ECONOMICS VS. POLITICS

An address by Henry M. Wriston, President of Lawrence College and Director of the Institute of Paper Chemistry, Appleton, Wisconsin, before the Executive Committee and the Board of Governors of the American Paper and Pulp Association, the executive officers of member mills of the Institute of Paper Chemistry, and invited guests, at the North Shore Golf Club, on Friday, June 5, 1936.

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Introduction by Mr. Ernst Mahler, President of the Board of Trustees of the Institute of Paper Chemistry:

ON BEHALF of the Board of Trustees of the Institute of Paper Chemistry, I am privileged to welcome you here this evening and, at the same time, thank you for your interest in the Institute as manifested by your visit.

Only six years ago, in the height of the world's greatest depression, the Institute was nothing but the dream of a few men who felt that a great service could be rendered our industry through its conception. Born of depression the Institute had to perform unusual services to attain its present status which has earned for it fair support within our own industry and the admiration and, may I say, envy of other industries.

The basic thought behind the Institute is education. The reason is that we believe the future of this great industry of ours does not demand bigger and faster paper machines so much as bigger and better man power to operate existing institutions and plan more wisely for the future. What Horace Mann so well said may be applied as a motto for the Institute of Paper Chemistry, namely, "to meet not merely the advanced but the advancing demands of the age."

Education is not a task to be solved by an individual, but must be anchored to a well-grounded program that is perpetual. We, your Trustees, are your servants who are willing to give time and energy to guide, on your behalf, the policies and the active administration of the Institute. The Institute is not a charitable and idealistic institution; at its very foundation it must perform valuable service to our industry, and Webster defines "service" as "a performance of labor for the benefit of another."

What holds true of industry with regard to equipment versus man power also holds true of educational and research institutions. I know, from your many expressions, that you were impressed with the physical layout of the Institute. Without the man power to intelligently use that marvelous equipment and the man power to interpret the results of their
labor, the Institute would be of no value. Therefore, the foremost task of the Trustees is to select that group of men who are guiding the activities of the Institute along the lines of service. Being educational in principle, we had to find the man around whose personality and intellectual integrity we could build the staff of the Institute. It is my privilege to introduce my colleague and my friend, the Director of the Institute, Dr. Wriston.
ECONOMICS VS. POLITICS

I AM CONSCIOUS of the fact that I am talking on this subject at the worst possible time. We are right on the eve of the national party conventions when every businessman's thought is turned toward the political scene and its effect on business. It is a poor time, therefore, to intimate that politics is not as important for the solution of our problems as we sometimes think it to be, for today the importance of politics is especially out of focus.

One other observation I should make at the outset: I may find it impossible to avoid a reference to the Institute of Paper Chemistry. You will remember that Mr. Dick, in Dickens' *David Copperfield*, whenever he spoke on any subject whatever, found himself speaking about King Charles' head. Throughout his entire conversation "King Charles' head" intruded itself continuously. In like manner, no matter the topic to which I address myself, some allusion to the Institute of Paper Chemistry creeps in.

I approach this subject as a detached observer. I studied constitutional law for some years but never took the responsibility of pretending to be a lawyer. I was employed in the public service for a time but in an extra-legal activity which was created when I was appointed and which disappeared with my resignation. I sat at the center of one of the great branches of the federal bureaucracy for a considerable period and became familiar with its intimate daily operation, but I was there as a private citizen and as a spectator and had no participation in its work and no official responsibilities. For many years now I have been an administrative officer of the College and more recently also of the Institute, and in this work have occupied the position which most nearly approximates that of a business executive; yet I am engaged in neither industry nor commerce.

Looking out upon the current world from that background, the central factor in the American scene is not that business and industrial activity is somewhere close to eighty per cent of
a "normal" level, but that unemployment is still close to an all-
time high. It is not necessary to argue that that combination of
facts does not make good sense. Therefore, people have sought
to explain it. Explanations are as various as the explainers.

We have had the Technocrats who seem, so far as social or-
ganization is concerned, to take their cue from the Com-
munists; who, so far as political organization is concerned,
take their lead from the Fascists; who, so far as the whole field
of economics and politics is concerned, may be labeled "igno-
rant engineers"; and I have heard engineers insist that they
are as ignorant of engineering as of economics and politics.

Then there are the weeping prophets, the Jeremiahs of our
time, who assert that technological unemployment is the in-
evitable concomitant of the industrial revolution "in its later
stages," whatever that may mean. We have the philosophical
pessimists, like Oswald Spengler, whose Decline of the West
sees everything through black glasses. We have the Socialists
and the Communists and their like who assert that "capitalism
has broken down."

Disagreeing with all these explanations, I shall offer my
own. This disparity between industrial activity and employ-
ment is the result of an attempt to solve economic problems too
largely by political means. It requires real concentration of
mind to extract any meaning from that statement. We have
come so accustomed to the steady encroachment of political
action upon economic life that the distinction between the
two has been blurred to the point of utter obscurity.

In time of war, and particularly during the World War, po-
litical considerations dominated everything. The government
commandeered both economic energies and the economic or-
ganization. Once having taken control, it yields it up only
with the utmost reluctance.

The essence of the totalitarian state is the extension of that
wastime absorption of economics by politics into peacetime
activities. Under the totalitarian ideal the line between eco-
nomics and politics is no longer even a blurred line. There is
no line at all. An identity, false, but nonetheless an identity,
has been established.
We should clarify our thinking about this distinction between economics and politics. The tariff, as we have known it and have practiced it, has had objectives which were fundamentally political. We have sought to bend economic lines of force to make the country self-supporting. Its fundamental purpose was not economic enrichment but political security. The tariff may be proper or it may be improper. I am not concerned with that question for it is not the point at issue. I am concerned with emphasizing the fact that though there are economic results, and though those economic results may involve the enrichment of individuals, the basic purpose of the action is political, though it is often expressed, falsely, in economic terms.

In like manner the political stimulation of export trade and the political inhibitions upon import trade, through quota systems and the like, have economic results, usually unhappy, but their basic purpose also is political. We have had open market operations by the Federal Farm Board, but those operations likewise had, basically, a political objective. They had reference to groups of voters and their ballots much more than to the fundamental economic life of the world or even of our own country.

Stateism—the utter identification of economics with politics—is an old idea in modern dress. It has come to its apotheosis in Italy, in Russia, and in Germany, but we can observe the same trend and tendency even in the United States. From the Interstate Commerce Commission to the Tennessee Valley Authority is a long step. It is the step from government, that is, regulation of business, to participation in business. Now we have the Electric Farm and Home Authority which will deliver electric refrigerators neatly packaged in government red tape.

If, in the light of this background, we again examine the problem of unemployment, we shall observe that throughout the world the modes of attack have been fundamentally political rather than economic. Italy "solved" this problem by political action rather than economic means. The private army
of Mussolini, the Fascist militia, was taken over by the state. There was a great enlargement of the army and navy, an enormous increase in the munitions business; all the shipping companies were fused and the government engaged in the construction of huge vessels, absorbing the losses. The "corporative state" was announced; corporations were formed under the direction of the government; wages, hours, prices, were fixed; free collective bargaining was destroyed. Bureaucratic dictation became a normal method of determining economic policies. When all else had failed to meet the situation, a war of conquest was undertaken.

It is perfectly clear that the Italian problem of unemployment, approached from an economic point of view, has not been solved. It has simply been concealed. Men who ought to be in productive occupations have simply been added to the government payroll as bureaucrats, fighters, munitions workers, land reclaimers, and on down through a long list. All this has involved the steady drainage of Italian resources; it has meant a perpetually unbalanced budget. It has produced a monetary situation which is wholly artificial, the money of Italy being held at one price internally by political means, and circulating in the world of outside commerce at a different level. As long as the means for solving the problem are fundamentally political, just so long will the economic problem of Italy remain unsolved.

Germany is marching down the same broad road. The army and navy have been enormously enlarged. Work camps have been established under the guise of training or some other convenient excuse. Thousands have been taken out of industry to prisons and concentration camps; and in counting the unemployed, it is not necessary to include the non-Aryans, because under the Nazi philosophy they ought not to be there anyway. The re-militarization of the Rhine, the re-fortification of the boundaries, the enormous growth of munitions plants—these are the fundamental devices adopted in Germany. The magicians in charge insist that they are leading the Germans along the highroad to economic salvation; they are being sent
down to economic destruction. German money is at three levels of value, depending upon the political leverage which the Third Reich can exercise. The flight from the mark is inhibited by the most drastic political measures.

One could tell the same story about Russia where, under a different political philosophy, similar political devices are being used to deal with problems which are fundamentally economic.

Now Britain, after its partial revival following the abandonment of the gold standard and the adoption of managed currency, after defaulting on its debt payments, after its politically balanced budget, sees again the prospect of deflation, sees France steadily pressed in the direction of further demonetization of the franc, and turns in alarm at the political and economic outlook toward the same military nostrums.

The record of the United States is in fundamental harmony with these other nations. We have not gone to the same lengths nor adopted the same devices nor espoused openly the totalitarian philosophy, but we have put our dependence too heavily upon political rather than economic measures.

We have the Civilian Conservation Corps, neither army nor work camp, neither educational nor military, and in total numbers insignificant in coping with the problem. We have undertaken to rebuild the navy, but upon a moderate scale. It is a mild and diluted military expedient. The Public Works Administration is busily engaged in constructing unnecessary works at extravagant cost and at low efficiency—honesty but badly. The WPA, like its predecessors the FERA and the CWA, devotes itself to the achievement of as little as possible, at as great a cost as possible, with as many men as possible, doing as little as possible. It seems to be based upon the belief that men no longer earn their bread by the sweat of their brows, but by political patronage.

We have heard of "priming the pump." This is a phrase which is designed to catch our imaginations and lull our intelligences. It is an attempted economic justification of political action. Certainly it is an interesting figure of speech. We
have heard the criticism that the Supreme Court is carrying us back to the "horse and buggy" days; but unless my memory is wrong, "priming the pump" certainly belongs to the "horse and buggy" era.

The fundamental point at which I am driving is that political manipulation never creates wealth. You may cut the gold content of the dollar and have many more dollars with a given gold coverage, but there is no increase in wealth. The government may employ millions of men to cure unemployment and teach them to do as little as possible in order to "spread the work," but to become flabby workers and to yield up their several skills is simply to destroy the capacity to create wealth. "Manipulation" is a harsh word; let us adopt the preferred expression—"plan." We are told that our troubles arise from the failure to have a plan. All our economic and social difficulties are to be solved by having a plan—framed by the government and operated by the government. This species of insanity arises from a false analogy between engineering and economics. Men have spoken glibly of "human engineering" and "social engineering" and have misguided their minds by similes which are false. They are false because they neglect the distinction between an organic growth and a fabricated structure. The difference is so fundamental that no misuse of words will alter it. There is no such thing as human engineering. It is simply a contradiction in terms, and social engineering, in like manner, is something that you just cannot have, and if you could have it, it would be utterly disastrous.

Political plans for economic purposes all have one thing in common. They involve the political manipulation of economic forces under bureaucratic direction. For the creation of work or wealth there is no program more futile. If we knew any history, if we had any perspective upon our problems, we would throw these political planners out, recognizing them as the charlatans they are.

The concept of a managed economy is not new, though the phrase, with all the glib assumptions concealed beneath its polished exterior, may be. In eighteenth century France an
army of bureaucrats sought to determine the size of handkerchiefs, to control the design of boats from which the humble fishermen of Brittany might cast their lines and their nets; they fixed the price of meat; they pegged the price of bread. "A socialistic republic could not have displayed more solicitude for the poor," and one of the humorless "benevolent" despots said he sought to make his people, "whether they liked it or not, into free, opulent and law-abiding citizens"—the eighteenth century equivalent of the abundant life. The managed economy of the eighteenth century had the same purpose as the planned economy of today, namely, to defeat economic forces by political tricks, instead of utilizing economic forces for economic purposes. Planned economy is a political harness upon economic forces. It is a harness designed not to let these forces pull their full load but to crib, cabin, and confine them. This will bring us back again to the "horse and buggy" days.

The bureaucratic control of economics is always an economics of scarcity. That aim did not originate with the AAA. The bureaucrats of the eighteenth century with their rigid enforcement of crop control and fishing quotas were believers in the same fallacy. They came to the same futile results. The effort to manage economic life by political means helped produce the French Revolution. The inevitable reaction from the benevolent despots, the bureaucratic tyrants, and the political totalitarians was the philosophy of liberty, freedom, individual initiative, and economic laissez-faire.

The history of the race, sane political theory, and sound economic thinking unite in demonstrating that there is no political solution to an economic problem. The sooner we recognize the distinction and restore the difference between economics and politics the better off we will be. To pull on your political boot-strap in order to lift yourself out of an economic depression is a hopeless problem in mechanics.

The moment economic enterprise appeals to political authority for aid, it saddles itself with burdens which it must thereafter carry. You pay for the "shot in the arm" with a load on the back. A bureaucracy will be established, and it is the
most persistent of all growths. Taxes go up and they seldom come down. Asking the government to assist with your troubles invites the government to sit in not merely on those operations but on all your operations. By and large, the less business asks of government, the less government will ask of business. From any point of view, whether from that of the manufacturer or from the point of view of society as a whole, there should be a clear recognition of the fact that artificially low interest rates, inflationary credit, inflationary money, and all other artificial stimulants achieve no final results for the genuine improvement of business or the increase of national wealth. Wealth is increased when improvements in manufacture lead to the expansion of business. Calling upon the government is like the fisherman in *The Arabian Nights* who got the Jinni out of the bottle but who had to out-think the Jinni to get him back.

The men who framed the Constitution understood this distinction. That instrument was designed as a framework of government. It specifically created a government of limited powers. Those powers were not limited merely by the distribution of responsibility between the central government and the states, nor merely in the checks and balances among the three great divisions of the national government. Wide areas of life were left entirely free from its control or even its influence. Its announced goal was the protection of life, liberty, and the pursuit of happiness. It gave its blessing to education, but left it alone, and for the most part, throughout our history, the national government has continued to leave it alone. It assumed a church, but a church free from the state, and the federal government has left that aspect of life alone. It also envisaged an economic life with only a minimum of political control. In fact, wherever decentralization of responsibility and control was possible, it assumed decentralization.

The Constitution, in other words, is based upon the premise that politics is only one aspect of the organization of society. Therefore, the Constitution was not designed to furnish the framework of an economic society. It was not expected to be the instrument for the solution of all our economic and social
problems. It was simply to furnish the framework of a limited government.

The framers understood distinctly the difference between the government and the sources of its support. Even as late as the days of Grover Cleveland, a President of the United States could say, and could mean, that "though the people support the government, the government should not support the people." It is a sardonically ironical fact that it should be the present Congress which voted to erect a memorial to Grover Cleveland. I suppose they thought that not only he, but all his ideas, were now dead enough to be nothing but memories.

Those who framed the Constitution specifically designed their doctrine of the separation of powers as a bulwark against the totalitarian state and bureaucratic tyranny. Of course, the phrase "totalitarian state" had not been invented, but the combination of the classic remark of Louis XIV, "L'état, c'est moi," and the way in which eighteenth century governments dealt with the detailed aspects of personal life, represented the substance of that ideal. Our forefathers recognized that the essential difference between that sort of government and the kind in which they were interested was the distinction between a government controlled by law and a government which represented the desires of an individual. Its most lucid and explicit statement was in Article XXX of the first Constitution of Massachusetts which read: "In the government of this commonwealth, the legislative department shall never exercise the executive and judicial powers, or either of them; the executive shall never exercise the legislative and judicial powers, or either of them; the judicial shall never exercise the legislative and executive powers, or either of them; to the end that it may be a government of laws and not of men." So long as that represented the aim and ideal of the government, a totalitarian state was utterly impossible. It is only when a bureaucracy exercises, as it has in recent years, powers which combine the functions of legislation, administration, and judicial interpretation, that the planned economy, the confusion of economics and politics, is possible.

Not only the framers of the Constitution, but, generally
speaking, the Supreme Court has understood that the Constitution was not economic in its purposes. With his customary lucidity, the late Justice Oliver Wendell Holmes remarked: "The Constitution is not intended to embody a particular economic theory." To make it "the partisan of a particular set of economic opinions" is to misuse it. That clear and penetrating statement has some implications which many businessmen regret, but they ought to see it in its right perspective and be grateful for it.

In the Schechter case Chief Justice Hughes said: "It is not the province of the Court to consider the economic advantages or disadvantages of such a centralized system. It is sufficient to say that the Federal Constitution does not provide for it. The same answer must be made to the contention that is based upon the serious economic situation which led to the passage of the Recovery Act—the fall in prices, the decline in wages and employment, and the curtailment of the market for commodities. Stress is laid upon the great importance of maintaining wage distributions which would provide the necessary stimulus in starting 'the cumulative forces making for expanding commercial activity.' Without in any way disparaging this motive, it is enough to say that the recuperative efforts of the federal government must be made in a manner consistent with the authority granted by the Constitution." That statement is as lucid as the alphabet, and yet the particular aspect which I am seeking to emphasize has been all but overlooked in public discussions.

Some who would admit that both the framers and the Supreme Court have taken this view would argue that those facts are simply evidence that the Constitution should be amended. I certainly am not opposed to all amendments to the Constitution, but I would be bitterly opposed to this type of amendment, for three reasons which can be stated very briefly. First, if in every time of tension and difficulty we tinker with the Constitution we will destroy it. A basic law cannot protect us from our own foolishness, when we are overcome by speculation, by the reaction from war, or by some economic disaster
which we have brought upon ourselves by unwise acts. Some of the states have made constitutions which are virtually codes, and they have as many as twenty or thirty amendments to vote upon at one election time. The Constitution of the United States has been amended and doubtless will be amended again, but it should not be amended merely because our “shoes pinch” us.

The second objection is: to amend it for this purpose would merely give legal sanction to political manipulation of economic forces. It would not make that manipulation any more successful. You cannot obliterate the distinction between economics and politics by law. You can change the terms; you can change the practices; you can alter the philosophy; but in the long run the hard facts will demonstrate that the totalitarian state is a passing phase, because it is built upon the fundamental fallacy that economics and politics is the same thing. The expectation that by political devices you can alter the structure of an economic system without wrecking it betrays a total want of understanding of that system. Capitalism is not an invention either political or economic; it is a growth, and has all of the qualities of an organic rather than a mechanical structure.

The third reason why the Constitution should not be amended for this purpose is that our system of government is a democracy. Democracy, by its very nature, finds discussion its most successful field, and action its most difficult. The political control of economic forces can succeed even temporarily only where democracy is suspended. It can succeed over any considerable period only where democracy is destroyed. That is the reason why planned economy has gone furthest where democracy is dead. When the state is dominant the people are not its masters but its servants; and when the state is dominant it comes into the hands either of an individual or of an oligarchy dominated by some individual, who will ruthlessly purge it of dissident elements. To alter the Constitution in order to open the way for the death of democracy is something to which we ought to be bitterly opposed.
This whole drive toward political control comes at the worst possible time. In some organizations of society and in some states of economic life it might be possible for politics to achieve at least the appearance of sound economic results. But in the modern world a political solution of the problem of life is an utter anachronism. It is one of the astounding paradoxes of history that politics becomes dominant just as its bankruptcy has become obvious.

One of the great constructive forces in the modern world, impotent at an earlier time, is science; but politics is out of step with science. Applied science has mapped a path to plenty. It has made the earth fruitful beyond man's wildest dreams. It has made the economics of plenty not only possible but absolutely inevitable. In contrast to this, a politically planned economy plows under grain and cotton, reduces hogs to sewage while men are cold and hungry. Limiting the production of cotton drove the farmers to peanuts, limiting the planting of peanuts drove them to potatoes; limiting those would have driven them to jail but for the timely sanity of the Supreme Court. Science girdles the globe with communication and transportation. Billions of dollars and millions of lives have been spent in shrinking the earth's size. Politics at one moment subsidizes this, spending as much as $125,000 for a pound of mail on a steamer or $10,000 for a few letters on an airplane. Then political action blocks world commerce by excessive nationalism and by political manipulation so that boats run at less than capacity, and planes are kept from developing as rapidly as they might, and the cables are used at less than their greatest efficiency. Instead, that is to say, of taking the gifts of science and using them, politics alternately encourages and destroys the fruits of scientific progress.

Economics interprets for us one great aspect of life and clarifies issues which must be met. But politics is out of step with economics. It is the simplest of economic maxims that you cannot become wealthy by destroying wealth and the power to produce it. The most obvious illustration of this is the uneconomic character of war. Of course, it is true that cer-
tain individuals are enriched during a war, but war is not a contribution to national wealth. It is an inescapable conclusion that the wealth of a nation is decreased. Whether a nation is victor or vanquished, war is always uneconomic. Yet the more political action becomes dominant over the lives of men, the more rapidly the world turns to armament. The more supreme the state, the more totalitarian its ideal, the more one hears of war. In his authoritative treatise on the doctrine of Fascism, Mussolini says that Fascism “believes in neither the possibility nor the utility of perpetual peace.” Therefore, the world is more fully armed today than in 1914. Russia’s Soviet army is larger than that of the Czar. Totalitarianism, which takes such delicate care of the individual whom it regards as incapable of caring for himself, ultimately treats him as it treats corn and hogs—it plows him under as cannon fodder. This is the most obvious of thousands of illustrations that politics is out of step with economics.

Even worse than its lack of harmony with science and economics, the politically planned economy is incoherent. An editorial some time ago in the New York Times stated in substance: All the nations are busy today (1) surrounding themselves with impassable walls, and (2) devising ways to fly over them. In other words, every political authority is seeking to do two contradictory things. This inconsistency appears in the United States. On the same day that the Secretary of Agriculture was insisting that salvation lay in the reduction of crop areas, the Secretary of the Interior, as Public Works Administrator, made an allotment of funds for an irrigation scheme which would open up thousands of new acres. Instances of inconsistency could be multiplied almost indefinitely.

Furthermore, there is something peculiarly incoherent in political efforts at social organization. Political activity in this field is designed to supersede individual initiative, and by that very act permits it to atrophy. The foundation of our system of economy is the willingness of individuals to take risks. The purpose of political manipulation is to reduce or expunge that element of risk. In other words, the ideal of security obtained
by political means leaves out of account fundamental human characteristics.

If you guarantee a man's future you withdraw most of the incentives to thrift, just as when you establish needless social controls you reduce the incentive to self-control. In all the sneering that has been done at individualism as an ideal of a bygone age, and at self-reliance as no longer possible in modern society, a personal psychology has been built which is antithetical both to the democratic ideal and the capitalistic economy. All the plans for social security by political devices are predicated upon the idea that the individual no longer has any mastery of his own destiny, can no longer be captain of his soul, or determine his own standards of value.

The solution of unemployment problems and the other insistent issues within our economic system must be economic. It must fall within the framework of capitalism, not necessarily from choice but from necessity. Capitalism is an economic system which has grown over a long period of time. We live in that environment just as a man breathes in the air instead of under water, or a fish breathes under water instead of in the air. That is the environment within which each lives.

Businessmen, interested in genuine solutions, must be statesmen. The railroad financier who many years ago said, "The public be damned," wrote an important chapter in the history of human stupidity. He demonstrated that political control is not responsible for all our economic failures. Too often the need for economic statesmanship has been forgotten. What are the essentials of statesmanship in economic life? There are three to which I should like to make very brief reference. Its first duty is endlessly to develop operating techniques with a view to economy and efficiency. The second function is constantly to develop new products through research and invention. The third obligation is to cultivate human relationships along lines calculated to bring the highest morale, the most initiative, and the greatest amount of resourcefulness. These, I may remark parenthetically, are precisely the functions of the Institute of Paper Chemistry. Its
research program is shaped to the first two objectives of economic statesmanship. It is designed to improve operating techniques, to develop new products, to refine old procedures and products through scientific and technical improvements, through research and invention.

You may ask why this must go on continuously and forever. The answer is that capitalism is by its very nature the economy of abundance, and abundance like all such terms is relative. It is proper to say that capitalism is based upon the presupposition of increasing and increasingly satisfying abundance, and that result can be achieved only by effort and skill, by investment and labor. The key to the whole thing is invention, discovery, and improvement. It is only fair to point out that these have a double effect. The first and temporary effect is adverse to employment; the second and ultimate effect is to multiply employment. The first impact increases profits and reduces employment because machinery replaces men, but the long-time effects are reduction of costs and prices without the destruction of profits, because of greatly increased purchasing power and greatly increased distribution. These enormously increase employment.

Capitalism flourished after the industrial revolution precisely because that revolution gave science and engineering the opportunity to improve products, processes, and procedures of management. Capitalism will go to seed and die only when and if the scientific and engineering bases of increasing abundance are neglected or impaired. It is fair to say that the war was the greatest blow to capitalism. The war interrupted and postponed, or defeated, tremendous developments and thus gave us (together with other factors not vital to this discussion) a terrible problem of unemployment. In other words, the war prevented the normal expansion of processes of production.

Sometimes men have felt that research and invention should be halted; that there should be a moratorium on scientific progress. But that is the antithesis of economic statesmanship. Sometimes it has been practiced. Patents and inventions have
been purchased not for use but in order to suppress them. Men have urged that such a course makes for stability, forgetting that the stability of capitalism depends upon motion. Its balance is like that of a top, impossible to achieve if the top is still, but no trick at all as long as it is spinning. The forces of capitalism achieve stability in precisely the same way in which a gyroscope achieves stability.

This accounts for the tremendous emphasis within the Institute of Paper Chemistry upon research and invention. There are now sixty-six people on the staff of the Institute, twenty of them with doctors' degrees earned in the great universities in this country and abroad. Their degrees are guarantees of scientific training and scientific background and scientific interest, but alone they are not enough. Of the twelve persons holding the highest grade in our research organization, all but two have had industrial experience. The guiding group, in other words, have had not only the highest degree of academic training but also the seasoning that comes only with industrial experience.

Sometimes I am asked, "Where did they come from and how do they come?" They have come in three ways. In the first place, the top men are carefully chosen. We are constantly on the search for people who have something to offer. In the second place, some have come as volunteers; one worked several months with no pay at all but has now come through the ranks to the leadership of his research group. He had the substance of aggressiveness without its appearance. It is an illustration of that individual initiative and self-confidence which the political planners say has become obsolete and ineffective. The third method of constructing the staff is by the sifting process. Many men have been tried out and only the best have been kept. We have never yet lost from our staff a person we were genuinely eager to hold. The organization is so flexible that it is possible to try a man in one spot after another. Either a place is found where he will fit or he goes elsewhere.

Why do the members of the staff stay with us? The answer is simple. They stay because of faith in the future of the enter-
prise. We pay a few salaries which would be regarded as respectable, though none could be called generous. We pay many which we wish were larger, and promotions have been distressingly slow. The work is hard. We do not count the hours. Faith in the significance of their activities is the source of courage and energy.

Thus the Institute has the combination of scientific and technical preparation, industrial experience, high morale, determination, and good organization. It is in a position, therefore, to produce in a steady stream the raw materials for economic advance—new products, refinement of old products, new operating techniques, through research and invention.

This points to the last task of economic statesmanship—the development of the right kind of personnel with the right morale. Mr. Mahler remarked a few moments ago that we do not need better machinery as much as we need better men. That is not only a principle of good management but of sound economics. A good many paper mills have made it their custom to take boys just out of college or engineering school and train them. It has proved a costly enterprise. Industrial organizations of moderate size do not have the facilities for contact with enough institutions or experience in making the best selections. Boys fresh from college are almost inevitably unstable vocationally. They do not easily commit themselves to an industry; consequently, the turnover in these training groups has been heavy and the cost of training has been high. This is simply an indication that industry is not a good educational institution, any more than a good educational institution is an industry. In contrast to this experience the Institute has contacts with a wide range of institutions, has the facilities and experience in the choice of men, the chance to sort them out, and to stabilize their vocational interests within the industry.

Of course, no education in any school is a substitute for experience. Charles F. Kettering of General Motors said on one occasion: "I would rather have a young man firmly grounded in elementary physics and chemistry, whether he
ever did a chemical analysis or not, than any other one thing. I can teach him the specific application of the art, but I have never been able to teach him the fundamentals underlying science after he has once gotten his diploma." He was not deprecating good techniques, nor was he contending that the man should not be able to make a good analysis, nor was he decrying knowledge of the art. He was simply insisting that foundations are necessary and that those foundations can best be laid in school, whereas experience and the practice of the art may best be gained in actual industrial work.

For this reason the Institute makes no apologies for training students in theory and principles. That is one thing a school can do and industry cannot. We make no apology for not cramming them with the detailed facts and procedures. As Professor Whitehead remarked: "Whatever be the detail with which you cram your student, the chance of his meeting in after life exactly that detail is almost infinitesimal; and if he does meet it, he will probably have forgotten what you taught him about it."

In this attempt to provide the industry, therefore, with forward-looking personnel it must be remembered that the Institute does not turn out a finished product. All that education can do or attempt to do is to equip men to acquire experience more efficiently, with less of error in trial and error, and to interpret their experience more speedily and more intelligently than otherwise they might.

Therefore, if you ask, "For what are you training students?", my answer must be, "For the paper industry." They leave us with only the minimum of experience—with nine months actual mill work, if the membership cooperates. That is as it should be. They have the necessary background so that they will not be a handicap to you, but they have no fixations which prevent them from adapting themselves to your needs, your problems, and your peculiar structure.

Moreover, they are still growing; if they were not, we ought not to give them degrees. We ought to close up shop and quit. It is the particular business of an educational institution to see
that its graduates are plastic rather than molded and set. To view these boys, therefore, primarily as persons to go into the laboratory is to do them, and us, and yourselves, an injustice. It is true that they have worked in the laboratories. It is true that their laboratory techniques ought to be good. And it is true that some of them will start in the laboratory and some should stay in the laboratory. But it is equally true that many will go into production where their understanding of laboratory problems will make them economically valuable, where their ability to interpret reports from the laboratory in terms of production is vitally necessary. Others will go into sales. They will be meeting that growing consciousness of specifications which is a plague to your sales organizations. The boys, therefore, as they go out are adaptable to a wide range of occupations. Their futures will depend upon traits of character, health, opportunities, and upon your skill in developing personnel.

The Institute represents, therefore, the three principal aspects of economic statesmanship. It is a reminder that the genius of America has not found its outlet exclusively in politics. Indeed, since the Civil War politics has not claimed either the best minds, the firmest characters, or the most resourceful leaders of America. Those seventy years have seen industry draw the most brilliant men into leadership in research, in production, and in administration. The great leaders of industry have often been statesmen in a more genuine and constructive sense than our political leaders.

The second great field which has challenged statesmanship is philanthropy. There have been established over 150 philanthropic foundations with available funds of over three-quarters of a billion. These include the great Carnegie Corporation, the Rockefeller Foundation, the Rosenwald, the Sage, and other funds, great and small. America has seen a burst of philanthropic activity matched nowhere else in all the world and never before in all history. If to the great foundations are added the trusts established in the hands of the trustees of the great universities and the endowed colleges
of the country, the total represents a sum of money and a leverage upon the reconstruction of society beside which any political activity pales.

The third great outlet for American genius is in education. The high school was invented, developed, and has become commonplace in that period. American universities, in their modern form, date from that same era. We have come to a structure and a philosophy of education which are unique with this country. The force of that educational impulse will be far more significant in the structure of American life than political activities can hope to be.

The Institute of Paper Chemistry is the epitome of these three great characteristic manifestations of American intellect and American interest. It is an educational institution fulfilling the highest ideals of scholarship and of teaching. It is based upon a philanthropic foundation. It represents the gifts of individuals and corporations and their hopes and aspirations for a brighter and a more rewarding future. It is dedicated to industrial progress, to the enlargement of the program of industrial production, laying the firmest foundations of economic statesmanship, productive research and skillful personnel.

This industry and this institution have a unique opportunity. Yours is the only industry which, upon a national basis, has established a graduate school for the finest training of industrial personnel. Furthermore, this institution is the only one which appears successfully to have united academic standards of the most rigid character with an industrial ideal—without apology, without compromise, and with efficiency. In its establishment the leaders of the industry showed economic statesmanship of the highest character. It is our aim, in its operation, to fulfill the ideals of a sound economy and to give substance and security to that economy through a constant flow of ideas, researches, and inventions, and through a never-ending stream of young men, intelligent, appreciative of the problems in the industry, keen for their solution upon an economic rather than a political basis.