the groundwork was laid for Nietzsche's *Zarathustra* and the violence of the modern Germanic approach based on the doctrine

of the superiority of certain germ plasm. The forces which Darwin, Adam Smith and John Stuart Mill let loose in the biological and economic worlds, combined with those originated by Hegel in the philosophic world, produced in the mind of Karl Marx one of the most powerful books of the nineteenth century, *Das Kapital*. Whether we like it or not, everyone in the world today is different because of *Das Kapital*. Without *Das Kapital* there would have been neither the Communist nor the Fascist experiments. All of us today are living more under the shadow of *Das Kapital* than under any other book of the nineteenth century.

Of all the American religious books of the nineteenth century it seems probable that *The Book of Mormon* was the most powerful. It reached perhaps only one percent of the people of the United States but it affected this one percent so powerfully and lastingly that all the people of the United States have been affected, especially by its contribution to opening up one of our great frontiers. The same may also be said for *Science and Health* and perhaps for several other books of this type, even though the great majority of Americans have been affected by them only indirectly.

When it comes to the books of the twentieth century, it is difficult for anyone to choose with any certainty the most powerful. In the United States, Turner's *The Frontier in American History*, has undoubtedly caused many of the most thoughtful Americans to consider most carefully changes which the passing of the frontier would inevitably bring upon us. Probably there would be some unanimity of opinion among the more thoughtful Americans of my generation with regard to the lasting effect on the psychology of the American people of the pragmatic philosophy of William James. Even more significant probably is Sigmund Freud with his *Interpretation of Dreams*.

My own inclination is to list Thorstein Veblen's books, *The Theory of the Leisure Class* and *The Theory of Business Enterprise*, among the most powerful produced in the United States in this century. Some of the most respectable economists, like Wesley C. Mitchell of Columbia University, as well as some of the most radical of the left-wingers, have been deeply influenced by Thorstein Veblen. In my opinion he is one of the few American writers who have appeared thus far in the twentieth century who will rank higher fifty years hence than he does today.

Further comment on the most powerful books of the twentieth century must be increasingly personal. I would include Max Weber's *Protestant Ethic* among the books which have had a tremendous influence both directly and indirectly. For my own part I cannot help feeling that Weber and his disciple, R. H. Tawney in England, have derived the spiritual basis for capitalism a little too exclusively from the self-denying Protestant

discipline which so many individuals developed in their personal lives. It seems to me that while in many parts of the world modern capitalism owes much of its spiritual vitality to personal Protestant discipline, yet it is derived in almost equal measure from the philosophies which found their origin in Adam Smith's *Wealth of Nations*, John Stuart Mill's writings, and Darwin's *Origin of Species*. While not many people would agree with me, I would like to pay a tribute to Ferrero's book published in 1913 on *Ancient Rome and Modern America*. This book made me shiver profoundly for the first time at the thought that the cities of the United States might thoughtlessly commit suicide in the same manner as the cities of ancient Rome through the process of destroying the life on the land.

Equally significant to me a quarter of a century ago was Flinders Petrie's book, *Revolutions of Civilization*. In this little book is found the essence of that which Spengler developed at such great length a decade later in his *The Decline of the West*. But whether the source is Spengler's or whether it is Petrie's, there is now a widespread belief in many quarters that civilizations almost of necessity are characterized by spring, summer, fall and winter, and that each of these periods has its spiritual, artistic and material expressions. Personally, I cannot help feeling that some of the most powerful books of the future, while recognizing the fact of rhythm in civilization, will in effect be written as an offset to the fatalism of this approach.

While I hesitate to speak of books by Americans who are now living, I cannot help expressing my belief that Charles Beard's *An Economic Interpretation of the Constitution of the United States* is certain to be looked on by the next generation of historians as one of the significant books of the early part of this century. While there is ground for disagreeing with Beard on some of his points, both his friends and critics must agree that this book has caused thousands of people in the United States to look at the Constitution in a far more vital and human way than would otherwise have been the case.

In the field of twentieth-century science it is too soon to say whether any of the books will compare in their revolutionary effect with those of Darwin, Bacon, Newton and Copernicus. Perhaps Einstein's book on relativity or Gregor Mendel's paper, rediscovered in 1900, which gave us the new science of heredity will deserve to rank with these older books. Despite the new physics and the new astronomy, however, science continues in the main to be the natural unfoldment of the approach created by men of the type of Bacon, Newton, Copernicus and Darwin.

There is no time in this presentation to deal with novels. Their influence is usually passing, and yet we cannot fail to recognize the extraordinary

significance of Dickens novels as they aroused the moral indignation of the English-speaking people with regard to social conditions. *Uncle Tom's Cabin* undoubtedly had a powerful effect. In the United States the most powerful novel of the century, not from an artistic point of view but from a social point of view, is Upton Sinclair's *Jungle*. From this book came much of the packing inspection and pure-food work in which the Department of Agriculture engages to protect the American public.

While I have spent nearly all of my time refreshing your memories about some of the powerful books of the past, for my own part I am much more interested in the powerful and significant books of the future than I am in those of the past. Most of the young people of the next generation are not going to read *The Origin of Species* or *The Wealth of Nations* or *Das Kapital* or any of the other powerful books of the past if they can possibly avoid it. But many of them will read the powerful books of the future. The stage is now being set for some of the most powerful books which the world has yet seen. Humanity everywhere is hungry for both a new freedom and a new discipline. The books which played their part in producing modern capitalism, fascism and communism do not have in them sufficient food for the human soul. Humanity is infinitely more decent than the infamous acts of the last twenty-five years would indicate. Modern science and modern technology both tell the story of one world. They tell the need of integrating, synthesizing and co-ordinating knowledge on a higher plane. Such integration is necessary to prevent modern civilization from committing suicide.

The truly significant books of the immediate future in both the economic and scientific fields will deal with co-ordination and synthesis. Efforts will be made to co-ordinate science with economics, government and philosophy. More and more humanity is feeling disappointment in the destructive and unbalanced effects of analytical science and *laissez-faire* economics. More and more humanity senses the need for co-ordination of our vast detailed knowledge in application to the economic, physical and spiritual life of the individual and the nation. The future requires powerful books which will point the way for a re-co-ordination of knowledge in the service of the economic, artistic and spiritual needs of man. The parts must be brought together in the service of the whole in a way which will maintain the vitality of the parts. The science and economics of the nineteenth century cost us our sense of ultimate human values. Surely these ultimate values will be brought back to us in a more vivid and well-balanced way than ever before. Great and powerful books, I feel sure, are now unconsciously in the making in the minds of scientists and other students of human affairs.