The Thomas Jefferson Center Foundation

# Market Mechanisms and Central Economic Planning

*Milton Friedman*

The G. Warren Nutter Lectures in Political Economy

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The G. Warren Nutter Lectures in Political Economy have been instituted to honor the memory of the late Professor Nutter, to encourage scholarly interest in the range of topics to which he devoted his career, and to provide his students and associates an additional contact with each other and with the rising generation of scholars.

At the time of his death in January 1979, G. Warren Nutter was director of the Thomas Jefferson Center Foundation, adjunct scholar of the American Enterprise Institute, director of AEI's James Madison Center, a member of advisory groups at both the Hoover Institution and The Citadel, and Paul Goodloe McIntire Professor of Economics at the University of Virginia.

Professor Nutter made notable contributions to price theory, the assessment of monopoly and competition, the study of the Soviet economy, and the economics of defense and foreign policy. He earned his Ph.D. degree at the University of Chicago. In 1957 he joined with James M. Buchanan to establish the Thomas Jefferson Center for Studies in Political Economy at the University of Virginia. In 1967 he established the Thomas Jefferson Center Foundation as a separate entity but with similar objectives of supporting scholarly work and graduate study in political economy and holding conferences of economists from the United States and both Western and Eastern Europe. He served during the 1960s as director of the Thomas Jefferson Center and chairman of the Department of Economics at the University of Virginia and, from 1969 to 1973, as assistant secretary of defense for international security affairs.

Milton Friedman delivered the second G. Warren Nutter Lecture at the Hoover Institution on March 4, 1981.

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*Milton Friedman*

MILTON FRIEDMAN is a senior research fellow at the Hoover Institution and a Nobel laureate in economic science. He is also Paul Snowden Russell Distinguished Service Professor of Economics at the University of Chicago and was formerly a member of the American Enterprise Institute's Council of Academic Advisers.

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# Foreword

G. Warren Nutter was one of the public policy scholars who worked most closely with my father, the late William J. Baroody, Sr., in developing the American Enterprise Institute. Now both are gone, but not before AEI became the kind of public policy institution that they had dreamed about and labored for throughout a substantial part of their lives.

My first meeting with Warren occurred some twenty-five years ago, when he was among a group of scholars who gathered at our home for dinner and discussion. Warren had a great intellect. With his ideas, research, and writings, he helped my father foster AEI from a small, little-known organization analyzing proposed federal legislation into a leading public policy research institution. Warren understood the role that intellectuals play in creating and shaping public policy. Some of his earlier studies helped mold defense strategy for years. His analysis of Russian strengths and weaknesses, published nearly thirty years ago, was a landmark work. He continued influencing public policy until his death.

In the early 1970s, I worked closely with Warren in the Department of Defense. He distinguished himself as assistant secretary for international security affairs, using the common sense that he had brought with him from his native Kansas.

Professor Nutter was a superior scholar, whose life was entwined with the American Enterprise Institute. Thus, we are proud to publish these memorial lectures, dedicated to one of the nation's finest scholars.

Bill Baroody Jr.

WILLIAM J. BAROODY, JR.

*President*
*American Enterprise Institute*

# Introduction

Colin D. Campbell

It is a pleasure for me to welcome you to the second of the G. Warren Nutter Lectures in Political Economy. The first Nutter Lecture was delivered in 1980, and the speaker was Professor Herbert Frankel. The third Nutter Lecture is scheduled for the fall of 1981 and will be given by Professor Ronald Coase.

The present lecture is being sponsored jointly by the Thomas Jefferson Center Foundation, the Hoover Institution, and the American Enterprise Institute; and the lecture will be published by the American Enterprise Institute. Warren Nutter was actively associated with all three of these organizations. Together with James M. Buchanan, in 1957 he founded the Thomas Jefferson Center for Studies in Political Economy at the University of Virginia. He was an adviser of the Hoover Institution, and he had a long and very close relationship with the American Enterprise Institute. Our speaker, Milton Friedman, also is associated with both the Hoover Institution and the American Enterprise Institute; and he has frequently participated in the programs of the Thomas Jefferson Center. Professor Friedman was one of Warren Nutter's teachers when Nutter was a graduate student at the University of Chicago.

Professor Friedman is so well known to all of you that I am not going to try to summarize his remarkable career. I do, however, want to mention one of his recent achievements, which Rose Friedman shares with him—the phenomenal success of their book, *Free to Choose.* For fifty-one consecutive weeks starting in early 1980, *Free to Choose* was on the best-seller list for nonfiction in the Sunday *New York Times Book Review.* It topped the list for six weeks during that spring; and during most of that summer it ranked number two, just behind a book entitled *Thy Neighbor's Wife.* During the year, it stayed on the list much longer than any of the other best sellers, even though it was competing with books with such intriguing titles as *All You Need to Know about the IRS, The Brethren, Aunt Erma's Cope Book, How You Can Become Financially Independent by Investing in Real Estate, Ordeal, They Call Me Assassin,* and *On a Clear Day You Can See General Motors.* Early in February 1981, *Free to Choose* was missing from the best-seller list, and I feared that the market for it had dropped. But I was wrong. It had just switched from the regular best-seller list to the best-seller list for paperbacks. It is still on the paperback list, and we hope it will stay there for a long time.

When we discussed with Professor Friedman the topic for this lecture, we agreed that it would be appropriate if he would talk about some aspect of socialist economic planning, one of Warren Nutter's main interests. When Nutter was head of the Thomas Jefferson Center, it held annual conferences in Italy that brought together free-market economists and economists from the Communist countries in Eastern Europe. Although at that time the conferences were considered to be a very bold program for promoting the ideas of the free market, recent events in Poland, China, and other Communist countries appear to justify Nutter's efforts to keep alive among Communist economists an understanding of the free-market system.

In the fall of 1980, Professor Friedman received an invitation from the government of China to give a series of lectures in China. I imagine that in some ways his visit to China provided an opportunity for the same kind of exchange of ideas that occurred at the conferences in Italy that were organized by the Thomas Jefferson Center. The remarkable thing about Professor Friedman's visit to China is that the initiative came from the Chinese rather than from persons in the West. Professor Friedman's Nutter lecture is taken from one of the lectures that he gave in China.

# Market Mechanisms and Central Economic Planning

Milton Friedman

This is very much a family gathering. All of us who were close personal friends or close professional associates of Warren Nutter mourn deeply his untimely passing. We all have benefited from his work, his friendship, his strength as a human being. That is why this is both a sad occasion and yet an occasion for gaining renewed dedication to the kinds of things in which he was particularly interested.

As Colin Campbell mentioned, Nutter was a student at the University of Chicago when I first went there. Indeed, he was the first student at Chicago on whose doctoral thesis committee I served as chairman. But I do not quite accept Professor Campbell's description of the relationship; it is much less clear than he made out who was the teacher and who was the student.

The subject that I am going to talk about—the possibility of introducing market arrangements in centrally planned economies—is one that was very close to Warren Nutter's interests throughout much of his life. As you know, some of his most important work dealt with the Soviet economy and with an understanding of its performance.

## Command versus Market Economies

We should begin by drawing a contrast between two kinds of arrangements for organizing economic activity. They are commonly designated by the terms "command economy" and "market economy." The ideal type of command economy is one in which individuals who act do so not as principals but as agents for someone else. They are carrying out an order, doing what they are told. The ideal type of market economy is one in which individuals act as principals in pursuit of their own interests. If any individual serves as an agent for some-one else, he does so on a voluntary, mutually agreed upon basis.

In practice, there can be no pure command economy. Such an economy would be composed of robots who had no separate volition, no separate interests. This approach is reflected in Tennyson's "Theirs not to reason why,/Theirs but to do and die." Even in the most extreme case of a command economy—an army battalion on the march—even, I suspect, in a case such as the charge of the Light Brigade, no human being really acts as a pure robot. How wholeheartedly he carries out commands, the degree of venturesomeness and courage he displays—in these respects he acts as a principal in response to his own interests.

A pure market economy is at least conceivable. The economist's favorite example of a market economy is Robinson Crusoe, but even that is modified somewhat by the presence of the man Friday. A Robinson Crusoe without a man Friday would constitute a market economy in which he is acting as a principal in pursuit of his own interests.

For society, there are no pure command or market economies, either as ideals or in practice. Even in the most extreme version of the anarchist-libertarian ideal of a market economy, families exist; and within a family there are command elements. Children some-times behave in response to orders and not of their own volition as principals, a fact that is equally true of other members of the family. Similarly, as I have already suggested, the most obvious and extreme case of a command economy is an army in which the general sup-posedly gives an order to the colonel, the colonel to the major, the major to the captain, the captain to the lieutenant, and so on down to the buck private. At every stage the individuals who are responding to those orders have volitions of their own and interests of their own, and they react in part in accordance with these. At every stage in that process they have some element of discretion: They know things about the immediate local circumstances that the general at the top could not conceivably know. Thus actual societies are always mix-tures. Only in very small groups such as families can command be even the principal, much less the exclusive, method of organizing economic activities.

Consider the most extreme command economies currently in existence—the Soviet Union and mainland China. I suspect that in the Soviet Union and even in China, if you could only find some way to quantify it, you would discover that most resources are organized through the principle of the market, of voluntary cooperation by people pursuing their own interests, rather than through the elaborate structure of direct command. An obvious example is the private agricultural plots in Russia, which are said to occupy 3 percent of the arable land and to contribute between a quarter and a third of the country's total agricultural output. But let us go beyond that example.

In the Soviet Union's labor market, people are hired and people are fired. Individuals have some freedom to choose where they are going to work and to accept or reject a job. This freedom is not absolute by any manner or means; some people do not have that choice. My wife and I often recall an instance during the trip we made to the Soviet Union. We were being driven from one airport to another, accompanied by the inevitable tourist guide, a young man who was just about to graduate from Moscow University. He was interested, I may say, in American literature. When we asked him who his favorite American author was, no one in this room would guess that it was Howard Fast. We asked him what he was going to do after he graduated from Moscow University; and he said, "Well I don't know. They haven't told me yet." That is the essence of a command economy; yet most laborers, most workers, in the Soviet Union are not in our guide's position. They are hired and they are fired, with the result that most labor is ultimately allocated through market arrangements.

In a pure command economy, goods and services would be allocated directly to individuals. Each person would get from the central authority a basket of goods, and he would have no choice concerning the content of that basket of goods. If we look at the way goods and services are distributed in the Soviet Union, we will find that they are sold through stores. True, a person may have to stand in long lines or queues to buy things, but the method of distribution is fundamentally a market mechanism of setting prices on goods and having people buy them. In some cases people need more than one kind of money: ration coupons as well as paper money. Nonetheless, the method is in large measure a market method. Again, gray markets spring up everywhere in such a country. If a Soviet citizen's electricity goes haywire, he is much more likely to try to get a private individual to come and fix it for a cash fee than he is to call the government agency assigned the task of fixing his electricity, because he will have little confidence that anyone would arrive from the government agency within a reasonable period of time.

With respect to intrafamily behavior, one notes that while the family is in some ways the ideal type of command economy, it also has very large elements of voluntary exchange and market reaction. In Warren Nutter's marvelous little book *The Strange World of Ivan Ivanov,*[1] which was developed and compiled from a series of newspaper articles he published, he describes in great detail the daily life of a family in the Soviet Union and contrasts it with the life of an American family. There are enormous differences; and yet as you go through the book you are struck by how large a fraction of the activities can be characterized and described as operating through the market. It is a very distorted market, but it is a market nonetheless.

We were very much impressed with the same phenomena in China. Despite recent easing, command elements are more important in the Chinese economy than in the Russian economy. For example, the allocation of labor is dictated much more by command elements. In all the factories that we visited, we kept inquiring what would happen if they needed to employ five more people. "We'd ask the people downtown, and they would send us five people." "Would you have a choice about hiring the five?" "Oh no, no, they are the people we would have to employ." We tried to find out whether there was any possibility that a worker at one plant could arrange a transfer if he believed that he would be better off at another plant. "Oh yes," they told us. If he believed that he could be more useful in another factory, all he would have to do is tell his supervisor, and his supervisor would tell his superior, and so on up to the top. Then the top man would communicate with his counterpart at the other factory, and he in turn would send the message down the line. In that way it would be possible for the worker to transfer. I kept asking whether they knew of any such cases. No, they had not come across any such cases—with one exception, which had to do not with a factory but with a scientific institute.

Despite the ubiquitous command element in the Chinese economy, there are also pervasive market elements. The Chinese have recently started to introduce private agricultural plots in the communes. We were taken to the most prosperous commune in the most prosperous county in the most prosperous province in China. About a year and a half earlier, they had introduced private plots. According to their figures, private plots accounted for 2½ percent of the arable land of the commune but were already producing 10 percent of the income from crops. Similarly, there are many stores, both specialty

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[1] G. Warren Nutter, *The Strange World of Ivan Ivanov* (New York and Cleveland: World Publishing Co., 1969).

shops and department stores, not to mention food markets. Goods and services are distributed by purchase and sale rather than by direct allocation. It is limited, but there is still some gray market activity and so on.

A question that is typically asked in connection with central economic planning is how extensively market elements can be introduced in a command economy. I believe that this way of putting it is upside down. The real question is how far one can go in introducing command elements into a market economy. I believe that it would be literally impossible for any large-scale economy to be operated on a strictly command basis. Fundamentally, what enables a country such as China or the Soviet Union to function at all is the market elements that are either deliberately introduced or are inadvertently permitted to operate.

When I speak of market elements being introduced into command economies such as China's and the Soviet Union's, I am not speaking of free markets; they are highly distorted markets. That is why those countries have such low standards of living; that is why they are so inefficient.

We all know the key insight that Adam Smith brought to this subject, which underlies the possibility of markets operating to coordinate economic activity. That key insight is that if exchange is voluntary—if two people engage in any exchange on a voluntary basis—the exchange will occur only if both sides benefit. Economic activity is not a "zero-sum game," to use the term that Lester Thurow recently adopted as the title of a book. It is an activity in which everybody can benefit. That, as I say, was Adam Smith's key insight, and it produced his corollary of the invisible hand; that is, a person who seeks to promote only his own interest is "led by an invisible hand to promote an end which was no part of his intention." We are all familiar with this proposition.

If we are to understand the problems that arise in trying to introduce effective market elements into command economies, it is important that we examine in more detail the functions that prices serve in the operation of the invisible hand and the coordination of economic activity.

## The Functions of Prices

Fundamentally prices serve three functions in such a society. First, they transmit information. We find out very quickly that it is necessary to conserve energy because that information is transmitted in the form of higher prices of oil. The crucial importance of this function tended to be neglected until Friedrich Hayek published his great article on "The Use of Knowledge in Society" in the *American Economic Review* in 1945. This function of prices is essential, however, for enabling economic activity to be coordinated. Prices transmit information about tastes, about resource availability, about productive possibilities. They transmit a very wide range of information. They transmit information about the availability of goods today versus tomorrow through futures markets, and so on. A second function that prices perform is to provide an incentive for people to adopt the least costly methods of production and to use available resources for the most highly valued uses. They perform that function because of their third function, which is to determine who gets what and how much—the distribution of income.

The reason it is essential to stress these three functions and to show their interrelation is that, in my opinion, essentially all of the problems in central economic planning arise from trying to separate the functions from one another. As we can readily see, prices give people an incentive only because they are used to distribute income. If what a person gets for his activity does not depend in any way on what he does, if prices do not serve the third function of distributing income, then there is no reason for him to worry about the information that prices are transmitting, and there is no incentive for him to act in accordance with that information. If his income does depend on what he does, on the difference between the prices that he receives for selling his services and the prices he has to pay for items he buys—if it depends on the difference between receipts and costs from the point of view of a business enterprise, or wages and costs for a worker, and so on—then he has a very strong incentive to try to ensure that he sells his services in the best market for the highest price, that he produces products at the least cost, that he produces those products for which other people are willing to pay the most. The real beauty, and I use the word "beauty" advisedly, of a price system is precisely the way in which the incentive to act on information accompanies the information that is transmitted. This is not true in a command economy. Information is transmitted from one level of a command economy to another, but that information does not carry with it any incentive to act in accordance with it. There must be some kind of supplementary means of seeing to it that people act on the information.

In every society the distribution of income is a major source of dissatisfaction. That is true in a command economy, and it is true in a market economy; every person always knows that he deserves more than he is getting and that the other fellow deserves less. That is a natural human instinct. I am reminded of a remark made by Alvin Johnson many years ago when he was conducting a study of incomes in different occupations. He found that physicians complained that lawyers were getting more than physicians, and lawyers complained that physicians were getting more than lawyers; carpenters complained that plumbers were getting more than carpenters, and plumbers complained that carpenters were getting more than plumbers; and so on down the line. Johnson finally concluded that life was an underpaid occupation.

In predominantly market economies, a very large fraction of all government activity, particularly the enormous expansion in government activity over the past fifty years, has been directed toward trying to separate the distribution of income from market determination, trying to separate the third function of prices from the other two functions, trying to make the amount that people get independent of the prices at which they can sell their services. It is impossible to accomplish this goal and still preserve the other functions of prices. You have to compromise. Professor Campbell referred to the seminars in which Warren Nutter was involved with Renato Mieli in bringing together economists from the East and the West. I recall very well one of those sessions at which a Hungarian economist gave an absolutely brilliant performance. He had rediscovered all by himself Adam Smith's principle of mutual benefit from voluntary exchange and the invisible hand. The burden of his whole analysis, however, was an attempt to separate the distribution of income from the function of prices in transmitting information and in providing an incentive to operate on that information. Of course, as always, he failed.

However much we might wish it to be otherwise, it simply is not possible to use prices to transmit information and to provide an incentive to act on that information without also using prices to affect, even if not to determine completely, the distribution of income. If a person's income will be the same whether he works hard or not, why should he work hard? Why should he make the effort to search out the buyer who values most highly what he has to sell if he will not get any benefit from doing so, and so on down the line? I need not spell that out in detail.

If prices are prevented from affecting the distribution of income, even if they do not completely determine it, they cannot be used for other purposes. The only alternative is command. Some authority would have to decide who should produce what and how much. That authority would have to decide who should sweep the streets and who manage the factory, who should be the policeman and who the physician.

It is tempting to think that a desire to render social service to benefit the community can replace the incentive provided by the price system. The result has been repeated attempts by leaders—both in countries that rely primarily on the market and in collectivist countries—to exhort their citizens to work harder or to economize or to hold down prices or wages or to engage in other supposedly desirable activities, all in the name of patriotism or the national interest. Such exhortation has an unbroken record of failing to solve the problems that called them forth. The reason is not because people are unresponsive to appeals to their patriotism or to the national interest or to their sense of social cohesion. Those are very powerful sentiments, and they do lead people to make extraordinary exertions. Just look at the way people react to appeals to their patriotism in times of war and the extent to which they are willing to sacrifice their lives for objectives that have very little or nothing to do with their immediate self-interest.

The reason why exhortation fails is much more fundamental. It is because exhortation can seldom be accompanied by the information that is relevant for the response to achieve the desired objective. That is possible when the exhortation, for example, is to enlist in an army. It is almost never possible when the exhortation is directed at behavior designed to promote social or economic coordination. How can the individual judge what is socially desirable or what actions he can take that will benefit the community? His vision is necessarily limited; he cannot envisage the more distant effects of his action. He is as likely to do harm as good when he acts in ignorance under the incentive to aid the "national interest" or to perform "social service." The great virtue of the incentive transmitted through the price system is not that it is necessarily stronger than other types of incentives or that it is "nobler" but simply that it is automatically accompanied by the information that is relevant to the effective operation of the incentive.

When centrally planned economies have tried to use the market, the major obstacle to their success has been their desire to separate the function of prices in distributing income from the function of prices in transmitting information and providing incentives. The attempt to do so and yet preserve the virtues of the free market has produced an extensive literature on alternative devices.

## Lange and Lerner "Playing at Capitalism"

As the economists here know very well, the most famous treatment of this subject in modern times, and certainly in the West, was by Oskar Lange, a Polish economist, first in two articles and then in slightly revised form in a book that also included an earlier essay by Fred M. Taylor;[2] and by Abba P. Lerner in a series of articles and later in a book.[3] Lange and Lerner tried to explain how a socialist society could be organized through the market. A very similar approach was presented around the same time by the English economist James Meade in his book on *Planning and the Price Mechanism*.[4]

Essentially the Lange–Lerner solution requires enterprises owned by the state to play at free-market capitalism. The idea is to formulate the end results of the operation of a free competitive market and to translate those results into instructions to managers of state enterprises about how to run those enterprises. In a free competitive market, for example, price tends to equal marginal cost, that is, the cost of producing an extra unit. Accordingly, Lange and Lerner would have the authorities instruct managers of state-run enterprises to set the price of each of their products equal to marginal cost or, alternatively, if the authorities themselves set the price, to adjust the volume of production so that marginal cost equals price. In calculating marginal cost, they would have the managers of enterprises use the closest possible approximation to the wages, the interest rates, the cost of raw materials, et cetera, that would arise in a free market. This was, however, to be "playing at" capitalism because, in their scheme, the incomes received by individuals would not necessarily be those that

[2] Oskar Lange, "On the Economic Theory of Socialism," *Review of Economic Studies*, vol. 4 (October 1936), pp. 53–71, and vol. 4 (February 1937), pp. 123–42. A revised version was subsequently published in Oskar Lange and Fred M. Taylor, *On the Economic Theory of Socialism*, Benjamin E. Lippencott, ed. (Minneapolis: University of Minnesota Press, 1938), pp. 55–142.

[3] Abba P. Lerner, "Economic Theory and Socialist Economy," *Review of Economic Studies*, vol. 2 (October 1934), pp. 51–61; idem, "A Note on Socialist Economics," *Review of Economic Studies*, vol. 4 (October 1936), pp. 72–76; idem, "Statics and Dynamics in Socialist Economics," *Economic Journal*, vol. 47 (June 1937), pp. 253–70; and idem, *The Economics of Control* (New York: Macmillan, 1944).

[4] James E. Meade, *Planning and the Price Mechanism: The Liberal-Socialist Solution* (London: G. Allen & Unwin, 1948).

would result from an actual free market. Managers of state enterprises would receive wages and not the "profits" from the enterprise, although perhaps they might receive payments geared to profits. There might be incentive payments. The managers would not be the owners of the enterprise; the state would own the enterprise. When the managers invested capital, they would not be investing their own funds or the funds of identifiable persons for whom they were operating as agents. They would be investing state funds. The risks they would be taking would not be risks for themselves or for identifiable principals but for the state. Similarly, the incomes of the workers would not necessarily be equal to the notional wages that the entrepreneurs would include in calculating how much to produce.

This is a small sample of the ingenious analysis in the Lange–Lerner book. It is an admirable book that has much to teach about the operation of a free market; indeed, much more, I believe, than about their actual objective, how to run a socialist state. It is unnecessary to go into great detail about their analysis, because what seems to me to be the basic flaw in this analysis has little to do with the sophisticated parts of their discussion. Let me emphasize that their approach has a great deal of merit. It forces planners in a society to try to estimate what the results would have been in a free market and therefore to take into account the truly relevant considerations in achieving efficient production. It specifies the principles that the planners in such a society should follow in the trial-and-error process of adjusting prices to experience; that is, to adjust the quantity demanded to the available supply in the short run, and the available supply to the quantity demanded at a price equal to marginal cost in the long run.

I may say that the principles that Lange and Lerner outline are very much neglected in our own society. Let me digress for a moment to give a current example from the British experience. One of the problems that Mrs. Thatcher's government has faced arose out of a commitment that she made during the campaign to accept the findings of a Royal Commission comparing salaries in government service with those in private industry. The commission concluded that the salaries of government servants should be raised by 28 percent to make them comparable with private salaries. If the planners in England had read —and absorbed—Lange and Lerner, they would have known what the right principle was: a job is overpaid if there are many applicants for few jobs; a job is underpaid if there are few applicants for many jobs. There is no doubt about what the situation in Britain was: there were altogether too many government servants; but at the same time, there were a great many applicants for each new job available in the civil service. Obviously the civil servants were being overpaid and not underpaid. Had the Royal Commission followed Lange and Lerner's book, they could never have reached the conclusion that government salaries were too low.

Various forms of the Lange–Lerner system have been tried on a smaller or a larger scale in many countries—in Lange's native land, Poland, where the success of those ventures is not exactly apparent; in Czechoslovakia; in Hungary; and in Romania. Although the results have often been superior to those achieved earlier, they have also uniformly disappointed the hopes of the sponsors of reform.

In 1968 Warren Nutter pointed out the key difficulty in the system in an important article entitled "Markets without Property: A Grand Illusion," from which I quote:

> If we now come full circle and return to Lange's model of socialism, we see how empty his theoretical apparatus is. Markets without divisible and transferable property rights are a sheer illusion. There can be no competitive behavior, real or simulated, without dispersed power and responsibility. And it will not do to disperse the one without the other. If all property is to be literally collectivized and all pricing literally centralized, there is no scope left for a mechanism that can reproduce in any significant respect the functioning of competitive private enterprise.[5]

A more pungent summary of exactly the same point was made by an English financial journalist, Samuel Brittan, in an article published in *Encounter* in January 1980:

> To publish a set of rules asking the managers of state enterprises to behave *"as if"* they were profit-maximising entrepreneurs in competitive private industry ignores the actual personal motivations faced by these men. . . . You do not make a horse into a zebra merely by painting stripes on its back.[6]

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[5] G. Warren Nutter, "Markets without Property: A Grand Illusion," in Nicholas A. Beadles and L. Aubrey Drewry, Jr., eds., *Money, the Market, and the State: Economic Essays in Honor of James Muir Waller* (Athens: University of Georgia Press, 1968), pp. 137–45 (quotation is from pp. 144–45).

[6] Samuel Brittan, "Hayek, the New Right, & the Crisis of Social Democracy," *Encounter*, January 1980, pp. 30–46 (quotation is from p. 38).

The fundamental problem with this approach is how to monitor performance. To state the central feature of a free-market system in a different way, it is a system under which each individual monitors his own performance and has an incentive to monitor it properly, a point that Thomas Sowell has developed with great insight in his recent book, *Knowledge and Decisions*.[7] The person who is using his own labor to produce goods for himself has a strong motivation to work hard and efficiently—as do those people tilling private plots in the Soviet Union and China. The person risking his own property has an incentive to make the best use of it. If he is using his property to hire others to produce a product or render a service, he has a strong incentive to monitor their labor; and, knowing that he is doing so and can reward or discharge them, the workers have a strong incentive to work efficiently. The consumer spending his own money has a strong incentive to spend it carefully. And so on.

Conversely, in a system in which managers of state enterprises are told to behave as if they were profit-making entrepreneurs, what incentive do they have to monitor themselves? Government officials will seek to monitor them, but what incentives do those officials have to monitor them properly? And how can they obtain the information to monitor the managers?

This problem can be brought out most clearly not by examining the routine day-to-day, repetitive operations of an enterprise, but rather by examining what in many ways is the most important single activity from the point of view of producing growth, development, and change, namely, innovation—deciding what new products to produce, what new methods to use in producing products, what new capital investment to undertake, and so on. Take a specific example. A person has an idea that, in his best judgment, has only one chance in ten of being successful. If successful, however, the financial return in the form of the value of the extra product produced or of the saving in production expenses would be, let us say, a hundred times the cost of introducing the idea. It is clearly desirable that this activity be undertaken. It is a good bet. If many such bets are taken, the end result will be highly favorable; the winners will more than make up for the losers.

In a market system in which the individual who makes the decision to undertake that venture receives all or a large fraction of the additional returns, he has an incentive to undertake it. He knows that

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[7] Thomas Sowell, *Knowledge and Decisions* (New York: Basic Books, 1980).

there are nine chances out of ten that he will lose his money; yet the gain he will receive in the one case out of ten when his idea works is big enough to justify taking the risk.

Consider the same situation in a state-run enterprise. How can the manager of that enterprise persuade the people under whom he works that the odds and potential returns are what he believes them to be? He may have great confidence in his own judgment; yet he may have very great difficulty in persuading his superiors. In addition, the reward structure is likely to be very different. If the venture is successful, he will no doubt receive some extra compensation; he may be awarded a medal, receive kudos and honors, become a hero of the nation. If, however, the venture is a failure, as it will be in nine cases out of ten, he will almost surely be reprimanded and may lose his position and perhaps even his life and liberty. The reward in the case of success does not compensate for the loss in case of failure. His natural tendency is to avoid such risky enterprises, to play it safe, to undertake investments that are almost certain to yield returns. Who can blame such a manager? Considering the circumstances under which such managers operate, that is the reasonable, rational, human way to behave. For society as a whole, however, that kind of behavior is the road to stagnation and rigidity, and that in fact has been the outcome in collectivist societies.

## Yugoslav Worker Cooperatives

A very different approach has been adopted in Yugoslavia, and it is the other main variant I want to discuss. The Yugoslav approach involves not playing at capitalism but establishing a restricted form of capitalism. This form operates on two different levels: strict capitalist private ownership and operation, that is, a real market; and worker cooperatives, a kind of halfway capitalist market.

Between 80 and 90 percent of the arable land in Yugoslavia is in strict private ownership. The peasant proprietors produce for the market. This sector of agriculture is comparable to the private plots that farmers in the Soviet Union or in China are permitted to cultivate.

Apart from agriculture, Yugoslavia permits—or at least it did when I was there some years back (I have not been there in recent years)—strict private ownership of all enterprises that employ fewer than five people other than family members. As I say, the exact numbers may be different now, but something like that is permitted. Although this keeps private enterprises relatively small, the cooperation of enterprises conducted by different members of the same family enables some to be fairly extensive while still remaining within the formal limits. Such enterprises have been particularly important in the tourist industry, where they have played a major role in providing Yugoslavia with a productive and financially rewarding industry.

For larger enterprises, Yugoslavia has adopted a form of worker cooperative in which the enterprises, instead of being explicitly owned by the state, supposedly are owned by the workers in the enterprises. I say "explicitly" and "supposedly" because the cooperatives involve the same mixture of collectivism and capitalism as do U.S. corporations. Who owns a U.S. corporation? The stockholders? Or is the owner the government, which receives 46 percent of the profits and bears 46 percent of the losses of all but relatively small corporations? Once when I was in Yugoslavia, I calculated that the difference between the degree of socialism in Yugoslavia and in the United States at that time was, if my memory is right, fourteen percentage points. In the United States, the corporate income tax was then 52 percent, and so the government owned 52 percent of every enterprise. In Yugoslavia, the central government was taking about 66 percent of the profits of the worker cooperatives. Thus there was only a fourteen-percentage-point difference in the degree of socialism. Just as we think of our enterprises as privately owned and operated, and this view contains an important element of validity, so in Yugoslavia these cooperative enterprises are regarded by the workers as being owned by the workers, a view that also contains a considerable element of validity.

This approach was adopted some decades ago after Yugoslavia had experimented with the rigid central planning methods of the Soviet Union. Those methods were very unsuccessful; and at about the same time that Yugoslavia broke politically with the Soviet Union, it abandoned them in favor of the worker cooperatives. The worker cooperatives have been far more successful than was rigid central planning. At the same time, they have been far less successful than a more nearly full-fledged free-market system. The first time we were in Yugoslavia, which was nearly twenty years ago, we were very much impressed by the contrast between our reaction and that of some other foreigners whom we met there. We went to Yugoslavia from the Soviet Union, and Yugoslavia struck us as a fairly prosperous and relatively open society. People we met there, however, who had gone to Yugoslavia from Austria thought that Yugoslavia was a very backward and unfree society.

It is worth examining more closely the problems with this approach because it seems very attractive. There has been much discussion in the West about the desirability of converting enterprises into worker-owned enterprises, and there have been a few examples in which such conversions have taken place. As you may know, when North West Industries owned the Chicago & North Western Railroad, which was losing money very rapidly, they found a profitable way to get rid of it by giving it to the workers, thereby establishing substantial tax reductions. As a result, the Chicago & North Western Railroad became a worker-owned enterprise, but not in the Yugoslav way because the workers actually had stock in the enterprise that they could dispose of and sell. In the Yugoslav case, workers do not have such shares.

The major defect of the Yugoslav approach arises from this difference in the linkage of property rights to employment status. Yugoslav workers have no separable or transferable rights to the productive enterprise. Workers are owners only as long as they are workers. If they terminate their employment, they no longer have any property rights or any rights to the income from the enterprise. As a result, a real capital market cannot exist. In line with the quotation that I read from Warren Nutter's article, both power and responsibility are dispersed; but there are no fully divisible and transferable property rights. The absence of such property rights rules out not only a capital market but also the possibility that private individuals can venture and innovate on anything but a minor scale, risking their own funds and reaping the rewards, without necessarily providing labor power themselves. That is possible in Yugoslavia on a very small scale, but nothing beyond that.

A few examples will show how this feature reduces the effectiveness of the system. Consider, for example, how workers are allocated among enterprises. Let us take an enterprise that happens to be highly successful. It is producing a product for which there is a good market; its receipts greatly exceed its costs. It is in the social interest that the enterprise be expanded, that it hire more workers. Each worker's reward consists not only of the value of the labor services that he contributes but also of his pro rata share of the returns attributable to the capital in the enterprise, whether that capital is in the tangible form of buildings and machines or in the intangible form of know-how and consumer goodwill. We can well understand that existing workers in such an enterprise will be reluctant to consent to the hiring of more workers because they will recognize that hiring additional workers would dilute the share of property income that each worker receives. As a result, successful enterprises are prevented from expanding. Workers who are not fortunate enough to be employed in such a successful enterprise must find employment in enterprises where their productive contribution is less. As an aside, we were fascinated to learn that one way in which managers of such enterprises have tried to offset this effect is by promoting nepotism; that is, when hiring additional workers, they give preference to the wives or the children of existing workers. In this way, they try to identify the incentives of the enterprise with the incentives of the workers.

Another aspect of the same problem is the absence of the right incentive for a worker to labor at the activity at which he is most productive. Consider a worker who could contribute more to the output of firm A, let us say, than to the output of firm B. Suppose, however, that firm A has little capital and earns little from its capital, whereas firm B has a great deal of capital and earns much that way. In consequence, if the worker can manage to work in firm B, he will have a higher income than if he works in firm A because he will share in a higher amount of property income, which will more than offset the lower value of the labor that he contributes. If he already works in firm B, he clearly has no incentive to shift to firm A, although that would be socially desirable.

A similar problem arises with respect to the use of the current profits of enterprises. A major decision that must be made by every enterprise is how to use its current profits, how much to devote to payments to its owners (in this case the workers), how much to set aside for investment and for building for the future. Under the Yugoslav system, current workers may not directly benefit from investment made for the future. That is especially true for older workers, and they are the ones who are likely to have achieved the greatest influence in the workers' councils. Who are the people who are elected to the workers' councils? They are not the young workers; they are the older workers. They are only going to work for a few more years, and so they are unlikely to favor investments that will not pay off for ten or fifteen years. As a result, workers have a strong incentive to press for the use of as large a fraction as possible of current profits for current benefits to current workers—in the form of direct bonuses, worker housing, or other benefits. Here again, one method that managers have tried to use to overcome this bias is nepotism. That is to say, enlisting the children of workers and the children's children in the enterprise provides the workers in the workers' council with an incentive to be concerned about the more distant future. That is far from a fully effective mechanism, however. The only fully effective mechanism would be to separate ownership from employment by giving the workers, or anyone else for that matter, transferable rights to the productive enterprise: that is, by making it a real, honest-to-God capitalist form of separable property right. Investment would then add to the value of these rights, and individuals could benefit currently from such investment.

Exactly the same problem limits the availability of risk capital. In general, investments in risky activities will pay off in the future and not in the present. Hence the bias against an investment in the future leads to a bias against investment of risk capital. Moreover, it is one thing for an individual by himself, or even for a few individuals who have common tastes and can join together, to undertake a major gamble. It is a very different thing for a large group of workers through a bureaucratic mechanism to justify engaging in risky activities. If one looks at Western capitalist societies, one sees that risky ventures have seldom been financed through banks; they have seldom been financed through major bureaucratic organizations, including the government—except, I should add, for some risky ventures that are almost sure to fail but that have strong political appeal. Risky ventures that seem to hold good promise of success but that are also very uncertain have almost invariably been financed by a small group of individuals risking their own funds or the funds of their relatives and friends.

The Yugoslavs have used banks and bank loans as a means of distributing capital. This arrangement does help; it does facilitate capital mobility and enable funds from a successful enterprise to be transferred to some extent to other enterprises that have promise of success but do not have the funds available. It is only a very partial substitute for a fully effective capital market, nonetheless. After all, the banks themselves are also worker cooperatives, and their employees have the same kinds of incentives to avoid risk as do the other bureaucratic enterprises.

## Some Conclusions

Let me now try to draw some conclusions from these comments about the operation of the market and about what I think are the two leading methods proposed for giving market mechanisms a greater role in a centrally planned society—trying to have the enterprises play at capitalism, and trying to construct a restricted and modified form of capitalism.

Basically, the conclusion is that there is no really satisfactory substitute for a full-scale use of a free market. It does not follow, however, that it may not be desirable to depart from a completely free market. In the first place, efficiency in production is not the only goal that people have. All of us are willing to sacrifice some efficiency for other goals. In the second place, the market is simply incapable of doing some things. The market cannot provide national defense. For that purpose, it is essential to depart from the market, which also involves further interference with the market through the effects of the methods used for raising funds to finance national defense. Third, as we are all aware, the market operates defectively in those cases in which an important part of the effects of any transaction—either benefits or costs—impinges on parties other than those directly involved in the transaction, parties whom it is difficult to identify. This third factor, which has been labeled "neighborhood effects" or "externalities," is particularly troublesome because government attempts to deal with such externalities have typically turned out to do more harm than good. In principle, nonetheless, we cannot deny that there is a case for that kind of intervention.

There are no completely pure systems; every system is something of a mixed system that, on the one hand, includes command elements and, on the other, relies predominantly on voluntary cooperation. The problem is one of proportion, of keeping command elements to a minimum and, where they are introduced, of doing so in a way that interferes as little as possible with the operation of the market while achieving the objectives other than productive efficiency that are being sought.

I believe that the most important implication of this analysis is that even allegedly command economies will find it desirable to use free markets over as wide an area as is politically and economically possible. In particular, even for such collectivist societies as China, Russia, Yugoslavia, that area clearly includes much of agriculture and of retail trade, as well as small enterprises in manufacturing, mining, transportation, and communication. All three countries already practice this policy to some extent, but to a far smaller extent than would be feasible even while retaining centralized political control. Of course, every move in this direction does set up some sources of power independent of the central political authority, which is no doubt why collectivist countries have been so reluctant to move in this direction.

Second, insofar as the objective is to affect the distribution of income rather than to achieve particular production targets, the lesson of history is that it is better to do so through general taxes and subsidies rather than through interfering with the price system. That lesson applies to predominantly market economies such as our own as well as to command economies. In using taxes and subsidies, it is desirable to keep the marginal rates as low as possible. Countries in the West—the United States among others—have resorted to highly graduated rates; but although the rates are graduated on paper, they are not effective in practice. The millions of taxpayers, each seeking to reduce the taxes he must pay, have found effective ways to offset and evade the graduated rates.

The same principle applies to subsidization. Insofar as the political authorities want to assist particular groups of people, they should give them money rather than making available to them goods and services at artificially low prices. The groups will benefit more, and the system will be interfered with less. I may say that this point has been raising particular problems for China in the past year or two because their price structure is absurd, partly because they have tried to keep some prices of so-called necessities and the like very low. They have had great difficulty in trying to follow the Lange–Lerner advice to let those prices rise to more nearly what they would be in a free market. Their limited success in doing so has given rise to great complaints about inflation, a phenomenon with which we are all too familiar. If subsidies are given in money instead of in goods and services at artificially low prices, the recipients will benefit more, and the productive system will be interfered with less.

Third, for enterprises that remain state enterprises, the Lange–Lerner rule, although it cannot be fully effective because it cannot be properly monitored, nonetheless indicates the right direction for policy to take. Enterprises should be made responsible for their own behavior; their targets should be set in generalized terms of profits or money rather than in terms of specific physical outcomes. Let the enterprises bid separately for the resources they need, and let the prices be determined at a level that will equate demand and supply.

As I have already noted, the chief defect of all alternatives to an extensive use of free markets will be in the area of innovation, change, and progress, as we in the United States have been learning to our cost in recent years. Unfortunately or fortunately, depending on your point of view, in that area there is no effective substitute for permitting the private market really to flourish.

Finally, the major lesson that has impressed me as I have studied the economic policies and practices in various countries—whether fully capitalist, or mixed, or primarily collectivist—is that there is a difference between rhetoric and reality, between intentions and results. The prating in the collectivist economies about introducing market elements is mostly rhetoric. In China, we were enormously impressed by the contrast between rhetoric and reality. We read the pronouncements by Chairman Hua Guofeng about the plans for introducing greater market elements into the Chinese economy, about how enterprises were going to have greater freedom in distributing their products and in deciding what to invest, what to produce, and so on. In every factory we visited, we asked the people whom we interviewed —most were public relations people rather than the people who were really running the factory—"Do you know about the new economic policy that your government is proposing?" Yes, they all knew about it, and they were all able to describe it to me in great detail. Then I would ask the next question: "Tell me, how has that affected your particular firm?" "Oh," they would say, "it hasn't had a chance to affect us yet."

As the famous English writer Samuel Johnson put it two centuries ago, "the road to Hell is paved with good intentions." Or, if I may use one of my favorite quotations, as a deputy from Nemours at the French National Assembly at the time of the French Revolution put it in 1790 (I may add that deputy's name was Pierre S. Du Pont):

> Gentlemen, it is a disagreeable custom to which one is easily led by the harshness of the discussions, to assume evil intentions. It is necessary to be gracious as to intentions; one should believe them good, and apparently they are; but we do not have to be gracious at all to inconsistent logic or to absurd reasoning. Bad logicians have committed more involuntary crimes than bad men have done intentionally.

Thank you.

# Questions and Answers

Professor Sidney Hook, Hoover Institution: How would you evaluate the German and Scandinavian systems of co-determination? Isn't that a way of introducing a cooperative element affecting the structure of the economy?

Professor Friedman: If we carry it to its extreme, it would be the Yugoslav system. That is to say, in the Yugoslav system we have an elected workers' council that in principle is elected by the body of workers, and it appoints a manager. I must say, one of the fascinating things to me when we were in Yugoslavia and we walked around factories with the managers was that the deferential attitudes of the workers toward the managers seemed to me no whit different from what we would observe in a Western country when a boss is walking around the factory and the workers are kowtowing to him. I did not notice an iota of difference. The workers' council does appoint the manager, however—he is appointed for a specific term—and that is in principle where the German co-determination system would go if it were carried to its logical conclusion.

What has happened at the moment, as you know, is that in the German system the workers have a minority of the votes; they do not have the final deciding vote. They usually have a group of workers' representatives (they are really not workers' representatives but representatives of the trade union), and then they have managers' representatives. It is set up so that the managers' representatives hold the deciding votes. I believe, however, this system is a very undesirable one that has exactly the same kinds of problems as those I pointed out for Yugoslavia, except, at the moment, only to a partial extent. It is exactly the same problem that we have in this country with Mr. Frazer on the board of the Chrysler Corporation. He has conflicting interests, and he cannot represent both parties. Exactly that same conflict arises with the workers in co-determination. Take a case in which an enterprise in Germany is doing very well and has good profits, and it would be desirable for it to hire more workers. If it hires more workers, that will dilute the amount of money that it will be able to pay existing workers. Which option will the workers' representatives go for: a higher wage for the workers now there, or a larger number of workers at a lower wage? Still, the wage for the additional workers would be higher than that which those workers could get in second or third industries.

Professor Hook: Presumably if they are going to hire more workers, it is in the expectation of making more money.

Professor Friedman: It depends on what wage they are paid. You cannot get out of it that way. You have an alternative, Professor Hook. You are running the factory, and you can either keep the price high, pay a high wage to a limited number of workers, and sell a small amount, or you can lower the price, sell a larger amount, and hire more workers at a relatively lower wage. You cannot get something for nothing out of that. What would the workers' representatives favor? They will be in favor of promoting the interests of current workers. It is not an accident that the two industries in the United States that are in the greatest difficulties, namely, automobiles and steel, are both strongly unionized; and both have wages that on the average are roughly twice as high as the average wage of all the other workers in the country. That wage may have been appropriate at one time, but it is no longer appropriate in the present competitive situation. The unions are very resistant to what would be an appropriate solution from the point of view of the country as a whole.

Sweden represents a more complicated situation because until a few years ago it was essentially a free-trade country that had very low tariffs. International competition was providing the same discipline that competition within a nation provides. In the past five or six years, however, Sweden has experienced increasingly greater difficulties. The government has been bailing out enterprises, and the system of so-called joint worker-employer-government negotiation of wage rates and so on has been coming apart at the seams.

I think the evidence is very unfavorable both to the German system of co-determination and to the Swedish system of joint bargaining by employer and employees.

Question: Perhaps the greatest success story of the past twenty-five years is Japan, and they have neither a classical labor market nor a capital market, I would think. What is your comment on that?

Professor Friedman: I do not believe you are right. I believe they have both a labor market and a capital market. Whether it is a "classical" market is a question of semantics. As I emphasized, all systems are mixed. As it happens, I know the Japanese situation rather well. My basic conclusion about Japan is that any statement we make about Japan that is true has an opposite statement that is equally true. If we say that Japan does not have a classical labor market, we are right. They do have lifetime employment in a certain class of enterprise. If we say they have a classical labor market, we are also right. It turns out that they are able to maintain lifetime employment because those enterprises engage in a great deal of subcontracting and buying from suppliers. Those smaller enterprises, subcontractors, and suppliers do not themselves have lifetime employment. They have an essentially classical labor market. In addition, Japan practices retirement at age fifty-five, a very early age. After retirement at age fifty-five, people typically do not go out of the labor market. They remain in the labor market, but they then are paid wages that are in accordance with their productivity in an essentially free labor market rather than in the other kind of labor market.

Similarly, when we come to capital, there is a big difference among the institutions in Japan. Banks have played a different role in Japan than they have played in the United States; they have been active participants in the financing of many enterprises. This is really a carry-over from the Zaibatsu organizations in which a group of enterprises, of banks and so on, worked together to form a close conglomerate. At the same time, it is fascinating to look at some of the real success stories in Japan. For example, Honda, Sony, and quite a number of the other successful enterprises were not financed by banks at all. They are typical of the ordinary American kind of development in which a private entrepreneur develops a small enterprise into a large enterprise by being successful. Bank financing has tended to dominate the older, more established, more basic industries.

We have an image of Japan Incorporated as being government-industry collaboration. Again, that is true, and the opposite is also true. A very simple thing makes that arrangement work in Japan: It is retirement at age fifty-five, with the top officials in the government bureaus then going to work for the private enterprises they were connected with before. That is what transfers the private incentives to the political level.

It is a very much more complicated picture than it looks on the surface. The success of Japan, in my opinion, has unquestionably been associated not with the elements that seem deviant from the market but with those that are like it. When we look at the history of Japanese growth, for example, we find that the period from 1867 to 1914—that is, the period after the Meiji Restoration—was a time of very rapid growth. The interwar period was a time of slow growth or stagnation. The period after World War II shows a resumption of the rapid growth that prevailed before World War I.

The years before World War I were a time of essentially free trade and of very little government involvement or intervention. From 1867 to 1897, Japan was prevented by international treaty from imposing tariffs of more than 5 percent, and so it was an essentially free market. Between the wars, the militarists took over and ran a collectivist society. There were severe restrictions on the free market, and there was slow growth. In the postwar period, particularly after 1950 when the Dodge Plan was implemented, there was again very rapid growth; and I believe that is again attributable to the prevalence of a predominantly free market with relatively limited intervention by the state.

Question: What was the reaction of your Chinese audience to this lecture?

Professor Friedman: They were very much interested in it. In fact, I gave four lectures there; and this was by all odds the one in which they were most interested because it was most immediately relevant to their situation, although they were also very much interested in the discussion of inflation because that is also a current problem for them. It is hard to answer your question about their reaction, however, because appearances are so deceptive. When you are there and are standing before a group, your first impression is that everybody is speaking freely, that you are having the kind of discussion you might have here, with a wide range of opinions being expressed. Then, if you compare what is being said with the published statements about policy, you discover that it is all within very firm guidelines. At the time we were there, to an even greater extent than now because there has been some backsliding, those guidelines stressed the importance of introducing greater market elements into the economy. Thus they were very much interested in those elements, and they were particularly taken with the Yugoslav example. That has a strong appeal to them, much more than the Lange–Lerner approach does. In this sense, they were very much interested; but I cannot say that I got any valid feeling for what their true beliefs or values were.

ROSE FRIEDMAN: The other point is that they really did not know what a free market is, even after your lecture.

PROFESSOR FRIEDMAN: That's true—and I hope not because of the lecture. My wife's and my favorite story about that has to do with a minister from the Ministry for Materials Distribution and his chief associate who came to the lecture and subsequently took us to lunch because they were scheduled to be part of a group that was coming to the United States shortly thereafter. They did come and indeed visited the Hoover Institution. Some of you may have spoken with them. During our lunch after the lecture, they wanted to know whom they should see and talk to in the United States. The first question they asked us was: "Tell us, who in the United States is responsible for the distribution of materials?" Now as my wife says, that really showed an understanding of a market system. Dr. Freeman?

DR. ROGER FREEMAN, Hoover Institution: It is my impression that in China there has been very little practical progress toward establishing a market system in large enterprises, but there have been a few approaches in smaller ones. Most of the restaurants now are worker cooperatives, and it was my impression that they really tried very hard to attract customers and to please them. It is also true in small repair shops. It is true in agricultural co-ops. They are also, of course, very interested in producing the most because everybody participates in it. In the Soviet Union there were attempts, as you know, under the Liberman system fifteen years ago, to provide some incentives. I would appreciate hearing your impressions of what the varying effects of the Liberman initiatives have been where, of course, the bureaucracy at first pulled back and then after a few years again charged in and took over.

Professor Friedman: I cannot answer your question about the Soviet Union. I only know very vaguely that the most successful applications of the Liberman or Lange–Lerner approaches seem not to have been in the Soviet Union but in Hungary. I gather that Hungary has gone farther in this respect than most of the others, but this is all very secondhand. I have no direct evidence. I have not been in the Soviet Union for eighteen years; I have never been in Hungary; I do not read either Hungarian or Russian; and so I have no confidence whatsoever in anything I could say about that. If there were any good results, they seem not to have had any very long-lasting impact, certainly not in the Soviet Union.

Dr. Freeman: Where they have had it is in some of their state-run stores. The bonus system has had considerable impact there in interesting the clerks and the managers.

Professor Friedman: In China we were interested in many of the same things that you are talking about. First of all, apparently for the first time, we were told, there were people on the streets who were selling something. They were very few and far between. They had to get a permit to do so, and we were told that the permits were being given to two classes of people. They have no unemployment; they only have "pre-employed" youth. Permits were being given to the pre-employed youth and also to the superannuated, and they were being permitted to sell at these street markets. They also had small-scale free markets, as you know. There was a very active outside market in the cooperative that we visited and also at several other places. So you are quite right that there is some element of this kind; but it is, as you say, very much limited to small enterprises. We could see almost no effect in the small number of larger enterprises that we visited. There it was all talk and no substance.

Question: It may interest you to know that probably some of the same people you met in China came to the United States and went to the Department of Commerce with the same question. Their hosts were somewhat nonplussed when they insisted; and they were finally shown one spot, the General Services Administration.

Professor Friedman: Well I will tell you the answer I gave to them. I told them they should go to the Chicago Board of Trade and watch the trading for corn. I don't know whether they did that; but I can well believe that if they were shown the GSA, they had our very best example, and so that's good.

PROFESSOR CAMPBELL: It appears to me that the argument really boils down to how much of a command you have to have in a market system if you want to have national security and you want to have roads. Right now we have a system set up that attempts to determine how much command ought to be in the system; and they sit in Washington, D.C., and make decisions with which we may or may not agree. The real question is, What kind of system can we put to our representatives that tells them how far they ought to go, what method they ought to use when the market will not work for them, and how they can sell it to a constituency?

PROFESSOR FRIEDMAN: I think the founding fathers who drew up our Constitution tried to answer your question at the Constitutional Convention. I believe that fundamentally the only answer is to try to establish a self-denying ordinance on the part of the populace at large, narrowly limiting activities to certain areas through political mechanisms. I believe the attempt was made under the Constitution, through a whole series of measures, to restrict the scope and power of the federal government, certainly in comparison with the state and local governments. That attempt was very successful until about fifty years ago when it began to break down. I am no lawyer, but many legal scholars will say that it has broken down because of a defect not in the Constitution but rather in the way in which the Constitution was interpreted in the courts. Of course, as Mr. Dooley said, the Supreme Court follows the election returns; and so the breakdown, if it was a breakdown, was not because of any evil people trying to change the character of the system; it was in response to popular will. That is why the fundamental self-denying ordinance is not expressed on a piece of paper. It is expressed in the attitudes and the beliefs of the populace. Unless the populace at large accepts the idea that the role of government should be very narrowly limited to certain specific functions such as national defense, I do not think that you can achieve those limits with any pieces of paper or by giving power to a court or anything like that. I think it has to come out of the general will.

PROFESSOR CAMPBELL: The real problem comes once you have admitted that there is something the government has to do that is not a pricing mechanism within the overall system and that it has to provide national defense and that it has to provide roads. Then, let us say, we cannot retrain workers as fast as the ideal system would when we dislocate them; and perhaps we have to give them some money. The question is, How do we know where to stop?

PROFESSOR FRIEDMAN: We cannot. I do not believe that there is any way in which we can have a hard-and-fast formula. I think we can state the principles on which we want to judge the activities (they can be hard-and-fast), but I think in any particular case we are always in the position of drawing up a balance sheet. I cannot go along with the people who believe that it would be possible to abolish the government altogether and to have a completely anarchist-capitalist system. I wish I could believe it, but I do not believe it. I do not think it can be done. I think you are asking for a hard-and-fast formula where a hard-and-fast formula is not possible. For example, consider the kind of activity you are talking about—training dislocated workers. Surely your attitude toward it would be one thing if government was absorbing 5 percent of the national income and a very different thing if government was already absorbing 35 percent.

The problem is that it is easier to avoid an activity than to eliminate one already undertaken. Every time government undertakes an activity, that tends to create a class of people with strong vested interests in the activity's continuation. There are always many apparently worthy proposals; and so if even a small fraction are accepted, government tends to grow and grow. Now for that very reason many people have believed that a free market and a free society are fundamentally unstable positions of equilibrium, and that may be true. I do not think we can rule out that possibility. If we look back in history, we have had free markets and free societies only over a very small part of the globe at any time and only for very short periods in any one part of the globe. We know that just simply writing a constitution doesn't do it. Some of the South American countries have constitutions that are word for word identical with ours, but the results are vastly different. We cannot rule out the possibility that, for the kinds of reasons you are citing, it is an accident and an aberration if we happen to get a free society and that it is an unstable state of equilibrium that will sooner or later change. I trust that is not true, obviously; and all of us in this room have been working as hard as we can to see that it is not true. I must say I think that many of the fears that people have are not confirmed by the evidence. The great fear has always been that the have-nots would vote themselves benefits at the expense of the haves, and that is not what has happened. Look at the referendums, which are a sign of public opinion. If we look at the referendums on state constitutional amendments and so on that have been conducted around the country during the past fifty years, we see on the whole that they have been less redistributionist and much more in line with limiting government than the actual actions of legislatures have been. In the past few years, for example, a number of states have had measures on the ballot to increase the graduation of the income tax, and they invariably have been defeated. Connecticut had a measure on the ballot to impose a graduated income tax, and it was voted down. Massachusetts had a measure that would have increased the graduation; it was voted down; and so on down the line. I do not think that one needs to despair of the possibility of having a public understanding of what is involved. We are having another test right now, I think. One more question, and then we had better stop.

QUESTION: You drew a sharp distinction between a command economy and a price economy. I am just wondering whether on the theoretical level there really is such a sharp distinction. Suppose you were a Martian, and you came down to Earth. You couldn't really land on Earth; you could only hover. You couldn't see too well or hear, and you couldn't see that money was being exchanged. You would look at Russia and would see people taking part in their little activities, and in America they would be doing that, too. You could not tell, really, which country had a price system. The question occurs to me whether you think a command economy has an implicit price system there in the background. Even in the United States a lot of people will say that there is something like an auctioneer behind those people and will wonder whether it is not an implicit price system. Then the question is, If those are really thought of as price systems, what is really different about those two systems?

PROFESSOR FRIEDMAN: I did not make the distinction between a command system and a price system. I made the distinction between a command system and a market system. In a market system, prices serve certain functions. In a command system, one may also have prices that serve functions; one has shadow prices of the kind about which you are talking. The distinction I made was not at all command versus price; it was command versus market. For example, I regard the system for the development of scientific knowledge as a market system, but it is not a price system. If we look at it, the development of science has not come from commands given by a central authority concerning who should work on what topic. The development has come from the voluntary cooperation of people who were pursuing their own self-interest. That is a market system, but it is definitely not a price system in the ordinary sense.

Concerning your question, I am not sure a Martian can tell the difference because I do not think the difference is manifest in the things that a Martian could observe. That does not mean there is not any difference. I cannot even see those Martians on Mars, but that does not mean they are not there. I believe you are making a more fundamental point that I will agree with, and it is that in a static, repetitive system, you could not tell the difference; nobody could tell the difference. If we had a system in which the basic conditions remained unchanged and in which life was a simple repetition of one cycle after another, there would be absolutely no way whatsoever that we could tell the difference between a command economy, a price system, a market system, or any other system. All we would observe would be the same phenomena repeating themselves ad infinitum. There would be no money in such a system, of course; so we would not observe any money flows. All we would have would be flows of services and goods. I have tended to emphasize the role of innovation, change, and development because I think we tend to see the difference more clearly in a world that is dynamic and subject to change and not static, stationary, and repetitive. In this case the fundamental question is whether or not the acts that people undertake are voluntary, and the answer is not going to be observed in the flows of goods and services. The answer must be found in a different dimension of observation.