

The Great Mises-Hayek

Dehomogenization/Economic Calculation Debate

by STEPHAN KINSELLA on FEBRUARY 8, 2016

Back in the 1990s there was a fascinating debate carried on among various Austrians, mostly in the pages of the [*Review of Austrian Economics* \(RAE\)](#), on the issue of socialism, the economic calculation problem, and the “knowledge” argument advanced by Hayek and various Hayekians. The debate was kicked off by some provocative comments by Misesian-Rothbardian Joseph Salerno, first in his Postscript to a 1990 reprint of Mises’s great 1920 article on the socialist calculation problem, and followed by Salerno’s 1993 article kicking off the Mises-Hayek “dehomogenization” debate.

I’ve compiled below a chronological listing of these pieces, and a few other works, with links to online versions, where available, for those who feel like reading up on this interesting issue. This is basically a (skeletal) ebook.

If anyone is aware of any significant material I have omitted, please let me know.

Background:

- Ludwig von Mises, [The Equations Of Mathematical Economics And The Problem Of Economic Calculation In A Socialist State](#) [1938]; [Economic Calculation in the Socialist Commonwealth](#) (1920); [Human Action](#) (1949 [1940]), esp. Ch. 16, Secs. [1](#), [2](#), and [3](#)
- F.A. von Hayek, [The Use of Knowledge in Society](#) (1945)

Main modern debate:

- Joseph T. Salerno, Postscript [1990], to Mises, [Economic Calculation in the Socialist Commonwealth](#) [1920]
- Salerno, [Ludwig von Mises as Social Rationalist](#), *RAE*, Vol. 4 (1990)
- Murray N. Rothbard, [The End of Socialism and the Calculation Debate Revisited](#), *RAE*, Vol. 5, No. 2 (1991)
- Jeffrey M. Herbener, [Ludwig von Mises and the Austrian School of Economics](#), *RAE*, Vo. 5, No. 2 (1991)

- Salerno, [Mises and Hayek Dehomogenized](#), *RAE*, Vol. 6, No. 2 (1993)
- Larry Eshelman, [Ludwig von Mises on Principle](#), *RAE*, Vol. 6, No. 2 (1993)
- Leland B. Yeager, [Mises and Hayek And Calculation and Knowledge](#), *RAE*, Vol. 7, No. 2 (1994)
- Salerno, [Reply to Leland B. Yeager on Mises and Hayek on Calculation and Knowledge](#), *RAE*, Vol. 7, No. 2 (1994)
- Hans-Hermann Hoppe, [Socialism: A Property or Knowledge Problem?](#), *RAE*, Vol. 9, No. 1 (1996)
- Herbener, [Calculation and the Question of Arithmetic](#), *RAE*, Vol. 9, No. 1, (1996)
- Jörg Guido Hülsmann, [Knowledge, Judgment, and the Use of Property](#), *RAE*, Vol. 10, No. 1 (1997)
- Yeager, [Calculation and Knowledge: Let's Write *Finis*](#), *RAE*, Vol. 10, No. 1 (1997)

See also:

- Kinsella, [Knowledge vs. Calculation](#), *Mises Blog* (July 11, 2006)
- Kinsella, [Economic Calculation Under Socialism](#), Appendix I to [Protecting Foreign Investment Under International Law: Legal Aspects of Political Risk](#) (1997)
- Mateusz Machaj, [Market Socialism and the Property Problem: Different Perspective of the Socialist Calculation Debate](#), *QJAE*, Vol. 10, No. 4 (2007)

Economic Calculation in the Socialist Commonwealth

Economic Calculation in the Socialist Commonwealth

Ludwig von Mises

Translated from German by S. Adler

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Contents

Foreword by Yuri N. Maltsev	vii
Introduction to this Edition by Jacek Kochanowicz	xi
Introduction by Ludwig von Mises.	xvii
1. The Distribution of Consumption Goods in the Socialist Commonwealth.	1
2. The Nature of Economic Calculation	8
3. Economic Calculation in the Socialist Commonwealth	24
4. Responsibility and Initiative in Communal Concerns.	31
5. The Most Recent Socialist Doctrines and the Problem of Economic Calculation.	38
Conclusion.	46
Postscript by Joseph T. Salerno	49

Foreword

The twentieth century has witnessed the beginning, development, and end of the most tragic experiment in human history: socialism. The experiment resulted in tremendous human losses, destruction of potentially rich economies, and colossal ecological disasters. The experiment has ended, but the devastation will affect the lives and health of generations to come.

The real tragedy of this experiment is that Ludwig von Mises and his followers—among the best economic minds of this century—had exposed the truth about socialism in 1920, yet their warnings went unheeded.

In this essay, “Economic Calculation in the Socialist Commonwealth,” Mises examines Marxism’s most fundamental claims. In doing so, Mises exposes socialism as a utopian scheme that is illogical, uneconomic, and unworkable at its core. It is “impossible” and must fail because it is devoid of economic rationale; it provides no means for any objective basis of economic calculation and thus no way to assign resources to their most productive uses. In 1920, however, the enthusiasm for socialism was so strong, especially among Western intellectuals, that Mises’s short and insightful masterpiece was either not understood or deliberately distorted by his critics.

Yet the actual implementation of socialism showed the complete validity of his analysis. Socialism attempted to replace billions of individual decisions made by sovereign consumers in the market with “rational economic planning” by a few vested with the power to determine the who, what, how, and when of production and consumption. It led to widespread shortages, starvation, and mass frustration of the population. When the Soviet government set 22 million prices, 460,000 wage rates, and over 90 million work quotas for 110 million government employees, chaos and shortages were the inevitable result. The socialist state destroyed work ethic, deprived people of entrepreneurial opportunity and initiative, and led to a widespread welfare mentality.

Socialism produced political monsters like Stalin and Mao Tse-Tung, and led to unheard-of crimes against humanity in all communist states. The destruction of Russia and Kampuchea, the humiliation of the Chinese and Eastern European people, are not “distortions of socialism” as the defenders of this doctrine would like to convince us: they are inevitable consequences of the destruction of the market which started with an attempt to replace the economic decisions of free individuals by the “wisdom of the planners.”

The real character of the so-called centrally planned economy is well illustrated by a quip I heard several years ago by Soviet economist Nikolai Fedorenko. He said that a fully balanced, checked, and detailed economic plan for the next year would be ready, with the help of computers, in 30,000 years. There are millions of product variants; there are hundreds of thousands of enterprises; it is necessary to make billions of decisions on inputs and outputs;

the plans must relate to labor force, material supplies, wages, costs, prices, “planned profits,” investments, transportation, storage, and distribution. These decisions originate from different parts of the planning hierarchy. They are, as a rule, inconsistent and contradictory to each other because they reflect the conflicting interests of different strata of bureaucracy. Because the next year’s plan must be ready by next year, and not in 29,999 years, it is inevitably neither balanced nor rational. And Mises proved that without private property in the means of production, even with 30,000 years of computer time, they still couldn’t make socialism work.

The defenders of socialism found themselves in a theoretical and practical deadlock as soon as they destroyed the institution of private property. Thus they resorted to the creation of artificial schemes. In the Soviet economy, profit is planned as a function of the cost. Enterprises are given “control figures” which determine the “planned profits” as a percentage of the costs. Thus the more you spend, the higher your profits. Under conditions of 100 percent monopolization, this simple device completely ruined the economies of the Soviet Union, Eastern Europe, and other “socialist” states to an extent comparable only to the barbarian invasions of Rome.

Today, the disastrous consequences of enforcing the utopia on the unfortunate populations of the communist states are clear even to their leaders. As Mises predicted, despite the “cloud-cuckoo lands of their fancy,” roasted pigeons failed to fly into the mouths of the comrades. And even according to official Soviet statistics, 234 of 277 basic consumer goods included by the USSR State Committee

on Statistics in the “market basket” of the Soviet people are “missing” from the state distribution system.

Yet Western advocates of socialism are still singing the old tune about the necessity to restrict property rights and replace the market with the “wisdom” of rational central planning.

In 1920, the world neglected or rejected Mises’s warning that “socialism is the abolition of rational economy.” We cannot afford to repeat this mistake today. We must stay alert to all schemes that would draw us into a new round of state experimentation on the people and the economy.

“Private property of the material factors of production,” Mises emphasized, “is not a restriction of the freedom of all other people to choose what suits them. It is, on the contrary, the means that assigns to the common man in his capacity as a buyer, supremacy in all economic affairs. It is the means to stimulate a nation’s most enterprising men to exert themselves to the best of their abilities in the service of all of the people.”

We must never again forget or ignore the insights of this great thinker, for the sake of liberty and the generations to come.

Yuri N. Maltsev
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The Ludwig von Mises Institute;
and Senior Researcher, Institute of Economics, Academy
of Sciences, USSR (1987–89)
April 1990

Introduction to this Edition

Ludwig von Mises's seminal refutation of socialist economics, republished here, was written seventy years ago, but it is a description of the "real socialism" of today—or rather yesterday. Mises's thesis is that in a socialist economy rational economic calculation is impossible; its attempts to allocate resources efficiently in the absence of private ownership of the means of production must fail. The East Bloc's disastrous experience with socialism has shown the world that Mises was correct all along.

In this article, Mises writes of full-blown socialism, where the state is the sole owner of the means of production. Although made so long ago, his description reflects very well the economic realities of the Soviet Union since the late twenties, and of Central and Eastern Europe since the late forties until, practically, today.

In the socialist economy that Mises described, consumption goods are freely demanded and exchanged by individuals of different tastes. Money can exist, but only within the limited sphere of the market for consumer goods. In the sphere of production, however, there is no private ownership of the means of production. They are not exchanged, and as a consequence, it is impossible to

establish prices that reflect actual conditions. If there are no prices, there is no method of finding the most effective combination of the factors of production.

Mises's pathbreaking article led to a famous debate on socialist calculation. Polish economist Oskar Lange contested Mises's position and tried to show that socialism can work by a "trial and error" method.¹ In the Lange model, the economy has a free market for consumption goods. The production sphere is organized into enterprises and branches, and there is a Central Planning Board. The bosses of enterprises are required to establish production plans in exactly the same way the private entrepreneurs would do—in a way that minimizes costs and makes marginal cost equal to price. The Central Planning Board determines the rate of investment, the volume and structure of public goods, and the prices of all inputs. The rate of investment is established by equating the demand and supply of capital goods. The Board raises the prices when the demand is not satisfied and lowers them when supply is too large.

Presuming for a moment that this would work, the question arises: why is this method better than the real market? For Lange, there were two advantages. First, income can be more equally distributed. Since there is no capital income, people are paid according to their input labor. (Some talented people receive additional income which is a sort of "rent" on their particular skills.) Second, socialism allows for better planning of long-term

¹Oskar Lange, "On the Economic Theory of Socialism," *Review of Economic Studies* (1936–37).

investment. Investment will not be directed by short-term fluctuation of opinions about future opportunities, and thus it would be less wasteful and more rational. Similar to John Maynard Keynes and, later, Paul Samuelson, Lange thought that although the free market may give proper signals concerning short-term production decisions, it does not give long-term signals concerning investment.

Lange used neoclassical, not Marxist terminology. Although he was a socialist by conviction, he was fascinated by the intellectual side of marginalist economics and by the possibility of showing with this apparatus that Mises was wrong. Lange thought that, theoretically, the possibility of calculation without an actual market was shown by the Italian economist Enrico Barone in 1908.² Barone referred to a system of general equilibrium saying that if the sets of equations could be solved, the partial equilibria of producers and consumers could be established *ex ante*. Barone's point was, however, that such a possibility is practically impossible, so (similar to Mises) he supported the view that socialism cannot work efficiently. Lange's aim was to show that both Mises and Barone were wrong (but Mises to a larger degree) and that theoretically and practically, calculation was possible.

Lange thought he had finally solved the problems of socialist calculation that Mises had demonstrated in his essay "Economic Calculation in the Socialist Commonwealth." And to this point Lange wrote in his article "On the Economic Theory of Socialism":

²Enrico Barone, "Il ministero della produzione nello stato collettivista," *Giornale degli Economisti e Rivista di Statistica* 37 (1908).

Socialists have certainly good reason to be grateful to Professor Mises, the great *advocatus diaboli* of their cause. For it was his powerful challenge that forced the socialists to recognize the importance of an adequate system of economic accounting to guide the allocation of resources in a socialist economy. Even more, it was chiefly due to Professor Mises' challenge that many socialists became aware of the very existence of such a problem. . . . [T]he merit of having caused the socialists to approach this problem systematically belongs entirely to Professor Mises.

Thus Lange suggested the following:

Both as an expression of recognition for the great service rendered by him and as a memento of the prime importance of sound economic accounting, a statue of Professor Mises ought to occupy an honorable place in the great hall of the Ministry of Socialization or of the Central Planning Board of the socialist state.

Lange's theoretical views, as well as his conviction of the practical applicability of a "shadow market" in the socialist economy, were, in turn, questioned by Friedrich A. Hayek.³ Hayek thought that Lange had committed many errors. In Lange's version of socialism, an army of controllers would be needed to verify the calculations of the heads of enterprises. But what would motivate the heads of enterprises and branches? Would they be prevented from cheating. Moreover, the results of these calculations

³Friedrich A. Hayek, "Socialist Calculation: the Competitive 'Solution'," *Economica*, ns. vii, no. 26 (1940).

would have to be compared with additional, counterfactual calculations in order to see whether the bosses of enterprises have chosen the best combination of factors of production possible. All this would call for an enormous bureaucratic state.

The practical side of socialism took its own course. A communist economy as we know it was constructed in the Soviet Union in the late twenties and early thirties and then transplanted to Central and Eastern Europe after World War II. For a time it seemed to have worked well, at least from the point of view of the ruling bureaucracies, who did not hesitate to use totalitarian measures and mass terror.

There was no place for private ownership, nor for the market. The only method of coordinating economic activity was government command and bureaucratic allocation. The result was a prolonged crisis, marked by a stagnation or decrease of production, by inflation, ecological disaster (because of wasteful use of all types of resources—energy, water, forests, etc.), by falling standards of living, and by widespread public frustration and social pathology. This crisis, coupled with political developments including the rise of an organized opposition, brought about the revolutionary changes we witnessed in 1989.

In Eastern European countries, and in Poland in particular, there is now a strong desire to reintroduce private property and the free market.

When it has been accomplished, perhaps Lange's suggestion should be taken up: a statue of Mises should be erected in Poland—in tribute to his final intellectual triumph. For his vision of a free society provides firm

Economic Calculation in the Socialist Commonwealth

intellectual grounding for the emergence of a free and prosperous Poland.

Jacek Kochanowicz
Professor of Economics
University of Warsaw, Poland
April 1990

Introduction

By Ludwig von Mises

There are many socialists who have never come to grips in any way with the problems of economics, and who have made no attempt at all to form for themselves any clear conception of the conditions which determine the character of human society. There are others, who have probed deeply into the economic history of the past and present, and striven, on this basis, to construct a theory of economics of the “bourgeois” society. They have criticized freely enough the economic structure of “free” society, but have consistently neglected to apply to the economics of the disputed socialist state the same caustic acumen, which they have revealed elsewhere, not always with success. Economics, as such, figures all too sparsely in the glamorous pictures painted by the Utopians. They invariably explain how, in the cloud-cuckoo lands of their fancy, roast pigeons will in some way fly into the mouths of the comrades, but they omit to show how this miracle is to take place. Where they do in fact commence to be more explicit in the domain of economics, they soon find themselves at a loss—one remembers, for instance, Proudhon’s fantastic dreams of an “exchange bank”—so that it is not difficult to point out their logical fallacies. When Marxism solemnly

forbids its adherents to concern themselves with economic problems beyond the expropriation of the expropriators, it adopts no new principle, since the Utopians throughout their descriptions have also neglected all economic considerations, and concentrated attention solely upon painting lurid pictures of existing conditions and glowing pictures of that golden age which is the natural consequence of the New Dispensation.

Whether one regards the coming of socialism as an unavoidable result of human evolution, or considers the socialization of the means of production as the greatest blessing or the worst disaster that can befall mankind, one must at least concede, that investigation into the conditions of society organized upon a socialist basis is of value as something more than “a good mental exercise, and a means of promoting political clearness and consistency of thought.”¹ In an age in which we are approaching nearer and nearer to socialism, and even, in a certain sense, are dominated by it, research into the problems of the socialist state acquires added significance for the explanation of what is going on around us. Previous analyses of the exchange economy no longer suffice for a proper understanding of social phenomena in Germany and its eastern neighbors today. Our task in this connection is to embrace within a fairly wide range the elements of socialistic society. Attempts to achieve clarity on this subject need no further justification.

¹Karl Kautsky, *The Social Revolution and On the Morrow of the Social Revolution* (London: Twentieth Century Press, 1907), Part II, p. 1.

1

The Distribution of Consumption Goods in the Socialist Commonwealth

Under socialism all the means of production are the property of the community. It is the community alone which can dispose of them and which determines their use in production. It goes without saying that the community will only be in a position to employ its powers of disposal through the setting up of a special body for the purpose. The structure of this body and the question of how it will articulate and represent the communal will is for us of subsidiary importance. One may assume that this last will depend upon the choice of personnel, and in cases where the power is not vested in a dictatorship, upon the majority vote of the members of the corporation.

The owner of production goods, who has manufactured consumption goods and thus becomes their owner, now has the choice of either consuming them himself or of having them consumed by others. But where the community becomes the owner of consumption goods, which

it has acquired in production, such a choice will no longer obtain. It cannot itself consume; it has perforce to allow others to do so. Who is to do the consuming and what is to be consumed by each is the crux of the problem of socialist distribution.

It is characteristic of socialism that the distribution of consumption goods must be independent of the question of production and of its economic conditions. It is irreconcilable with the nature of the communal ownership of production goods that it should rely even for a part of its distribution upon the economic imputation of the yield to the particular factors of production. It is logically absurd to speak of the worker's enjoying the "full yield" of his work, and then to subject to a separate distribution the shares of the material factors of production. For, as we shall show, it lies in the very nature of socialist production that the shares of the particular factors of production in the national dividend cannot be ascertained, and that it is impossible in fact to gauge the relationship between expenditure and income.

What basis will be chosen for the distribution of consumption goods among the individual comrades is for us a consideration of more or less secondary importance. Whether they will be apportioned according to individual needs, so that he gets most who needs most, or whether the superior man is to receive more than the inferior, or whether a strictly equal distribution is envisaged as the ideal, or whether service to the State is to be the criterion, is immaterial to the fact that, in any event, the portions will be meted out by the State.

Let us assume the simple proposition that distribution will be determined upon the principle that the State treats all its members alike; it is not difficult to conceive of a number of peculiarities such as age, sex, health, occupation, etc., according to which what each receives will be graded. Each comrade receives a bundle of coupons, redeemable within a certain period against a definite quantity of certain specified goods. And so he can eat several times a day, find permanent lodgings, occasional amusements and a new suit every now and again. Whether such provision for these needs is ample or not, will depend on the productivity of social labor.

Moreover, it is not necessary that every man should consume the whole of his portion. He may let some of it perish without consuming it; he may give it away in presents; he may even in so far as the nature of the goods permit, hoard it for future use. He can, however, also exchange some of them. The beer tippler will gladly dispose of non-alcoholic drinks allotted to him, if he can get more beer in exchange, whilst the teetotaler will be ready to give up his portion of drink if he can get other goods for it. The art lover will be willing to dispose of his cinema tickets in order the more often to hear good music; the Philistine will be quite prepared to give up the tickets which admit him to art exhibitions in return for opportunities for pleasure he more readily understands. They will all welcome exchanges. But the material of these exchanges will always be consumption goods. Production goods in a socialist commonwealth are exclusively communal; they are an inalienable property of the community, and thus *res extra commercium*.

The principle of exchange can thus operate freely in a socialist state within the narrow limits permitted. It need not always develop in the form of direct exchanges. The same grounds which have always existed for the building-up of indirect exchange will continue in a socialist state, to place advantages in the way of those who indulge in it. It follows that the socialist state will thus also afford room for the use of a universal medium of exchange—that is, of money. Its role will be fundamentally the same in a socialist as in a competitive society; in both it serves as the universal medium of exchange. Yet the significance of money in a society where the means of production are State controlled will be different from that which attaches to it in one where they are privately owned. It will be, in fact, incomparably narrower, since the material available for exchange will be narrower, inasmuch as it will be confined to consumption goods. Moreover, just because no production good will ever become the object of exchange, it will be impossible to determine its monetary value. Money could never fill in a socialist state the role it fills in a competitive society in determining the value of production goods. Calculation in terms of money will here be impossible.

The relationships which result from this system of exchange between comrades cannot be disregarded by those responsible for the administration and distribution of products. They must take these relationships as their basis, when they seek to distribute goods per head in accordance with their exchange value. If, for instance 1 cigar becomes equal to 5 cigarettes, it will be impossible for the administration to fix the arbitrary value of 1 cigar = 3 cigarettes

as a basis for the equal distribution of cigars and cigarettes respectively. If the tobacco coupons are not to be redeemed uniformly for each individual, partly against cigars, partly against cigarettes, and if some receive only cigars and others only cigarettes, either because that is their wish or because the coupon office cannot do anything else at the moment, the market conditions of exchange would then have to be observed. Otherwise everybody getting cigarettes would suffer as against those getting cigars. For the man who gets one cigar can exchange it for five cigarettes, and he is only marked down with three cigarettes.

Variations in exchange relations in the dealings between comrades will therefore entail corresponding variations in the administrations' estimates of the representative character of the different consumption-goods. Every such variation shows that a gap has appeared between the particular needs of comrades and their satisfactions because in fact, some one commodity is more strongly desired than another.

The administration will indeed take pains to bear this point in mind also as regards production. Articles in greater demand will have to be produced in greater quantities while production of those which are less demanded will have to suffer a curtailment. Such control may be possible, but one thing it will not be free to do; it must not leave it to the individual comrade to ask the value of his tobacco ticket either in cigars or cigarettes at will. If the comrade were to have the right of choice, then it might well be that the demand for cigars and cigarettes would exceed the supply, or vice versa, that cigars or cigarettes pile up in the distributing offices because no one will take them.

If one adopts the standpoint of the labor theory of value, the problem freely admits of a simple solution. The comrade is then marked up for every hour's work put in, and this entitles him to receive the product of one hour's labor, less the amount deducted for meeting such obligations of the community as a whole as maintenance of the unfit, education, etc.

Taking the amount deducted for covering communal expenses as one half of the labor product, each worker who had worked a full hour would be entitled only to obtain such amount of the product as really answered to half an hour's work. Accordingly, anybody who is in a position to offer twice the labor time taken in manufacturing an article, could take it from the market and transfer to his own use or consumption. For the clarification of our problem it will be better to assume that the State does not in fact deduct anything from the workers towards meeting its obligations, but instead imposes an income tax on its working members. In that way every hour of work put in would carry with it the right of taking for oneself such amount of goods as entailed an hour's work.

Yet such a manner of regulating distribution would be unworkable, since labor is not a uniform and homogeneous quantity. Between various types of labor there is necessarily a qualitative difference, which leads to a different valuation according to the difference in the conditions of demand for and supply of their products. For instance, the supply of pictures cannot be increased *ceteris paribus*, without damage to the quality of the product. Yet one cannot allow the laborer who had put in an hour of the most simple type of labor to be entitled to the product of an

hour's higher type of labor. Hence, it becomes utterly impossible in any socialist community to posit a connection between the significance to the community of any type of labor and the apportionment of the yield of the communal process of production. The remuneration of labor cannot but proceed upon an arbitrary basis; it cannot be based upon the economic valuation of the yield as in a competitive state of society, where the means of production are in private hands, since—as we have seen—any such valuation is impossible in a socialist community. Economic realities impose clear limits to the community's power of fixing the remuneration of labor on an arbitrary basis: in no circumstances can the sum expended on wages exceed the income for any length of time.

Within these limits it can do as it will. It can rule forthwith that all labor is to be reckoned of equal worth, so that every hour of work, whatever its quality, entails the same reward; it can equally well make a distinction in regard to the quality of work done. Yet in both cases it must reserve the power to control the particular distribution of the labor product. It will never be able to arrange that he who has put in an hour's labor shall also have the right to consume the product of an hour's labor, even leaving aside the question of differences in the quality of the labor and the products, and assuming moreover that it would be possible to gauge the amount of labor represented by any given article. For, over and above the actual labor, the production of all economic goods entails also the cost of materials. An article in which more raw material is used can never be reckoned of equal value with one in which less is used.

2

The Nature of Economic Calculation

Every man who, in the course of economic life, takes a choice between the satisfaction of one need as against another, *eo ipso* makes a judgment of value. Such judgments of value at once include only the very satisfaction of the need itself; and from this they reflect back upon the goods of a lower, and then further upon goods of a higher order.¹ As a rule, the man who knows his own mind is in a position to value goods of a lower order. Under simple conditions it is also possible for him without much ado to form some judgment of the significance to him of goods of a higher order. But where the state of affairs is more involved and their interconnections not so easily discernible, subtler means must be employed to accomplish a correct² valuation of the means of production. It would

¹[By “lower order” Mises refers to those goods made for final consumption, and by “higher order” those used in production.]

²Using that term, of course, in the sense only of the valuating subject, and not in an objective and universally applicable sense.

not be difficult for a farmer in economic isolation to come by a distinction between the expansion of pasture-farming and the development of activity in the hunting field. In such a case the processes of production involved are relatively short and the expense and income entailed can be easily gauged. But it is quite a different matter when the choice lies between the utilization of a water-course for the manufacture of electricity or the extension of a coal mine or the drawing up of plans for the better employment of the energies latent in raw coal. Here the roundabout processes of production are many and each is very lengthy; here the conditions necessary for the success of the enterprises which are to be initiated are diverse, so that one cannot apply merely vague valuations, but requires rather more exact estimates and some judgment of the economic issues actually involved.

Valuation can only take place in terms of units, yet it is impossible that there should ever be a unit of subjective use value for goods. Marginal utility does not posit any unit of value, since it is obvious that the value of two units of a given stock is necessarily greater than, but less than double, the value of a single unit. Judgments of value do not measure; they merely establish grades and scales.³ Even Robinson Crusoe, when he has to make a decision where no ready judgment of value appears and where he has to construct one upon the basis of a more or less exact estimate, cannot operate solely with subjective use value, but must take into consideration the intersubstitutability

³Franz Čuhel, *Zur Lehre von den Bedürfnissen* (Innsbruck: Wagner'ssche Universität-Buchhandlung, 1907), pp. 198 f.

of goods on the basis of which he can then form his estimates. In such circumstances it will be impossible for him to refer all things back to one unit. Rather will he, so far as he can, refer all the elements which have to be taken into account in forming his estimate to those economic goods which can be apprehended by an obvious judgment of value—that is to say, to goods of a lower order and to pain-cost. That this is only possible in very simple conditions is obvious. In the case of more complicated and more lengthy processes of production it will, plainly, not answer.

In an exchange economy the objective exchange value of commodities enters as the unit of economic calculation. This entails a threefold advantage. In the first place, it renders it possible to base the calculation upon the valuations of all participants in trade. The subjective use value of each is not immediately comparable as a purely individual phenomenon with the subjective use value of other men. It only becomes so in exchange value, which arises out of the interplay of the subjective valuations of all who take part in exchange. But in that case calculation by exchange value furnishes a control over the appropriate employment of goods. Anyone who wishes to make calculations in regard to a complicated process of production will immediately notice whether he has worked more economically than others or not; if he finds, from reference to the exchange relations obtaining in the market, that he will not be able to produce profitably, this shows that others understand how to make a better use of the goods of higher order in question. Lastly, calculation by exchange value makes it possible to refer values back to a unit. For this purpose, since goods are mutually substitutable in accordance with

the exchange relations obtaining in the market, any possible good can be chosen. In a monetary economy it is money that is so chosen.

Monetary calculation has its limits. Money is no yardstick of value, nor yet of price. Value is not indeed measured in money, nor is price. They merely consist in money. Money as an economic good is not of stable value as has been naïvely, but wrongly, assumed in using it as a “standard of deferred payments.” The exchange-relationship which obtains between money and goods is subjected to constant, if (as a rule) not too violent, fluctuations originating not only from the side of other economic goods, but also from the side of money. However, these fluctuations disturb value calculations only in the slightest degree, since usually, in view of the ceaseless alternations in other economic data—these calculations will refer only to comparatively short periods of time—periods in which “good” money, at least normally, undergoes comparatively trivial fluctuations in regard to its exchange relations. The inadequacy of the monetary calculation of value does not have its mainspring in the fact that value is then calculated in terms of a universal medium of exchange, namely money, but rather in the fact that in this system it is exchange value and not subjective use value on which the calculation is based. It can never obtain as a measure for the calculation of those value determining elements which stand outside the domain of exchange transactions. If, for example, a man were to calculate the profitability of erecting a waterworks, he would not be able to include in his calculation the beauty of the waterfall which the scheme might impair, except that he may pay attention to the diminution of

tourist traffic or similar changes, which may be valued in terms of money. Yet these considerations might well prove one of the factors in deciding whether or not the building is to go up at all.

It is customary to term such elements "extra-economic." This perhaps is appropriate; we are not concerned with disputes over terminology; yet the considerations themselves can scarcely be termed irrational. In any place where men regard as significant the beauty of a neighborhood or of a building, the health, happiness and contentment of mankind, the honor of individuals or nations, they are just as much motive forces of rational conduct as are economic factors in the proper sense of the word, even where they are not substitutable against each other on the market and therefore do not enter into exchange relationships.

That monetary calculation cannot embrace these factors lies in its very nature; but for the purposes of our everyday economic life this does not detract from the significance of monetary calculation. For all those ideal goods are goods of a lower order, and can hence be embraced straightway within the ambit of our judgment of values. There is therefore no difficulty in taking them into account, even though they must remain outside the sphere of monetary value. That they do not admit of such computation renders their consideration in the affairs of life easier and not harder. Once we see clearly how highly we value beauty, health, honor and pride, surely nothing can prevent us from paying a corresponding regard to them. It may seem painful to any sensitive spirit to have to balance spiritual goods against material. But that is not the fault of monetary calculation; it lies in the very nature of things

themselves. Even where judgments of value can be established directly without computation in value or in money, the necessity of choosing between material and spiritual satisfaction cannot be evaded. Robinson Crusoe and the socialist state have an equal obligation to make the choice.

Anyone with a genuine sense of moral values experiences no hardship in deciding between honor and livelihood. He knows his plain duty. If a man cannot make honor his bread, yet can he renounce his bread for honor's sake. Only they who prefer to be relieved of the agony of this decision, because they cannot bring themselves to renounce material comfort for the sake of spiritual advantage, see in the choice a profanation of true values.

Monetary calculation only has meaning within the sphere of economic organization. It is a system whereby the rules of economics may be applied in the disposition of economic goods. Economic goods only have part in this system in proportion to the extent to which they may be exchanged for money. Any extension of the sphere of monetary calculation causes misunderstanding. It cannot be regarded as constituting a kind of yardstick for the valuation of goods, and cannot be so treated in historical investigations into the development of social relationships; it cannot be used as a criterion of national wealth and income, nor as a means of gauging the value of goods which stand outside the sphere of exchange, as who should seek to estimate the extent of human losses through emigrations or wars in terms of money?⁴ This is mere sciolistic

⁴Cf. Friedrich von Wieser, *Über den Ursprung und die Hauptgesetze des wirtschaftlichen Eertes* (Vienna: A. Hölder, 1884), pp. 185 f.

tomfoolery, however much it may be indulged in by otherwise perspicacious economists.

Nevertheless within these limits, which in economic life it never oversteps, monetary calculation fulfils all the requirements of economic calculation. It affords us a guide through the oppressive plenitude of economic potentialities. It enables us to extend to all goods of a higher order the judgment of value, which is bound up with and clearly evident in, the case of goods ready for consumption, or at best of production goods of the lowest order. It renders their value capable of computation and thereby gives us the primary basis for all economic operations with goods of a higher order. Without it, all production involving processes stretching well back in time and all the longer roundabout processes of capitalistic production would be gropings in the dark.

There are two conditions governing the possibility of calculating value in terms of money. Firstly, not only must goods of a lower, but also those of a higher order, come within the ambit of exchange, if they are to be included. If they do not do so, exchange relationships would not arise. True enough, the considerations which must obtain in the case of Robinson Crusoe prepared, within the range of his own hearth, to exchange, by production, labor and flour for bread, are indistinguishable from those which obtain when he is prepared to exchange bread for clothes in the open market, and, therefore, it is to some extent true to say that every economic action, including Robinson Crusoe's own

production, can be termed *exchange*.⁵ Moreover, the mind of one man alone—be it ever so cunning, is too weak to grasp the importance of any single one among the countless many goods of a higher order. No single man can ever master all the possibilities of production, innumerable as they are, as to be in a position to make straightway evident judgments of value without the aid of some system of computation. The distribution among a number of individuals of administrative control over economic goods in a community of men who take part in the labor of producing them, and who are economically interested in them, entails a kind of intellectual division of labor, which would not be possible without some system of calculating production and without economy.

The second condition is that there exists in fact a universally employed medium of exchange—namely, money—which plays the same part as a medium in the exchange of production goods also. If this were not the case, it would not be possible to reduce all exchange-relationships to a common denominator.

Only under simple conditions can economics dispense with monetary calculation. Within the narrow confines of household economy, for instance, where the father can supervise the entire economic management, it is possible to determine the significance of changes in the processes of production, without such aids to the mind,

⁵Cf. Mises, *Theorie des Geldes und der Umlaufsmittel* (Munich and Leipzig: Duncker & Humblot, 1912), p. 16, with the references there given. [See the English translation by H.E. Batson, *The Theory of Money and Credit* (Indianapolis: Liberty Classics, 1980), p. 52.]

and yet with more or less of accuracy. In such a case the process develops under a relatively limited use of capital. Few of the capitalistic roundabout processes of production are here introduced: what is manufactured is, as a rule, consumption goods or at least such goods of a higher order as stand very near to consumption-goods. The division of labor is in its rudimentary stages: one and the same laborer controls the labor of what is in effect, a complete process of production of goods ready for consumption, from beginning to end. All this is different, however, in developed communal production. The experiences of a remote and bygone period of simple production do not provide any sort of argument for establishing the possibility of an economic system without monetary calculation.

In the narrow confines of a closed household economy, it is possible throughout to review the process of production from beginning to end, and to judge all the time whether one or another mode of procedure yields more consumable goods. This, however, is no longer possible in the incomparably more involved circumstances of our own social economy. It will be evident, even in the socialist society, that 1,000 hectolitres of wine are better than 800, and it is not difficult to decide whether it desires 1,000 hectolitres of wine rather than 500 of oil. There is no need for any system of calculation to establish this fact: the deciding element is the will of the economic subjects involved. But once this decision has been taken, the real task of rational economic direction only commences, i.e., economically, to place the means at the service of the end. That can only be done with some kind of economic calculation. The human mind cannot orientate itself properly

among the bewildering mass of intermediate products and potentialities of production without such aid. It would simply stand perplexed before the problems of management and location.⁶

It is an illusion to imagine that in a socialist state calculation *in natura* can take the place of monetary calculation. Calculation *in natura*, in an economy without exchange, can embrace consumption goods only; it completely fails when it comes to dealing with goods of a higher order. And as soon as one gives up the conception of a freely established monetary price for goods of a higher order, rational production becomes completely impossible. Every step that takes us away from private ownership of the means of production and from the use of money also takes us away from rational economics.

It is easy to overlook this fact, considering that the extent to which socialism is in evidence among us constitutes only a socialistic oasis in a society with monetary exchange, which is still a free society to a certain degree. In one sense we may agree with the socialists' assertion which is otherwise entirely untenable and advanced only as a demagogic point, to the effect that the nationalization and municipalization of enterprise is not really socialism, since these concerns in their business organizations are so much dependent upon the enviroing economic system with its free commerce that they cannot be said to partake today of the really essential nature of a socialist economy. In state

⁶Friedrich von Gottl-Ottlilienfeld, *Wirtschaft und Technik (Grundriss der Sozialökonomik*, Section II; Tübingen: J.C.B. Mohr, 1914), p. 216.

and municipal undertakings technical improvements are introduced because their effect in similar private enterprises, domestic or foreign, can be noticed, and because those private industries which produce the materials for these improvements give the impulse for their introduction. In these concerns the advantages of reorganization can be established, because they operate within the sphere of a society based upon private ownership of the means of production and upon the system of monetary exchange, being thus capable of computation and account. This state of affairs, however, could not obtain in the case of socialist concerns operating in a purely socialistic environment.

Without economic calculation there can be no economy. Hence, in a socialist state wherein the pursuit of economic calculation is impossible, there can be—in our sense of the term—no economy whatsoever. In trivial and secondary matters rational conduct might still be possible, but in general it would be impossible to speak of rational production any more. There would be no means of determining what was rational, and hence it is obvious that production could never be directed by economic considerations. What this means is clear enough, apart from its effects on the supply of commodities. Rational conduct would be divorced from the very ground which is its proper domain. Would there, in fact, be any such thing as rational conduct at all, or, indeed, such a thing as rationality and logic in thought itself? Historically, human rationality is a development of economic life. Could it then obtain when divorced therefrom?

For a time the remembrance of the experiences gained in a competitive economy, which has obtained for some

thousands of years, may provide a check to the complete collapse of the art of economy. The older methods of procedure might be retained not because of their rationality but because they appear to be hallowed by tradition. Actually, they would meanwhile have become irrational, as no longer comporting with the new conditions. Eventually, through the general reconstruction of economic thought, they will experience alterations which will render them in fact uneconomic. The supply of goods will no longer proceed anarchically of its own accord; that is true. All transactions which serve the purpose of meeting requirements will be subject to the control of a supreme authority. Yet in place of the economy of the "anarchic" method of production, recourse will be had to the senseless output of an absurd apparatus. The wheels will turn, but will run to no effect.

One may anticipate the nature of the future socialist society. There will be hundreds and thousands of factories in operation. Very few of these will be producing wares ready for use; in the majority of cases what will be manufactured will be unfinished goods and production goods. All these concerns will be interrelated. Every good will go through a whole series of stages before it is ready for use. In the ceaseless toil and moil of this process, however, the administration will be without any means of testing their bearings. It will never be able to determine whether a given good has not been kept for a superfluous length of time in the necessary processes of production, or whether work and material have not been wasted in its completion. How will it be able to decide whether this or that method of production is the more profitable? At best it will only be able

to compare the quality and quantity of the consumable end product produced, but will in the rarest cases be in a position to compare the expenses entailed in production. It will know, or think it knows, the ends to be achieved by economic organization, and will have to regulate its activities accordingly, i.e., it will have to attain those ends with the least expense. It will have to make its computations with a view to finding the cheapest way. This computation will naturally have to be a value computation. It is eminently clear, and requires no further proof, that it cannot be of a technical character, and that it cannot be based upon the objective use value of goods and services.

Now, in the economic system of private ownership of the means of production, the system of computation by value is necessarily employed by each independent member of society. Everybody participates in its emergence in a double way: on the one hand as a consumer and on the other as a producer. As a consumer he establishes a scale of valuation for goods ready for use in consumption. As a producer he puts goods of a higher order into such use as produces the greatest return. In this way all goods of a higher order receive a position in the scale of valuations in accordance with the immediate state of social conditions of production and of social needs. Through the interplay of these two processes of valuation, means will be afforded for governing both consumption and production by the economic principle throughout. Every graded system of pricing proceeds from the fact that men always and ever harmonized their own requirements with their estimation of economic facts.

All this is necessarily absent from a socialist state. The administration may know exactly what goods are most urgently needed. But in so doing, it has only found what is, in fact, but one of the two necessary prerequisites for economic calculation. In the nature of the case it must, however, dispense with the other—the valuation of the means of production. It may establish the value attained by the totality of the means of production; this is obviously identical with that of all the needs thereby satisfied. It may also be able to calculate the value of any means of production by calculating the consequence of its withdrawal in relation to the satisfaction of needs. Yet it cannot reduce this value to the uniform expression of a money price, as can a competitive economy, wherein all prices can be referred back to a common expression in terms of money. In a socialist commonwealth which, whilst it need not of necessity dispense with money altogether, yet finds it impossible to use money as an expression of the price of the factors of production (including labor), money can play no role in economic calculation.⁷

Picture the building of a new railroad. Should it be built at all, and if so, which out of a number of conceivable roads should be built? In a competitive and monetary economy, this question would be answered by monetary

⁷This fact is also recognized by Otto Neurath (*Durch die Kriegswirtschaft zur Naturalwirtschaft* [Munich: G.D.W. Callwey, 1919], pp. 216 f.). He advances the view that every complete administrative economy is, in the final analysis, a natural economy. "Socialization," he says, "is thus the pursuit of natural economy." Neurath merely overlooks the insuperable difficulties that would have to develop with economic calculation in the socialist commonwealth.

calculation. The new road will render less expensive the transport of some goods, and it may be possible to calculate whether this reduction of expense transcends that involved in the building and upkeep of the next line. That can only be calculated in money. It is not possible to attain the desired end merely by counterbalancing the various physical expenses and physical savings. Where one cannot express hours of labor, iron, coal, all kinds of building material, machines and other things necessary for the construction and upkeep of the railroad in a common unit it is not possible to make calculations at all. The drawing up of bills on an economic basis is only possible where all the goods concerned can be referred back to money. Admittedly, monetary calculation has its inconveniences and serious defects, but we have certainly nothing better to put in its place, and for the practical purposes of life monetary calculation as it exists under a sound monetary system always suffices. Were we to dispense with it, any economic system of calculation would become absolutely impossible.

The socialist society would know how to look after itself. It would issue an edict and decide for or against the projected building. Yet this decision would depend at best upon vague estimates; it would never be based upon the foundation of an exact calculation of value.

The static state can dispense with economic calculation. For here the same events in economic life are ever recurring; and if we assume that the first disposition of the static socialist economy follows on the basis of the final state of the competitive economy, we might at all events conceive of a socialist production system which is rationally controlled

from an economic point of view. But this is only conceptually possible. For the moment, we leave aside the fact that a static state is impossible in real life, as our economic data are forever changing, so that the static nature of economic activity is only a theoretical assumption corresponding to no real state of affairs, however necessary it may be for our thinking and for the perfection of our knowledge of economics. Even so, we must assume that the transition to socialism must, as a consequence of the levelling out of the differences in income and the resultant readjustments in consumption, and therefore production, change all economic data in such a way that a connecting link with the final state of affairs in the previously existing competitive economy becomes impossible. But then we have the spectacle of a socialist economic order floundering in the ocean of possible and conceivable economic combinations without the compass of economic calculation.

Thus in the socialist commonwealth every economic change becomes an undertaking whose success can be neither appraised in advance nor later retrospectively determined. There is only groping in the dark. Socialism is the abolition of rational economy.

3

Economic Calculation in the Socialist Commonwealth

Are we really dealing with the necessary consequences of common ownership of the means of production? Is there no way in which some kind of economic calculation might be tied up with a socialist system?

In every great enterprise, each particular business or branch of business is to some extent independent in its accounting. It reckons the labor and material against each other, and it is always possible for each individual group to strike a particular balance and to approach the economic results of its activities from an accounting point of view. We can thus ascertain with what success each particular section has labored, and accordingly draw conclusions about the reorganization, curtailment, abandonment, or expansion of existing groups and about the institution of new ones. Admittedly, some mistakes are inevitable in such a calculation. They arise partly from the difficulties consequent upon an allocation of general expenses. Yet other mistakes arise from the necessity of calculating with what are not

from many points of view rigorously ascertainable data, e.g., when in the ascertainment of the profitability of a certain method of procedure we compute the amortization of the machines used on the assumption of a given duration for their usefulness. Still, all such mistakes can be confined within certain narrow limits, so that they do not disturb the net result of the calculation. What remains of uncertainty comes into the calculation of the uncertainty of future conditions, which is an inevitable concomitant of the dynamic nature of economic life.

It seems tempting to try to construct by analogy a separate estimation of the particular production groups in the socialist state also. But it is quite impossible. For each separate calculation of the particular branches of one and the same enterprise depends exclusively on the fact that is precisely in market dealings that market prices to be taken as the bases of calculation are formed for all kinds of goods and labor employed. Where there is no free market, there is no pricing mechanism; without a pricing mechanism, there is no economic calculation.

We might conceive of a situation, in which exchange between particular branches of business is permitted, so as to obtain the mechanism of exchange relations (prices) and thus create a basis for economic calculation even in the socialist commonwealth. Within the framework of a uniform economy knowing not private ownership of the means of production, individual labor groups are constituted independent and authoritative disposers, which have indeed to behave in accordance with the directions of the supreme economic council, but which nevertheless assign each other material goods and services only against a payment,

which would have to be made in the general medium of exchange. It is roughly in this way that we conceive of the organization of the socialist running of business when we nowadays talk of complete socialization and the like. But we have still not come to the crucial point. Exchange relations between production goods can only be established on the basis of private ownership of the means of production. When the "coal syndicate" provides the "iron syndicate" with coal, no price can be formed, except when both syndicates are the owners of the means of production employed in their business. This would not be socialization but workers' capitalism and syndicalism.

The matter is indeed very simple for those socialist theorists who rely on the labor theory of value.

As soon as society takes possession of the means of production and applies them to production in their directly socialised form, each individual's labour, however different its specific utility may be, becomes *a priori* and directly social labour. The amount of social labour invested in a product need not then be established indirectly; daily experience immediately tells us how much is necessary on an average. Society can simply calculate how many hours of labour are invested in a steam engine, a quarter of last harvest's wheat, and a 100 yards of linen of given quality. . . . To be sure, society will also have to know how much labour is needed to produce any consumption-good. It will have to arrange its production plan according to its means of production, to which labour especially belongs. The utility yielded by the various consumption-goods, weighted against each

other and against the amount of labour required to produce them, will ultimately determine the plan. People will make everything simple without the mediation of the notorious “value.”⁸

Here it is not our task once more to advance critical objections against the labor theory of value. In this connection they can only interest us in so far as they are relevant to an assessment of the applicability of labor in the value computations of a socialist community.

On a first impression calculation in terms of labor also takes into consideration the natural non-human conditions of production. The law of diminishing returns is already allowed for in the concept of socially necessary average labor time to the extent that its operation is due to the variety of the natural conditions of production. If the demand for a commodity increases and worse natural resources must be exploited, then the average socially necessary labor time required for the production of a unit increases too. If more favorable natural resources are discovered, the amount of socially necessary labor diminishes.⁹ The consideration of the natural condition of production suffices only in so far as it is reflected in the amount of labor socially necessary. But it is in this respect that valuation in terms of labor fails. It leaves the employment of material factors of production out of account. Let the amount of

⁸Friedrich Engels, *Herrn Eugen Dührings Umwälzung des Wissenschafts*, 7th ed., pp. 335 f. [Translated by Emile Burns as *Herr Eugen Dühring's Revolution in Science—Anti-Düring* (London: Lawrence & Wishart, 1943).]

⁹Karl Marx, *Capital*, translated by Eden and Cedar Paul (London: Allen & Unwin, 1928), p. 9.

socially necessary labor time required for the production of each of the commodities *P* and *Q* be 10 hours. Further, in addition to labor the production of both *P* and *Q* requires the raw material *a*, a unit of which is produced by an hour's socially necessary labor; 2 units of *a* and 8 hours' labor are used in the production of *P*, and one unit of *a* and 9 hours' labor in the production of *Q*. In terms of labor *P* and *Q* are equivalent, but in value terms *P* is more valuable than *Q*. The former is false, and only the latter corresponds to the nature and purpose of calculation. True, this surplus, by which according to value calculation *P* is more valuable than *Q*, this material sub-stratum "is given by nature without any addition from man."¹⁰ Still, the fact that it is only present in such quantities that it becomes an object of economizing, must be taken into account in some form or other in value calculation.

The second defect in calculation in terms of labor is the ignoring of the different qualities of labor. To Marx all human labor is economically of the same kind, as it is always "the productive expenditure of human brain, brawn, nerve and hand."¹¹

Skilled labour counts only as intensified, or rather multiplied, simple labour, so that a smaller quantity of skilled labour is equal to a larger quantity of simple labour. Experience shows that skilled labour can always be reduced in this way to the terms of simple labour. No matter that a commodity be the product of the most highly skilled

¹⁰Ibid., p. 12.

¹¹Ibid., p. 13 et seq.

labour, its value can be equated with that of the product of simple labour, so that it represents merely a definite amount of simple labour.

Böhm-Bawerk is not far wrong when he calls this argument “a theoretical juggle of almost stupefying naïveté.”¹² To judge Marx’s view we need not ask if it is possible to discover a single uniform physiological measure of all human labor, whether it be physical or “mental.” For it is certain that there exist among men varying degrees of capacity and dexterity, which cause the products and services of labor to have varying qualities. What must be conclusive in deciding the question whether reckoning in terms of labor is applicable or not, is whether it is or is not possible to bring different kinds of labor under a common denominator without the mediation of the economic subject’s valuation of their products. The proof Marx attempts to give is not successful. Experience indeed shows that goods are consumed under exchange relations without regard of the fact of their being produced by simple or complex labor. But this would only be a proof that given amounts of simple labor are directly made equal to given amounts of complex labor, if it were shown that labor is their source of exchange value. This not only is not demonstrated, but is what Marx is trying to demonstrate by means of these very arguments.

¹²Cf. Eugen von Böhm-Bawerk, *Capital and Interest*, translated by William Smart (London and New York: Macmillan, 1890), p. 384. [See the English translation by George Huncke and Hans F. Sennholz (South Holland, Ill.: Libertarian Press, 1959), p. 299, where the phrase reads “a bit of legerdemain in the theorizing line that is astounding in its naïveté.”]

No more is it a proof of this homogeneity that rates of substitution between simple and complex labor are manifested in the wage rate in an exchange economy—a fact to which Marx does not allude in this context. This equalizing process is a result of market transactions and not its antecedent. Calculation in terms of labor would have to set up an arbitrary proportion for the substitution of complex by simple labor, which excludes its employment for purposes of economic administration.

It was long supposed that the labor theory of value was indispensable to socialism, so that the demand for the nationalization of the means of production should have an ethical basis. Today we know this for the error it is. Although the majority of socialist supporters have thus employed this misconception, and although Marx, however much he fundamentally took another point of view, was not altogether free from it, it is clear that the political call for the introduction of socialized production neither requires nor can obtain the support of the labor theory of value on the one hand, and that on the other those people holding different views on the nature and origin of economic value can be socialist according to their sentiments. Yet the labor theory of value is inherently necessary for the supporters of socialist production in a sense other than that usually intended. In the main socialist production might only appear rationally realizable, if it provided an objectively recognizable unit of value, which would permit of economic calculation in an economy where neither money nor exchange were present. And only labor can conceivably be considered as such.

4

Responsibility and Initiative in Communal Concerns

The problem of responsibility and initiative in socialist enterprises is closely connected with that of economic calculation. It is now universally agreed that the exclusion of free initiative and individual responsibility, on which the successes of private enterprise depend, constitutes the most serious menace to socialist economic organization.¹³

The majority of socialists silently pass this problem by. Others believe they can answer it with an allusion to the directors of companies; in spite of the fact that they are not the owners of the means of production, enterprises under their control have flourished. If society, instead of company shareholders, becomes the owner of the means of production, nothing will have altered. The directors would not work less satisfactorily for society than for shareholders.

¹³Cf. *Vorläufiger Bericht der Sozialisierungskommission über die Frage der Sozialisierung des Kohlenbergbaues*, concluded 15th February, 1919 (Berlin, 1919), p. 13.

We must distinguish between two groups of joint-stock companies and similar concerns. In the first group, consisting for the large part of smaller companies, a few individuals unite in a common enterprise in the legal form of a company. They are often the heirs of the founders of the company, or often previous competitors who have amalgamated. Here the actual control and management of business is in the hands of the shareholders themselves or at least of some of the shareholders, who do business in their own interest; or in that of closely related shareholders such as wives, minors, etc. The directors in their capacity as members of the board of management or of the board of control, and sometimes also in an attenuated legal capacity, themselves exercise the decisive influence in the conduct of affairs. Nor is this affected by the circumstance that sometimes part of the share-capital is held by a financial consortium or bank. Here in fact the company is only differentiated from the public commercial company by its legal form.

The situation is quite different in the case of large-scale companies, where only a fraction of the shareholders, i.e., the big shareholders, participate in the actual control of the enterprise. And these usually have the same interest in the firm's prosperity as any property holder. Still, it may well be that they have interests other than those of the vast majority of small shareholders, who are excluded from the management even if they own the larger part of the share-capital. Severe collisions may occur, when the firm's business is so handled on behalf of the directors that the shareholders are injured. But be that as it may, it is clear that the real holders of power in companies run the business in their

own interest, whether it coincides with that of the shareholders or not. In the long run it will generally be to the advantage of the solid company administrator, who is not merely bent on making a transient profit, to represent the shareholders' interests only in every case and to avoid manipulations which might damage them. This holds good in the first instance for banks and financial groups, which should not trifle at the public's expense with the credit they enjoy. Thus it is not merely on the prescriptiveness of ethical motives that the success of companies depends.

The situation is completely transformed when an undertaking is nationalized. The motive force disappears with the exclusion of the material interests of private individuals, and if State and municipal enterprises thrive at all, they owe it to the taking over of "management" from private enterprise, or to the fact that they are ever driven to reforms and innovations by the business men from whom they purchase their instruments of production and raw material.

Since we are in a position to survey decades of State and socialist endeavor, it is now generally recognized that there is no internal pressure to reform and improvement of production in socialist undertakings, that they cannot be adjusted to the changing conditions of demand, and that in a word they are a dead limb in the economic organism. All attempts to breathe life into them have so far been in vain. It was supposed that a reform in the system of remuneration might achieve the desired end. If the managers of these enterprises were interested in the yield, it was thought they would be in a position comparable to that of the manager of large-scale companies. This is a fatal error.

The managers of large-scale companies are bound up with the interests of the businesses they administer in an entirely different way from what could be the case in public concerns. They are either already owners of a not inconsiderable fraction of the share capital, or hope to become so in due course. Further, they are in a position to obtain profits by stock exchange speculation in the company's shares. They have the prospect of bequeathing their positions to, or at least securing part of their influence for, their heirs. The type to which the success of joint-stock companies is to be attributed, is not that of a complacently prosperous managing director resembling the civil servant in his outlook and experience; rather it is precisely the manager, promoter, and man of affairs, who is himself interested as a shareholder, whom it is the aim of all nationalization and municipalization to exclude.

It is not generally legitimate to appeal in a socialist context to such arguments in order to ensure the success of an economic order built on socialist foundations. All socialist systems, including that of Karl Marx, and his orthodox supporters, proceed from the assumption that in a socialist society a conflict between the interests of the particular and general could not possibly arise. Everybody will act in his own interest in giving of his best because he participates in the product of all economic activity. The obvious objection that the individual is very little concerned whether he himself is diligent and enthusiastic, and that it is of greater moment to him that everybody else should be, is either completely ignored or is insufficiently dealt with by them. They believe they can construct a socialist commonwealth on the basis of the Categorical Imperative

alone. How lightly it is their wont to proceed in this way is best shown by Kautsky when he says, "If socialism is a social necessity, then it would be human nature and not socialism which would have to readjust itself, if ever the two clashed."¹⁴ This is nothing but sheer Utopianism.

But even if we for the moment grant that these Utopian expectations can actually be realized, that each individual in a socialist society will exert himself with the same zeal as he does today in a society where he is subjected to the pressure of free competition, there still remains the problem of measuring the result of economic activity in a socialist commonwealth which does not permit of any economic calculation. We cannot act economically if we are not in a position to understand economizing.

A popular slogan affirms that if we think less bureaucratically and more commercially in communal enterprises, they will work just as well as private enterprises. The leading positions must be occupied by merchants, and then income will grow apace. Unfortunately "commercial-mindedness" is not something external, which can be arbitrarily transferred. A merchant's qualities are not the property of a person depending on inborn aptitude, nor are they acquired by studies in a commercial school or by working in a commercial house, or even by having been a business man oneself for some period of time. The entrepreneur's commercial attitude and activity arises from his position in the economic process and is lost with its dis-

¹⁴Cf. Karl Kautsky, Preface to "Atlanticus" [Gustav Jaeckh], *Produktion und Konsum im Sozialstaat* (Stuttgart: J.H.W. Dietz, 1898), p. 14.

appearance. When a successful business man is appointed the manager of a public enterprise, he may still bring with him certain experiences from his previous occupation, and be able to turn them to good account in a routine fashion for some time. Still, with his entry into communal activity he ceases to be a merchant and becomes as much a bureaucrat as any other placeman in the public employ. It is not a knowledge of bookkeeping, of business organization, or of the style of commercial correspondence, or even a dispensation from a commercial high school, which makes the merchant, but his characteristic position in the production process, which allows of the identification of the firm's and his own interests. It is no solution of the problem when Otto Bauer in his most recently published work proposes that the directors of the National Central Bank, on whom leadership in the economic process will be conferred, should be nominated by a Collegium, to which representatives of the teaching staff of the commercial high schools would also belong.¹⁵ Like Plato's philosophers, the directors so appointed may well be the wisest and best of their kind, but they cannot be merchants in their posts as leaders of a socialist society, even if they should have been previously.

It is a general complaint that the administration of public undertakings lacks initiative. It is believed that this might be remedied by changes in organization. This also is a grievous mistake. The management of a socialist concern cannot entirely be placed in the hands of a single individual,

¹⁵Cf. Otto Bauer, *Der Weg zum Sozialismus* (Vienna: Ignaz Brand, 1919), p. 25.

because there must always be the suspicion that he will permit errors inflicting heavy damages on the community. But if the important conclusions are made dependent on the votes of committees, or on the consent of the relevant government offices, then limitations are imposed on the individual's initiative. Committees are rarely inclined to introduce bold innovations. The lack of free initiative in public business rests not on an absence of organization, it is inherent in the nature of the business itself. One cannot transfer free disposal of the factors of production to an employee, however high his rank, and this becomes even less possible, the more strongly he is materially interested in the successful performance of his duties; for in practice the propertyless manager can only be held morally responsible for losses incurred. And so ethical losses are juxtaposed with opportunities for material gain. The property owner on the other hand himself bears responsibility, as he himself must primarily feel the loss arising from unwisely conducted business. It is precisely in this that there is a characteristic difference between liberal and socialist production.

5

The Most Recent Socialist Doctrines and the Problem of Economic Calculation

Since recent events helped socialist parties to obtain power in Russia, Hungary, Germany and Austria, and have thus made the execution of a socialist nationalization program a topical issue,¹⁶ Marxist writers have themselves begun to deal more closely with the problems of the regulation of the socialist commonwealth. But even now they still cautiously avoid the crucial question, leaving it to be tackled by the despised “Utopians.” They themselves prefer to confine their attention to what is to be done in the immediate future; they are forever drawing up programs of the path to Socialism and not of Socialism itself. The only possible conclusion from all these writings is that they are not even conscious of the larger problem of economic calculation in a socialist society.

¹⁶[The reader will remember that Mises is writing in 1920.]

To Otto Bauer the nationalization of the banks appears the final and decisive step in the carrying through of the socialist nationalization program. If all banks are nationalized and amalgamated into a single central bank, then its administrative board becomes “the supreme economic authority, the chief administrative organ of the whole economy. Only by nationalization of the banks does society obtain the power to regulate its labor according to a plan, and to distribute its resources rationally among the various branches of production, so as to adapt them to the nation’s needs.”¹⁷ Bauer is not discussing the monetary arrangements which will prevail in the socialist commonwealth after the completion of the nationalization of the banks. Like other Marxists he is trying to show how simply and obviously the future socialist order of society will evolve from the conditions prevailing in a developed capitalist economy. “It suffices to transfer to the nation’s representatives the power now exercised by bank shareholders through the Administrative Boards they elect,”¹⁸ in order to socialize the banks and thus to lay the last brick on the edifice of socialism. Bauer leaves his readers completely ignorant of the fact that the nature of the banks is entirely changed in the process of nationalization and amalgamation into one central bank. Once the banks merge into a single bank, their essence is wholly transformed; they are then in a position to issue credit without any limitation.¹⁹

¹⁷Cf. Otto Bauer, *Der Weg zum Sozialismus* (Vienna: Ignaz Brand, 1919), p. 26f.

¹⁸Ibid. p. 25.

¹⁹Cf. Ludwig von Mises, *Theorie des Geldes und der Umlaufsmittel* (Munich and Leipzig: Duncker & Humblot, 1912), pp.

In this fashion the monetary system as we know it today disappears of itself. When in addition the single central bank is nationalized in a society, which is otherwise already completely socialized, market dealings disappear and all exchange transactions are abolished. At the same time the Bank ceases to be a bank, its specific functions are extinguished, for there is no longer any place for it in such a society. It may be that the name “Bank” is retained, that the Supreme Economic Council of the socialist community is called the Board of Directors of the Bank, and that they hold their meetings in a building formerly occupied by a bank. But it is no longer a bank, it fulfils none of those functions which a bank fulfils in an economic system resting on the private ownership of the means of production and the use of a general medium of exchange—money. It no longer distributes any credit, for a socialist society makes credit of necessity impossible. Bauer himself does not tell us what a bank is, but he begins his chapter on the nationalization of the banks with the sentence: “All disposable capital flows into a common pool in the banks.”²⁰ As a Marxist must he not raise the question of what the banks’ activities will be after the abolition of capitalism?

All other writers who have grappled with the problems of the organization of the socialist commonwealth are guilty of similar confusions. They do not realize that the bases of economic calculation are removed by

474 ff. [See the English translation by H.E. Batson, *The Theory of Money and Credit* (Indianapolis: Liberty Classics, 1980), [Compare p. 411 of the 1980 English edition.]

²⁰Cf. Bauer, *Der Weg zum Sozialismus*, p. 24 f.

the exclusion of exchange and the pricing mechanism, and that something must be substituted in its place, if all economy is not to be abolished and a hopeless chaos is not to result. People believe that socialist institutions might evolve without further ado from those of a capitalist economy. This is not at all the case. And it becomes all the more grotesque when we talk of banks, banks management, etc. in a socialist commonwealth.

Reference to the conditions that have developed in Russia and Hungary under Soviet rule proves nothing. What we have there is nothing but a picture of the destruction of an existing order of social production, for which a closed peasant household economy has been substituted. All branches of production depending on social division of labor are in a state of entire dissolution. What is happening under the rule of Lenin and Trotsky is merely destruction and annihilation. Whether, as the liberals²¹ hold, socialism must inevitably draw these consequences in its train, or whether, as the socialists retort, this is only a result of the fact that the Soviet Republic is attacked from without, is a question of no interest to us in this context. All that has to be established is the fact that the Soviet socialist commonwealth has not even begun to discuss the problem of economic calculation, nor has it any cause to do so. For where things are still produced for the market in Soviet Russia in spite of governmental prohibitions, they

²¹[Mises is using the term “liberal” here in its nineteenth-century European sense, meaning “classical liberal” or libertarian. On liberalism see Mises’s *Liberalism: In the Classical Tradition*, translated by Ralph Raico (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, 1985).]

are valued in terms of money, for there exists to that extent private ownership of the means of production, and goods are sold against money. Even the Government cannot deny the necessity, which it confirms by increasing the amount of money in circulation, of retaining a monetary system for at least the transition period.

That the essence of the problem to be faced has not yet come to light in Soviet Russia, Lenin's statements in his essay on *Die nächsten Aufgaben der Sowjetmacht* best show. In the dictator's deliberations there ever recurs the thought that the immediate and most pressing task of Russian communism is "the organization of bookkeeping and control of those concerns, in which the capitalists have already been expropriated, and of all other economic concerns."²² Even so Lenin is far from realizing that an entirely new problem is here involved which it is impossible to solve with the conceptual instruments of "bourgeois" culture. Like a real politician, he does not bother with issues beyond his nose. He still finds himself surrounded by monetary transactions, and does not notice that with progressive socialization money also necessarily loses its function as the medium of exchange in general use, to the extent that private property and with it exchange disappear. The implication of Lenin's reflections is that he would like to re-introduce into Soviet business "bourgeois" bookkeeping carried on on a monetary basis. Therefore he also

²²Cf. V.I. Lenin, *Die nächsten Aufgaben der Sowjetmacht* (Berlin: Wilmersdorf, 1919), pp. 12 f., 22 ff. [English translation, *The Soviets at Work*.—This edition.]

desires to restore “bourgeois experts” to a state of grace.²³ For the rest Lenin is as little aware as Bauer of the fact that in a socialist commonwealth the functions of the bank are unthinkable in their existing sense. He wishes to go farther with the “nationalization of the banks” and to proceed” to a transformation of the banks into the nodal point of social bookkeeping under socialism.”²⁴

Lenin’s ideas on the socialist economic system, to which he is striving to lead his people, are generally obscure.

“The socialist state,” he says “can only arise as a net of producing and consuming communes, which conscientiously record their production and consumption, go about their labour economically, uninterruptedly raise their labour productivity and thus attain the possibility of lowering the working day to seven or six hours or even lower.”²⁵ “Every factor, every village appears as a production and consumption commune having the right and obligation to apply the general Soviet legislation in its own way (‘in its own way’ not in the sense of its violation but in the sense of the variety of its forms of realisation), and to solve in its own way the problems of calculating the production and distribution of products.”²⁶

²³Ibid., pp. 15.

²⁴Ibid., pp. 21 and 26. Compare also Bukharin, *Das Programm der Kommunisten* (Zürich: no pub., 1918), pp. 27 ff.

²⁵Lenin, *Die nächsten Aufgaben der Sowjetmacht*, pp. 24 f.

²⁶Ibid., pp. 32.

“The chief communes must and will serve the most backward ones as educators, teachers, and stimulating leaders.” The successes of the chief communes must be broadcast in all their details in order to provide a good example. The communes “showing good business results” should be immediately rewarded “by a curtailment of the working day and with an increase in wages, and by allowing more attention to be paid to cultural and aesthetic goods and values.”²⁷

We can infer that Lenin’s ideal is a state of society in which the means of production are not the property of a few districts, municipalities, or even of the workers in the concern, but of the whole community. His ideal is socialist and not syndicalist. This need not be specially stressed for a Marxist such as Lenin. It is not extraordinary of Lenin the theorist, but of Lenin the statesman, who is the leader of the syndicalist and small-holding peasant Russian revolution. However, at the moment we are engaged with the writer Lenin and may consider his ideals separately, without letting ourselves be disturbed by the picture of sober reality. According to Lenin the theorist, every large agricultural and industrial concern is a member of the great commonwealth of labor. Those who are active in this commonwealth have the right of self-government; they exercise a profound influence on the direction of production and again on the distribution of the goods they are assigned for consumption. Still labor is the property of the whole society, and as its product belongs to society also, it therefore disposes of its distribution. How, we must now

²⁷Ibid., p. 33.

ask, is calculation in the economy carried on in a socialist commonwealth which is so organized? Lenin gives us a most inadequate answer by referring us back to statistics. We must

bring statistics to the masses, make it popular, so that the active population will gradually learn by themselves to understand and realize how much and what kind of work must be done, how much and what kind of recreation should be taken, so that the comparison of the economy's industrial results in the case of individual communes becomes the object of general interest and education.²⁸

From these scanty allusions it is impossible to infer what Lenin understands by statistics and whether he is thinking of monetary or *in natura* computation. In any case, we must refer back to what we have said about the impossibility of learning the money prices of production-goods in a socialist commonwealth and about the difficulties standing in the way of *in natura* valuation.²⁹ Statistics would only be applicable to economic calculation if it could go beyond the *in natura* calculation, whose ill-suitedness for this purpose we have demonstrated. It is naturally impossible where no exchange relations are formed between goods in the process of trade.

²⁸Ibid.

²⁹Neurath, too, imputes great importance to statistics for the setting up of the socialist economic plan. Otto Neurath (*Durch die Kriegswirtschaft zur Naturalwirtschaft* [Munich: G.D.W. Callwey, 1919], pp. 212 et seq.).

Conclusion

It must follow from what we have been able to establish in our previous arguments that the protagonists of a socialist system of production claim preference for it on the ground of greater rationality as against an economy so constituted as to depend on private ownership of the means of production. We have no need to consider this opinion within the framework of the present essay, in so far as it falls back on the assertion that rational economic activity necessarily cannot be perfect, because certain forces are operative which hinder its pursuance. In this connection we may only pay attention to the economic and technical reason for this opinion. There hovers before the holders of this tenet a muddled conception of technical rationality, which stands in antithesis to economic rationality, on which also they are not very clear. They are wont to overlook the fact that “all technical rationality of production is identical with a low level of specific expenditure in the processes of production.”³⁰ They overlook

³⁰Friedrich von Gottl-Ottlilienfeld, *Wirtschaft und technik* (*Grundriss der Sozialökonomik*, Section II; Tübingen: J.C.B. Mohr, 1914), p. 220.

the fact that technical calculation is not enough to realize the “degree of general and teleological expediency”³¹ of an event; that it can only grade individual events according to their significance; but that it can never guide us in those judgments which are demanded by the economic complex as a whole. Only because of the fact that technical considerations can be based on profitability can we overcome the difficulty arising from the complexity of the relations between the mighty system of present-day production on the one hand and demand and the efficiency of enterprises and economic units on the other; and can we gain the complete picture of the situation in its totality, which rational economic activity requires.³²

These theories are dominated by a confused conception of the primacy of objective use value. In fact, so far as economic administration is concerned, objective use value can only acquire significance for the economy through the influence it derives from subjective use value on the formation of the exchange relations of economic goods. A second confused idea is inexplicably involved—the observer’s personal judgment of the utility of goods as opposed to the judgments of the people participating in economic transactions. If anyone finds it “irrational” to spend as much as is expended in society on smoking, drinking, and similar enjoyments, then doubtless he is right from the point of view of his own personal scale of values. But in so judging, he is ignoring the fact that economy is a means, and that, without prejudice to the rational considerations influencing

³¹Ibid., p. 219.

³²Ibid., p. 225.

its pattern, the scale of ultimate ends is a matter for conation and not for cognition.

The knowledge of the fact that rational economic activity is impossible in a socialist commonwealth cannot, of course, be used as an argument either for or against socialism. Whoever is prepared himself to enter upon socialism on ethical grounds on the supposition that the provision of goods of a lower order for human beings under a system of common ownership of the means of production is diminished, or whoever is guided by ascetic ideals in his desire for socialism, will not allow himself to be influenced in his endeavors by what we have said. Still less will those “culture” socialists be deterred who, like Muckle, expect from socialism primarily “the dissolution of the most frightful of all barbarisms—capitalist rationality.”³³ But he who expects a rational economic system from socialism will be forced to re-examine his views

³³Friedrich Muckle, *Das Kulturideal des Sozialismus* (Munich and Leipzig: Duncker & Humblot, 1919), p. 213. On the other hand, Muckle demands the “highest degree of rationalisation of economic life in order to curtail hours of labor, and to permit man to withdraw to an island where he can listen to the melody of his being.”

Postscript

Why a Socialist Economy is “Impossible”

Mises’s Thesis

In “Economic Calculation in a Socialist Commonwealth,” Ludwig von Mises demonstrates, once and for ever, that, under socialist central planning, there are no means of economic calculation and that, therefore, socialist economy itself is “impossible” (“unmöglich”)—not just inefficient or less innovative or conducted without benefit of decentralized knowledge, but really and truly and literally *impossible*.

At the same time, he establishes that the necessary and sufficient conditions of the existence and evolution of human society is liberty, property, and sound money: the liberty of each individual to produce and exchange according to independently formed value judgments and price appraisements; unrestricted private ownership of all types and orders of producers’ goods as well as of consumers’ goods; and the existence of a universal medium of exchange whose value is not subject to large or unforeseeable variations.

Abolish all, or even one, of these institutions and human society disintegrates amid a congeries of isolated household economies and predatory tribes. But not only does abolition of private ownership of the means of production by a world embracing socialist state render human social existence impossible: Mises's analysis also implies that socialism destroys the praxeological significance of time and nullifies humanity's uniquely teleological contribution to the universe.

Because Mises's critique of socialism has been the subject of significant misinterpretation by his followers as well as his opponents, his argument, as it is presented in this article, should be restated.

The Calculation Argument

(1) Mises's pathbreaking and central insight is that monetary calculation is the indispensable mental tool for choosing the optimum among the vast array of intricately-related production plans that are available for employing the factors of production within the framework of the social division of labor. Without recourse to calculating and comparing the benefits and costs of production using the structure of monetary prices determined at each moment on the market, the human mind is only capable of surveying, evaluating, and directing production processes whose scope is drastically restricted to the compass of the primitive household economy.

The practically unlimited number of alternative plans for allocating the factors of production and the overwhelming complexities of their interrelationships stem from two

related facts about our world. First, our world is endowed with a wide variety of relatively “nonspecific” resources, which to a greater or lesser degree are substitutable for one another over a broad range of production processes. Second, since human action itself implies the ineradicable scarcity of time as well as of resources, there always exists an almost inexhaustible opportunity to accumulate capital and lengthen the economy’s structure of production, thus multiplying beyond number the technical possibilities for combining the factors of production.

Given, therefore, the infinitude of the relationships of complementarity and substitutability simultaneously subsisting among the various types of productive resources, a single human mind—even if it were miraculously endowed with complete and accurate knowledge of the quantities and qualities of the available factors of production, of the latest techniques for combining and transforming these factors into consumer goods, and of the set of all individuals’ value rankings of consumer goods—would be utterly incapable of determining the optimal pattern of resource allocation or even if a particular plan was ludicrously and destructively uneconomic. Not only would this perfectly knowledgeable person be unable to devise a rational solution of the problem, he or she would be unable to even achieve a full intellectual “survey” of the problem in all its complexity.

Thus, as Mises (p. 15) says,

the mind of one man alone—be it never so cunning, is too weak to grasp the importance of any single one among the countless many goods of a higher order. No single man can ever master

all the possibilities of production, innumerable as they are, as to be in a position to make straight-way evident judgments of value without the aid of some system of computation.

(2) What is needed, then, to produce the cardinal numbers necessary for computing the costs and benefits of production processes is what Mises (p. 15) calls the “intellectual division of labor” which emerges when private property owners are at liberty to exchange goods and services against money according to their individual value judgments and price appraisements. Thus in a market society every individual mind is accorded a dual role in determining the quantities of monetary calculation. In their consumer roles, all people make monetary bids for the existing stocks of final goods according to their subjective valuations, leading to the emergence of objective monetary exchange ratios which relate the values of all consumer goods to one another.

In light of the system of consumer goods’ prices thus determined, and of the existing knowledge of the technical conditions of production, entrepreneurs seeking to maximize monetary profit bid against one another to acquire the services of the productive factors currently available and owned by these same consumers (including those in entrepreneurial roles). In this competitive process, each and every type of productive service is objectively appraised in monetary terms according to its ultimate contribution to the production of consumer goods. There thus comes into being the market’s monetary price structure, a genuinely “social” phenomenon in which every unit of exchangeable goods and services is assigned a socially significant cardinal

number and which has its roots in the minds of every single member of society yet must forever transcend the contribution of the individual human mind.

(3) Since the social price structure is continually being destroyed and recreated at every moment of time by the competitive appraisal process operating in the face of ceaseless change of the economic data, there is always available to entrepreneurs the means of estimating the costs and revenues and calculating the profitability of any thinkable process of production.

Once private property in the nonhuman means of production is abolished, however, as it is under socialism, the appraisal process must grind to a halt, leaving only the increasingly irrelevant memory of the market's final price structure. In the absence of competitive bidding for productive resources by entrepreneurs, there is no possibility of assigning economic meaning to the amalgam of potential physical productivities embodied in each of the myriad of natural resources and capital goods now in the hands of the socialist central planners.

Even if planners observed the money prices which continued to be generated on an unhampered market for consumer goods, or substituted their own unitary scale of values for those of their subject consumers, there would still be no possibility for the central planners to ever know or guess the "opportunity cost" of any social production process. Where actors, in principle, are not in a position to compare the estimated costs and benefits of their decisions, economizing activities, by definition, are ruled out.

A society without monetary calculation, that is, a socialist society, is therefore quite literally a society without

an economy. Thus, contrary to what has become the conventional interpretation by friend and foe alike, Mises (pp. 18 and 23) was not indulging in rhetorical hyperbole but drily stating a demonstrable conclusion of economic science when he declared in this article:

Without economic calculation there can be no economy. Hence in a socialist state wherein the pursuit of economic calculation is impossible, there can be—in our sense of the term—no economy whatsoever. . . . Socialism is the abolition of rational economy.

(4) Socialism will have particularly devastating effects on the economy's capital structure. Without a unitary expression for time preferences in monetary terms, central planners will never know whether the investment of current resources in the higher stages of production, which yield physically heterogeneous and noncommensurable outputs, will generate an overall production structure whose parts fit together or whose intended length is adjusted to the amount of capital available. Thus higher-order technical processes will be undertaken whose outputs cannot be used in further production processes because the needed complementary producer goods are not available.

In the Soviet Union, for example, in the midst of a dire undersupply of food products, new and unused tractors stand rusting in fields of unharvested grain, because there does not exist sufficient fuel to power them, labor to operate them, or structures to house them. One of the most important consequences of the fact that centrally planned economies exist within a world market economy is that the planners can observe and crudely copy capitalist economies

in deciding which technical processes can coexist in a reasonably coherent capital structure. Had the entire world, rather than isolated nations, existed under central planning for the last half century, the global capital structure would long since have crumbled irretrievably to dust and humanity been catapulted back to autarkic primitivism.

(5) Thus, from the first, Mises emphasized the point, which was conveniently ignored by hostile and disingenuous critics: that the existence of the Soviet Union and other centrally-controlled economies is no refutation of his thesis regarding the impossibility of socialist economy. Their gross inefficiency notwithstanding, these economies in fact do eke out a precarious existence as parasites on the social appraisal process and integrated capital structure produced by the surrounding world market. As Mises (pp. 17–18) points out, neither these economies nor nationalized enterprises within capitalist economies are genuinely socialistic, because both entities

are so much dependent upon the environing economic system with its free commerce that they cannot be said to partake . . . of the really essential nature of a socialist economy. . . . In state and municipal undertakings technical improvements are introduced because their effect in similar private enterprises, domestic and foreign, can be noticed, and because those private industries which produce the materials for these improvements give the impulse for their introduction. In these concerns the advantages of reorganization can be established, because they operate within the sphere of a society based upon the private ownership of the means of production and upon the

system of monetary exchange, being thus capable of computation and account.

(6) But Mises does not stop with the demonstration that socialism must eradicate economizing activity within the social nexus; he also traces out its implications for the development of the human mind. With the dissolution of social production that inevitably ensures upon the imposition of a world-embracing socialist state, humanity is reduced in short order to dependence upon economic activities carried on in relative isolation. The primitive production processes suitable to autarkic economies do not require economic calculation using cardinal numbers nor do such simple processes offer much scope for purely technical calculation. No longer dependent upon arithmetic operations to sustain itself, the human mind begins to lose its characteristic ability to calculate.

Mises's analysis of the effects of socialism also has another momentous implication. With the impossibility of building up and maintaining a capital structure in the absence of monetary calculation, human economy under socialism comes to consist of super-short and repetitive household processes utilizing minimal capital and with little scope for adjustment to new wants. The result is that time itself—in the praxeological sense of a distinction between present and future—ceases to play a role in human affairs. Men and women, in their capitalless, hand-to-mouth existence, begin to passively experience time as the brute beasts do—not actively as a tool of planning and action but passively as mere duration. Humanity as a teleological force in the universe is therefore necessarily a creation of the inextricably related phenomena of calculation and

capital. In a meaningful sense, then, socialism not only exterminates economy and society but the human intellect and spirit as well.

Mises vs. the Hayekians

(1) It is of utmost importance to recognize that, in his original article as well as all later writings on the subject, Mises unswervingly identified the unique and insoluble problem of socialism as the impossibility of calculation—not, as in the case of F.A. Hayek, as an absence of an efficient mechanism for conveying knowledge to the planners. This difference between Mises and Hayek is reflected in their respective conceptions of the social function of competition as well as in their responses to the claims of the later market and mathematical socialists. Actually, Mises anticipated and refuted both groups in his original article. Nonetheless, Mises's position on these issues is today generally ignored or conflated with Hayek's.

(2) For Mises, the starting point for entrepreneurial planning of production in a market economy is the experience of the present (actually immediately past) price structure of the market as well as of the underlying economic data. Knowledge of past market prices by the entrepreneur does not substitute for qualitative information about the economy, as Hayek seems to argue, but is necessarily complementary to it. The reason, for Mises, is that it is price structures as they emerge at future moments of time that are relevant to unavoidably time-consuming and therefore future-oriented production plans. But entrepreneurs can never know future prices directly; they are only able to

appraise them in light of their “experience” of past prices and of their “understanding” of what transformations will take place in the present configuration of the qualitative economic data. Whether or not one prefers to characterize entrepreneurial forecasting and appraisalment as a procedure for “discovery” of knowledge, as Hayek does, what is important is that for Mises it is the indispensable starting point of the competitive process and not its social culminant.

In other words, the forecasting and appraisalment of future price structures in which discovery of new knowledge may be said to play a role is a *precompetitive* and *nonsocial* operation, that is, it precedes and conditions competitive entrepreneurial bidding for existing factors of production and is carried on wholly within the compass of individual minds. The *social* function of competition, on the other hand, is the objective price appraisalment of the higher-order goods, the *sine qua non* of entrepreneurial calculation of the profitability of alternative production plans. Competition therefore acquires the characteristic of a quintessentially social process, not because its operation presupposes knowledge discovery, which is inescapably an individual function, but because, in the absence of competitively determined money prices for the factors of production, possession of literally all the knowledge in the world would not enable an individual to allocate productive resources economically within the social division of labor.

(3) Mises thus assumes in all his writings on the subject that the planners have full knowledge of consumer valuations of final goods as well as of the various means

available for producing these goods under known technological conditions. For example, Mises (p. 21) writes,

The administration may know exactly what goods are most urgently needed. . . . It may also be able to calculate the value of any means of production by calculating the consequence of its withdrawal in relation to the satisfaction of needs.

Despite this knowledge, the socialist administrators would be unable to arrive at a useful social appraisal of the means of production in cardinal terms. This can only occur where there exists private ownership and exchange of productive resources, which generate catallactic competition among independent producers resulting in the imputation of meaningful money prices to the resources.

(4) Anticipating the future arguments of market socialists, Mises reasons that any attempt to implement monetary calculation by forcing or inducing managers of socialist enterprises to act as profit-maximizing (or even more absurdly, price-and-marginal-cost-equalizing) entrepreneurs founders on the fact that these managers do not have an ownership interest in the capital and output of their enterprises. Consequently, the bids they make against one another in seeking to acquire investment funds and purchase productive resources must result in interest rates and prices that are wholly and inescapably arbitrary and useless as tools of economic calculation.

The meaninglessness of these so-called “parametric prices” of market socialism, and their failure to replicate the price structure of the market, derives from the circumstance that they are wholly conditioned by the system of

rewards and penalties and other arrangements instituted by the monopoly owners of the factors of production (the planners) to guide the behavior of their managers. But this system of managerial incentives is itself a construct of the individual human mind, which would first have to solve for itself the problem of valuing the factors of production before it could even hope to devise the proper (but now superfluous) incentive structure.

(5) Hayek and his followers are skeptical regarding how quickly and effectively dispersed knowledge of the changing economic circumstances can be incorporated into the socialist price system. But for Mises's analysis, this is quite beside the point. Regardless of how well-informed the socialist managers are, their bids in the "market" for factors of production, to which the central planners are supposed to adjust the price parameters of the system, emerge from an arbitrary set of directives from the planners themselves and not from competition among private property owners. The prices could be no more useless for the task of economic calculation, if the planners eschewed the elaborate and wasteful charade of orchestrating a pseudo-market and simply picked them out of a hat.

(6) From the Misesian point of view, moreover, the shortcomings of the prices of market socialism do not stem from the fact that such prices are supposed to be treated as "parametric" by the managers, as has been curiously argued recently by some of Mises's followers. The problem is precisely that such prices are *not* genuinely parametric from the point of view of all members of the social body. The prices which emerge on the free market are meaningful for economic calculation because and to the extent

that they are determined by a social appraisal process, which, though it is the inevitable outcome of the mental operations of all consumers and producers, yet enters as an unalterable external factor in the buying and selling plans of every individual actor.

(7) In the 1930s, Hayek and the British Misesian Lionel (later Lord) Robbins made a fateful and wholly unwarranted concession to those who contended that the methods of mathematical economics could be successfully bent to yield a solution for the socialist calculation problem. In response to the argument that prices of the factors of production would emerge from the solution of a set of simultaneous equations which incorporated the given data of the economic system, Hayek and Robbins argued that in “theory” this was true but in “practice,” highly problematic.

The reason for its impracticality, according to Hayek and Robbins, is that, in the real-world economy, consumer wants, available resources, and technology are subject to continual and unforeseeable change. Therefore, by the time the planners had assembled the vast amount of information needed to formulate the massive equation system and succeeded in solving it (manually or mechanically, since there were no high-speed computers in the 1930s), the system of prices which emerged would be completely inapplicable to the current economy, whose underlying data had changed rapidly and unpredictably in the meantime.

Unfortunately, the Hayek-Robbins response was construed by most economists to mean that the theoretical debate over socialist calculation had come to an end with

the concession from the Misesian side that socialism could calculate after all, though perhaps a day late in practice. Moreover, some modern Austrian economists, in a belated effort to reclaim the theoretical high ground, reconstructed the case against socialism along lines suggested by Hayek's later articles on knowledge and competition, which, for all their subtle and compelling argumentation, are disturbingly quasi-Walrasian, seemingly disregarding the lapse of time between present and future prices. The result has been an unacknowledged but momentous retreat from the original and unrefuted Misesian critique emphasizing the absolute impossibility of economic calculation without market prices to a categorically different Hayekian position criticizing the relative inefficiency of nonmarket mechanisms for discovery, communication, and use of knowledge in the allocation of productive resources.

(8) In sharp contrast to the Hayek-Robbins rejoinder and the reconstructed Austrian position, Mises's neglected refutation of the mathematical socialists, which is outlined in his original article (pp. 22–23) and elaborated upon in *Human Action*, does not deviate in the slightest from the fundamental and crucial calculation perspective. Thus Mises assumes that the economic data underlying an existing market economy are suddenly and forever frozen and revealed to newly appointed central planners.

With brilliant insight, Mises demonstrates that, even with Hayekian knowledge problems thus banished from consideration, the planners would still be unable to calculate the optimal or any pattern of deployment for the factors of production. The reason is that the existing capital structure and acquired skills and locations of the labor

force are initially maladjusted to the newly prevailing equilibrium configuration of the data. The planners therefore would be forced to decide how to allocate the flow of productive services among the myriads of potential technical production processes and labor retraining and relocation projects so as to secure the optimal path of adjustment to equilibrium for the existing stocks of capital goods, labor skills, and housing. The bewildering complexity of this allocation decision rests on the fact that the planners will be confronted with altered conditions *at every moment of time* during this disequilibrium transition process, since the quantities and qualities of the available productive services themselves are in constant flux due to the circumstance that they originate in the very stocks of physical assets and labor skills that are being progressively transformed.

(9) Complicating this problem beyond conception is the added fact that the leveling of incomes under the new socialist regime and the inevitable fluctuation of current incomes attending the transformation of the production structure would effect a continual revolution in the structure of consumer demands during the transition period. Mises (p. 23) is surely not overstating his case when he concludes that

the transition to socialism must . . . change all economic data in such a way that a connecting link with the final state of affairs in the previously existent competitive economy becomes impossible. But then we have the spectacle of a socialist economic order floundering in the ocean of possible and conceivable economic combinations without the compass of economic calculation.

Even if mathematics, therefore, yields a consistent set of prices for the given data of equilibrium, this solution is inapplicable to the calculation problems of the dynamic approach to equilibrium. In this situation, use of such prices to allocate resources does not allow the economy to achieve equilibrium, at any rate, before the capital structure and the entire system of social production is demolished.

Thus Mises's original thesis stands on its own against all counterarguments and without any need for qualification or emendation: without private ownership of the means of production, and catallactic competition for them, there cannot exist economic calculation and rational allocation of resources under conditions of the social division of labor. In short, socialist economy and society are impossible.

Beyond Socialism

(1) But though Mises's thesis may remain valid, is it still relevant in a world in which socialist planned economies have collapsed like a house of cards? The answer is a resounding "yes," for Mises's argument (p. 17) implies that "Every step that takes us away from private ownership of the means of production and from the use of money also takes us away from rational economics."

The never-ending growth of the bloated, rapacious, unjust, and unlovely American and other Western-style welfare states involves an ongoing series of such steps. Looking at it from another angle, the blessedly defunct planned economies of Eastern Europe, as noted above, were far from being genuinely socialist economies in the

Misesian sense, because of their ability to trade in and observe the capital complementarities and prices of the world market. They were, and the Soviet Union, China, and others still are, gigantic monopoloid entities that suppress internal markets for capital goods yet maintain subjective and objective relationships with the world market order which enables them to crudely calculate their actions.

As the parasitic welfare state expands its power of monetary inflation and of regulating and intervening into its host “mixed” economy, we can expect productive activities to become more chaotic and guided less and less by socially-determined market prices. In fact, long before a state of complete socialization is achieved, economy and society will begin to disintegrate amid failure of markets to clear, increasing barter, less efficient sizes and forms of business organizations, misallocation, and technical inefficiency of productive resources and disastrous declines of gross capital investment, labor productivity, and living standards. The dangers currently threatening to plunge sectors of the U.S. economy into calculational chaos can be illustrated with a few examples.

(2) Let us consider inflation. One of the most important factors operating to restrain governments of the United States and other mixed economies from reinstating the inflationary monetary policies which brought us the double-digit rates of price increase of the 1970s is the coexistence of closely integrated global capital markets and independent national fiat currencies issued by central banks jealous of their prerogatives. Any nation that attempts a highly inflationary monetary policy courts the prospect of a rapidly depreciating exchange rate for its

currency, a “flight” of investors from its domestic capital market, and a stratospheric climb in interest rates. In the current jargon, monetary authorities, even of large nations such as the United States, have “lost control of domestic interest rates.”

Now, there is a much ballyhooed movement afoot to effect greater international “coordination” of monetary and fiscal policies or even to introduce a supranational central bank empowered to issue its own fiat currency. At bottom, such proposals seek to loosen the restraints on monetary inflation at the domestic level and allow politicians and bureaucrats and their allowed special interests to surreptitiously extract an expanding flow of lucre or “welfare” from the productive sectors of their economies.

More importantly from our point of view, these international monetary arrangements greatly increase the threat of hyperinflation and the consequent disintegration of the world market economy. Moreover, even if it were reined in before hiving off into hyper-inflationary currency collapse, a bout of galloping inflation in an economy with a highly developed and complex capital structure would drastically falsify monetary calculation and cause capital consumption and a drastic plunge in living standards.

(3) Another area in which we face the prospect of calculational chaos is health care. By wildly subsidizing and stimulating the demand for health care services of selected special interest groups beginning in the mid-1960s, the United States government precipitated a never ending and catastrophic upward-spiral of health care costs.

In addition, the irrational and labyrinthine structure of regulations and prohibitions imposed by government

on the industry has massively distorted resource allocation, restricted supply, and further driven up the costs of medical care. The tragic but predictable result of such intervention is that many of the unsubsidized members of society have been effectively priced out of the market for health care. The simple and humane solution to this tragedy is to quickly terminate these antisocial subsidies and dismantle the destructive regulatory structure, permitting the competitive price appraisal and resource allocation process to operate unimpeded.

But, of course, the internal dynamic of the welfare state is never to retrench and risk disaffection of its pampered and powerful constituencies, for example, the American Medical Association, the American Association for Retired Persons, the entrenched bureaucracies of nonprofit hospitals, and so on. And so we face the prospect of “national health care insurance” which is a euphemism for the thoroughgoing socialization of the health care sector, with its resultant shortages, further suppression of competitive incentives, and deterioration of quality. But this is simply another example of the mad logic of the welfare state: since the government produces nothing that is valuable in terms of social appraisal, it can only supply welfare to some by siphoning off the resources and destroying the economic arrangements that support the welfare of others. In attempting to repair the politically unpopular destruction of its earlier policies, it is driven to further isolated acts of destruction until it arrives, with cruel and ultimate irony, at the policy for the systematic destruction of society and human welfare, that is, socialism.

(4) Finally, we have environmental policies, which are becoming progressively broader in scope and more draconian in enforcement. To the extent that such policies go beyond the protection of individual rights and property—and they are now far, far beyond this point—they become antisocial and destructive of capital and living standards. In fact, in many if not in most cases, it is the obliteration of economic productivity *per se* which is intended and which constitutes the in-kind welfare subsidy to the well-heeled and well-organized minority of upper-middle class environmentalists.

This is true, for example, of environmental regulations that prohibit development activities for the vast majority of Alaskan land and along much of the California coastline as well as of recent calls for suppressing development of Amazon rain forest and coercively maintaining the entire continent of Antarctica forever wild. Needless to say, thoroughgoing and centralized land use regulations, which some fanatical environmentalists are calling for, is tantamount to the abolition of private property in national resources and business structures. The connection between environmentalism and socialism is even stronger when we realize that what socialism brings about unintentionally—the abolition of humanity as a teleological force shaping nature to its purposes—is precisely the aim of the radical environmentalist program.

Conclusion

The significance of Mises's 1920 article extends far beyond its devastating demonstration of the impossibility of

socialist economy and society. It provides the rationale for the price system, purely free markets, the security of private property against all encroachments, and sound money. Its thesis will continue to be relevant as long as economists and policy-makers want to understand why even minor government economic interventions consistently fail to achieve socially beneficial results. “Economic Calculation in the Socialist Commonwealth” surely ranks among the most important economic articles written this century.

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Ludwig von Mises as Social Rationalist

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For the most part Ludwig von Mises's writings on society and social evolution have been ignored by the participants in the current revivals of both Austrian economics and classical liberal political philosophy. When his social theory has been addressed, Mises appears to his critics (Barry 1987, p. 59) as "a child of the Enlightenment wrongly deposited in the twentieth century." But this assessment is inaccurate for two reasons. First, Mises severely criticizes the social meliorism of the Enlightenment liberals and demonstrates that their position is inconsistent with one that assigns the central position to human reason in social evolution. Second, in developing his own uniquely rationalist position, Mises has much to say about matters of central importance to modern Austrians, libertarians, and classical liberals who are either critics or adherents of the "spontaneous order" and/or social evolutionist positions staked out by Hayek.

I limit myself here to a systematic exposition of Mises's thinking about society and social evolution. I make no attempt to critically analyze Mises's thought or to explicitly compare it to that of other social thinkers. However, I do employ certain well-known positions of Hayek's work as a foil to facilitate the elaboration of Mises's arguments and to demonstrate their contemporary relevance.

In the following section I present Mises's view that all social interactions and relationships are thought out in advance and that, therefore, society originates and evolves as a product of reason and teleological striving, as a "man-made mode of acting" and a consciously devised "strategy." Section three sets forth Mises's argument that law, normative rules of conduct, and social institutions are at one and the same time the product of a long evolutionary process and the outcome of attempts by individual human beings to rationally and purposively adjust their behavior to the requirements of social cooperation under division of labor.

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Section four highlights the importance which Mises attaches to economic calculation using market prices as the logical precondition of the existence of society. Far from being a “spontaneous” order, society is, for Mises, a “rational” order, because the very possibility of purposive action within the framework of social division of labor depends on the faculty of the human intellect to conceive cardinal numbers and manipulate them in arithmetic operations. Thus, as we shall see in section five, from Mises’s viewpoint, *the* social function of the price system is not to facilitate “the use of knowledge in society” but to render possible “the use of calculation in society.” And it is speculative future market prices as *appraised* by entrepreneurs and not the realized prices of history which serve this function. Mises argues further that the past prices experienced by entrepreneurs, praxeologically, can never embody the knowledge relevant to their necessarily future-oriented production plans in the real world of changing economic data. Indeed, I argue that this is the long neglected negative implication of Mises’s regression theorem of the origin of money.

Section six addresses the question whether and to what extent Mises’s position in the socialist calculation debate actually referred to problems of knowledge rather than of calculation. In fact, as we shall see, the answer to this question is quite clear. Particularly in his later discussions of the issue, Mises explicitly assumed, time and again, that the socialist planners had full knowledge, not only of the latest technology, but of what Hayek calls “the particular circumstances of time and place” relating to consumer value scales and resource availabilities. Even under these conditions of “perfect information,” Mises emphatically contended that the problem of calculation, “the crucial and only problem of socialism,” remains insoluble.

The Misesian approach to social evolution as the outcome of conscious ideological struggle is outlined in the concluding section. Here I present Mises’s speculative hypothesis that continuing ignorance of the remoter consequences of catallactic activity by the masses leads to spreading social maladjustment and spontaneous social disintegration.

Reason and the Origin of Society

For Mises reason is man’s “characteristic feature” (1966, p. 177). Human reason and human action are inseparably linked, because “Every action is always based on a definite idea about causal relations” (Mises 1966, p. 177). In addition reason and action are congeneric, a twin product of man’s efforts to sustain himself and flourish in a universe of scarcity. Thus, beings inhabiting a “universe of

unlimited opportunities ... would never have developed reasoning and thinking. If ever such a world were to be given to the descendants of the human race, these blessed beings would see their power to think wither away and would cease to be human. For the primary task of reason is to cope consciously with the limitations imposed upon man by nature, is to fight scarcity. Acting and thinking man is a product of a universe of scarcity" (Mises 1966, pp. 235-36).

As the fruit of conscious thought and the instrument of action, Mises characterizes knowledge as having an "activistic basis." "[K]nowledge is a tool of action. Its function is to advise man how to proceed in his endeavors to remove uneasiness" (Mises 1987b, p. 35).

Mises (1966, p. 143) defines society as "concerted action" or "cooperation" among human beings that is "the outcome of conscious and purposeful behavior." As such, society is a consciously-devised "strategy," "a man-made mode of acting" in the war against scarcity (Mises 1966, p. 26).¹ Society is therefore a product of human reason and volition: "Reason has demonstrated that, for man, the most adequate means for improving his condition is social cooperation and division of labor. They are man's foremost tool in his struggle for survival" (Mises 1966, p. 176).

The provenance of social cooperation, in Mises's view, is to be found in two fundamental facts. The first is the "natural phenomenon" that human effort expended under the division of labor is more productive than the same quantum of effort devoted to isolated production (1985, pp. 38-39). The second fact is that, through a deliberate exercise of reason, individuals are able to grasp this first fact and *consciously* use it as a means to improve their welfare (1966 pp. 144-45). As Mises writes: "Human society is an intellectual and spiritual phenomenon. It is the outcome of a *purposeful utilization* [my emphasis] of a universal law determining cosmic becoming, viz. the higher productivity of the division of labor. As with every instance of action, the recognition of the laws of nature are put into the service of man's efforts to improve his conditions" (1966, p. 14).

In identifying the division of labor as "the essence of society" and "the fundamental social phenomenon," Mises establishes social evolution as an ontological process amenable to rational investigation (1969, p. 299; 1966, p. 157). Social evolution thus becomes "the development of the division of labor" and this permits us to "... trace the origin of everything concerned with society in the development of the division of labor" (Mises 1969, pp. 301, 303).

As "the great principle of cosmic becoming and evolution," and "the fundamental principle of all forms of life" (Mises 1985, p. 38

¹Mises employs this term to characterize the market economy in particular.

Mises 1969, p. 291),² the principle of the division of labor has application in both the social and biological worlds. This insight leads Mises in his earlier writings to compare human society to a biological organism, identifying the division of labor as the *tertium comparationis* of the metaphor (1969, pp. 289-92).³

What distinguishes cooperation among individuals within the "social organism," however, from the cellular interactions of animal and vegetable organisms is that, in the former only, reason and will are the originating and sustaining forces of the organic coalescence. Human society is thus spiritual and teleological. Writes Mises: "Society is the product of thought and will. It does not exist outside thought and will. Its being lies within man, not in the outer world. It is projected from within outwards" (1969, p. 291).

Eagerness for improved living standards in conjunction with the recognition of the higher productivity of social cooperation provides the specific motivation that induces an individual to renounce autarkic economic activity and willingly integrate himself into the social division of labor. Accordingly,

Every step by which an individual substitutes concerted action for isolated action results in an immediate and recognizable improvement in his conditions. The advantages derived from peaceful cooperation and division of labor are universal. They immediately benefit every generation. ... When social cooperation is intensified by enlarging the field in which there is division of labor ... the incentive is the desire of all those concerned to improve their own conditions. In striving after his own—rightly understood—interests the individual works toward an intensification of social cooperation and peaceful intercourse. Society is a product of human action, i.e., the human urge to remove uneasiness as far as possible [Mises 1966, p. 146].

The Torrens-Ricardo law of comparative cost, which identifies the causes of trade and specialization among nations, thus becomes for Mises a formal inference from the more general "law of association,"

²Elsewhere, Mises (1966, p. 145) refers to it as "one of the great basic principles of cosmic becoming and evolutionary change." It is this expression which Butler (1988, p. 336 n. 119) cites as "among the most evident" of the "many examples of Mises's difficulty with English." This is not "an odd description of the division of labor," as Butler (1988, p. 336, n.119) suggests, but a felicitous and perfectly fitting description of its central importance in the ontological structures of the biological and social worlds.

³Mises (1966, pp. 143-76) completely drops the biological metaphor in his later discussion of society in *Human Action*, but then reinstates it in *Theory and History* (Mises 1985, pp. 252-53) while criticizing its various misinterpretations. In response to the charge of Butler (1988, p. 108) that Mises at one point "drifts into the organic fallacy," it should be said that Mises uses the metaphor with complete awareness and with the sole purpose of illustrating the point that the principle of the division of labor operates in the biological as well as the social realm.

which explains the universality and permanence of social cooperation on the individual level. In elucidating the incentives that induce individual human beings of varying productive capacities and without explicit agreement to willingly undertake those actions that engender the social division of labor and tend toward its progressive intensification, the law of association provides the key to understanding social evolution.

According to Mises:

The law of association makes us comprehend the tendencies which resulted in the progressive intensification of human cooperation. ... The task with which science is faced in respect of the origins of society can only consist in the demonstration of those factors which can and must result in association and its progressive intensification. ... If and as far as labor under the division of labor is more productive than isolated labor, and if and as far as man is able to realize this fact, human action itself tends toward cooperation and association; man becomes a social being not in sacrificing his own concerns for the sake of a mythical Moloch, society, but in aiming at an improvement in his own welfare. Experience teaches that this condition—higher productivity achieved under the division of labor—is present because its cause—the inborn inequality of men and the inequality in the geographical distribution of the natural factors of production—is real. Thus we are in a position to comprehend the course of social evolution [1966, pp. 160-61].

The operation of the law of association gives rise to two related tendencies which are detectable in the historical development of society. The first is the progressive extension of the division of labor to encompass greater numbers of individuals and groups. The second is the progressive intensification of the division of labor, as the attainment of an ever increasing variety of individual goals is sought within the social nexus. These evolutionary tendencies are described by Mises in the following terms:

Society develops subjectively and objectively; subjectively by enlarging its membership, objectively by enlarging the aims of its activities. Originally confined to the narrowest circles of people, to immediate neighbours, the division of labour gradually becomes more general until it eventually includes all mankind. This process, still far from complete and never at any point in history completed, is finite. When all men on earth form a unitary system of division of labor, it will have reached its goal. Side by side with this extension of the social bond goes a process of intensification. Social action embraces more and more aims; the area in which the individual provides for his own consumption becomes constantly narrower [1969, p. 324].

The latter tendency for division of labor to intensify effects “the highest possible concentration of the production of each specialty’

consistent with geographical factors, such as the distribution of natural resources and climatic conditions. In the absence of such geographical impediments, social evolution "would finally result in the emergence of one factory supplying the whole oecumene with some particular article" (Mises 1985, p. 23).

As the final and full fruition of social evolution driven by the cosmic ontological principle of division of labor, the "oecumene" embraces all of humanity cooperating in hyperspecialized production processes. At any point in history, the evolving oecumene is the "rational and intended" outcome of an intersubjective process, whose purpose is the amelioration of scarcity. It exists not as a thing unto itself but as a complex of social relations which emerges from a common orientation of individual human actions, i.e., to use the social division of labor as the means to attain individual goals. Because such relations thus emanate from the will, they must be daily affirmed and recreated in human thought and conduct.

The Rationalistic Basis of Rules of Conduct and Social Institutions

If society and social evolution are emanations of the human will, a "will-phenomenon" as Mises says, so are the ancillary social institutions, customs, and rules of conduct which facilitate the establishment and smooth functioning of the system of social relationships. Law, the moral code, marriage and the nuclear family, private property, specialized occupations and professions, linguistic developments, and the market economy itself are the outcome of conscious endeavors by human beings to adjust more effectively to the requirements of the fundamental social relation and thereby make more productive use of the principle of the division of labor in achieving their goals. While these institutions were not created out of whole cloth by a single mind, political fiat or "social contract," they are indeed the products of rational and intentional planning by human beings, whose thoughts and actions continually reaffirm and reshape them in the course of history (1969, p. 306).

Thus Mises argues that "Compliance with the moral rules which the establishment, preservation, and intensification of social cooperation require is not seen as a sacrifice to a mythical entity, but as the recourse to the most efficient methods of action, as a price expended for the attainment of more highly valued returns" (1966, p. 883). In order to reap the benefits of social cooperation, each individual must refrain from seeking ephemeral advantages through actions "detrimental to the smooth functioning of the social system" and, therefore, to his own rightly understood interests (Mises 1966, p. 148).

Law evolves as part of the system of "the rules of conduct indispensable for the preservation of society" (Mises 1966, p. 149). The development of these rules of conduct, like that of society itself, is an evolutionary *and* rational process. Mises emphatically rejects the naive rationalist explanation of society and of the legal order, which construes their origination and development as "a conscious process ... in which man is completely aware of his motives, of his aims and how to pursue them" (1969, p. 43). Nonetheless, Mises affirms that evolution of law is crucially dependent on the fact that the "position of social ends in the system of individual ends is perceived by the individual's reason, which enables him to recognize aright his own interests" (1969, p. 398). Where the naive rationalist asserts that law sprang into existence full-grown from a set of explicit presocietal contracts, Mises as social rationalist characterizes law as a "settlement, an end to strife" which emerges naturally from the process of social evolution and spreading awareness of the higher productivity of peaceful integration into the social division of labor (1969, p. 44). This explains, furthermore, why "The idea of Law is realized at first in the sphere in which the maintenance of peace is most urgently needed to assure economic continuity ... that is in the relations between individuals [i.e., the realm of private law]" (Mises 1969, p. 46).

As an instrument designed to increase mutual prosperity by facilitating social cooperation, the law has a teleological and rationalistic basis: "Like all other social institutions, the Law exists for social purposes" (Mises 1969, p. 77). As such, "Law and legality, the moral code and social institutions ... are of human origin, and the only yardstick that must be applied to them is that of expediency with regard to human welfare" (Mises 1966, p. 147).

However, the repression of the antisocial conduct of the intellectually defective, the weak-willed, or individuals who heavily discount the future consequences of their actions is not accomplished solely or even mainly by the coercive powers of the legal authorities. Broadly accepted morals and customs evolved as a first line of defense against behavior potentially destructive of social relationships. As Mises points out:

Not every social norm requires that the most extreme coercive measures shall at once be put into force. In many things, morals and custom can wring from the individual a recognition of social aims without assistance from the sword of justice. Morals and custom go further than State law in so far as there may be a difference in extent between them, but no incompatibility of principle [1969, p. 399].

This is the meaning behind Mises's dictum that "Morality consists

in the regard for the necessary requirements of social existence that must be demanded of each individual member of society. A man living in isolation has no moral rules to follow" (Mises 1987b, p. 33).

Like law and normative rules of conduct, private property is, at the same time, an "outgrowth of an age old evolution" and "a human device" (Mises 1966, pp. 654, 683). It originated as a rational response to scarcity, when, encountering lowered productivity due to increased population density, people deliberately decided to abandon "predatory methods" of hunting and gathering and to permanently appropriate to themselves the most productive land factors (Mises 1966, pp. 656-57). Moreover, the historical development of private property was powerfully conditioned by ideology, which, as we shall see below, is the product of conscious human thought.

Monogamous marriage and the nuclear family are also social institutions that evolved as products of rational insight into the requirements of the division of labor. "As a social institution marriage is an adjustment of the individual to the social order by which a certain field of activity, with all its tasks and requirements, is assigned to him" (Mises 1969, p. 99). In this sense, it is the application of the principle of the division of labor to those extra-catalactic tasks that are immediately prerequisite to the enjoyment of consumption goods, whether acquired on the market or produced within the household, e.g., the bearing and raising of children. It is a chosen form of social cooperation in the face of the pervasiveness of scarcity in human life.

Marriage and family life are therefore not products of innate sexual drives or natural instincts. These institutions originated and continue to exist as an integral part of social life because ratiocination of individual human beings daily affirms their benefits. In Mises's words, "neither cohabitation, nor what precedes it and follows, generates social cooperation and societal modes of life. The animals too join together in mating, but they have not developed social relations. Family life is not merely a product of sexual intercourse. It is by no means natural and necessary that parents and children live together in the way in which they do in the family. The mating relation need not result in a family organization. The human family is an outcome of thinking and acting" (Mises 1969, p. 168).

Nor is the modern ideal of monogamous marriage a creation of ecclesiastical directives. Modern marriage is a product of the evolution of contract law and its deliberate extension into matters of family life. Monogamy historically wins out over polygamy as conflict over control and disposition of the property that a woman brings to a marriage, including the identification of her proper heirs, is resolved

through recourse to the idea of contract. This process is described by Mises in the following passage:

Thus monogamy has been gradually enforced by the wife who brings her husband wealth and by her relatives—a direct manifestation of the way in which capitalist thought and calculation has penetrated the family. In order to protect legally the property of wives and their children a sharp line is drawn between legitimate and illegitimate connection and succession. The relation of husband and wife is acknowledged as a contract.

As the idea of contract enters the Law of Marriage, it breaks the rule of the male, and makes the wife a partner with equal rights. From a one-sided relationship resting on force, marriage thus becomes a mutual agreement; the servant becomes the married wife entitled to demand from the man all that he is entitled to ask from her. ...

This evolution of marriage has taken place by way of the law relating to the property of married persons. Woman's position in marriage was improved as the principle of violence was thrust back, and as the idea of contract advanced in other fields of the Law of Property it necessarily transformed the property relations between the married couple. The wife was freed from the power of her husband for the first time when she gained legal rights over the wealth that she brought into marriage and which she acquired during marriage. ...

Thus marriage, as we know it, has come into existence entirely as a result of the contractual idea penetrating into this sphere of life. All our cherished ideals of marriage have grown out of this idea. That marriage unites one man and one woman, that it can be entered into only with the free will of both parties, that it imposes a duty of mutual fidelity, that a man's violations of the marriage vows are to be judged no differently from a woman's, that the rights of husband and wife are necessarily the same—these principles develop from the contractual attitude to the problem of marital life [1969, pp. 95-96].

In sum, family life in its modern form, as well as the morals and rules of conduct that sustain and make it possible, are the outcome of a historical process directed by reason and fueled by the eagerness of individual human beings to establish living arrangements compatible with the fullest possible satisfaction of their desires under the evolving division of labor. Thus, as Mises concludes, modern marriage "is the result of capitalist, and not ecclesiastical, development" (1969, p. 97).

Like the morals underlying marriage, all spiritual or intellectual phenomena, including religion and culture, are powerfully conditioned by the development of the social division of labor. As Mises points out, "all inner culture requires external means for its realization, and these external means can be attained only by economic effort. When the productivity of labor decays through the retrogression of social co-operation the decay of inner culture follows" (1969, p. 310).

Mises illustrates this historically by noting the decline of the Roman Empire, which “was only a result of the disintegration of ancient society which after reaching a high level of division of labor sank back into an almost moneyless economy” (1969, p. 309). The “disintegration” of the social division of labor delivered a devastating setback not only to human population, productivity, and prosperity, but also to scientific, technical, and artistic pursuits. In short, “The Classical culture died because Classical society retrogressed” (Mises 1969, p. 309).

Linguistic evolution is also intimately connected with changes occurring in the division of labor. Language is “a tool of thinking and acting” and, as such, “changes continually in conformity with changes occurring in the minds of those who use it” (Mises 1985, p. 232). When communication between members of a linguistically homogeneous group is impaired or altogether cut off, the consequence is a divergent evolution of the language among the isolated groups from that point onward. Thus Mises explains the emergence of local dialects as a “disintegration of linguistic unity” that results “When communication between the various parts of a nation’s territory was infrequent on account of the paucity of the interlocal division of labor and the primitiveness of transportation facilities ...” (1985, p. 233).

Along with genetic endowment and natural environment, Mises identifies the social division of labor as an important factor operating to constrain the possibilities of the individual’s “being and becoming” at any point in history (1969, pp. 314-15). The individual is born into a social environment characterized by pre-existing rules of conduct, linguistic conventions, legal and moral codes, customs, and social institutions whose *raison d’être* is to render possible human cooperation under the division of labor. In choosing to integrate himself into society, the individual must consciously adapt himself to the division of labor both physically and spiritually: physically, by forgoing the exercise and development of his abilities and skills in a whole range of tasks designed to serve directly his own wants and by pursuing a highly specialized profession or occupation oriented to satisfying the wants of other human beings; and spiritually, by adopting behavior in accordance with social norms and institutions.

Thus, according to Mises (1969, p. 304), “The most important effect of the division of labor is that it turns the independent individual into a dependent social being. Under the division of labor, social man changes. ... He adapts himself to new ways of life, permits some energies and organs to atrophy and develops others. He becomes one-sided.”

Moreover, as Mises points out, the very concept of an isolated human being is a fiction, a useful mental construct for the elaboration of economic theory but impossible of realization in history (Mises

1966, pp. 243-44; Mises 1969, pp. 291-92). *Homo sapiens* is necessarily a creature of social cooperation under division of labor, because language, the prerequisite of conscious thought, cannot be developed by an isolated being. As Mises expresses it:

The biological passing of a species of primates above the level of a mere animal existence and their transformation into primitive men implied the development of the first rudiments of social cooperation. *Homo sapiens* appeared on the stage of earthly events neither as a solitary food-seeker nor as a member of a gregarious flock, but as a being consciously cooperating with other beings of his own kind. Only in cooperation with his fellows could he develop language, the indispensable tool of thinking. We cannot even imagine a reasonable being living in perfect isolation and not cooperating at least with members of his family, clan, or tribe. Man as man is necessarily a social animal. Some sort of cooperation is an essential characteristic of his nature [1985, p. 252].

These considerations lead Mises to conclude that "The development of human reason and human society are one and the same process" (1969, p. 291). Elsewhere Mises affirms "the inner and necessary connection between evolution of the mind and evolution of society" (1969, p. 300). But if social cooperation is a necessary precondition of the origination of the human mind, the existence and evolution of the social division of labor beyond the rudimentary level depends on the ability of the human intellect to operate with cardinal numbers in order to calculate the outcome of social production processes. This is another sense in which, for Mises, society can be considered a rational phenomenon.

Economic Calculation, Market, and Society

Mises characterizes the market as "the foremost social body" (1966, p. 315). As such the market economy is "the product of a long evolutionary process" (Mises 1966, p. 265). This does not imply, however, that market relations are a nonteleological or undesigned outcome of tropistic and nonrational cultural selection processes. To the contrary, Mises argues that the market economy is the product of conscious reason and teleological striving, it is "the outcome of man's endeavors to adjust his action in the best possible way to the given conditions of his environment that he cannot alter" (1966, p. 265). In this spirit, Mises refers to the market economy both as "a man-made mode of acting under the division of labor" and as a "strategy" for achieving social and economic progress (1966, p. 265).

Moreover, the market originates and evolves through individual exchanges, which involve "intentional mutuality" and "conscious and purposeful cooperation" (Mises 1966, p. 194). As Mises writes, "The

recurrence of individual acts of exchange generates the market step by step with the evolution of the division of labor within a society based on private property" (1966, p. 327). It follows then that "The exchange relation is the fundamental social relation. Interpersonal exchange of goods and services weaves the bond which unites men into society. The societal formula is: *do ut des*" (Mises 1966, p. 194).

By virtue of the fact that it subsists in the network of exchanges continually recurring among purposeful human actors, the market and its configuration at any moment in time is to be explained by the human values and choices which give rise to these exchanges. In this sense, certainly, market society is a purposeful creation, an intended consequence of consciously chosen behavior. According to Mises:

The market is a process, actuated by the interplay of the actions of the various individuals cooperating under the division of labor. The forces determining the—continually changing—state of the market are the value judgments of these individuals and their actions as directed by these value judgments. ... The market is entirely a resultant of human actions. Every market phenomenon can be traced back to definite choices of the members of the market society. ...

... [T]he only factors directing the market and the determination of prices are the purposive acts of men. There is no automatism; there are only men consciously and deliberately aiming at ends chosen. There are no mysterious mechanical forces; there is only the human will to remove uneasiness [1966, pp. 257-58, 315].

But while market phenomena are to be explained completely in terms of conscious human choices, the successive price structures which emerge in the course of the market process are genuinely "social" phenomena. They are social in the sense that, although every individual transactor contributes to their formation, they represent more than any particular individual's contribution. The result is that each individual when planning his market activities takes prices into account as if they were uninfluenced by his own actions. As Mises writes:

The market phenomena are social phenomena. They are the resultant of each individual's active contribution. But they are different from each such contribution. They appear to the individual as something given which he himself cannot alter. ...

... [Prices] are social phenomena as they are brought about by the interplay of the valuations of all individuals participating in the operation of the market. Each individual, in buying or not buying and in selling or not selling, contributes his share to the formation of the market prices. But the larger the market is, the smaller is the weight of each individual's contribution. Thus the structure of market prices appears to the individual as a datum to which he must adjust his own conduct [1966, pp. 315, 331].

Mises emphasizes that it is not any particular price but the momentarily prevailing complex of interrelationships among prices that constitutes the social aspect of the market:

It would be absurd to look upon a definite price as if it were an isolated object in itself. A price is expressive of the position which acting men attach to a thing under the present state of their efforts to remove uneasiness. It does not indicate a relationship to something unchanging, but merely the instantaneous position in a kaleidoscopically changing assemblage. In this collection of things considered valuable by the value judgments of acting men each particle's place is interrelated with those of all other particles. What is called a price is always a relationship within an integrated system which is the composite effect of human relations [1966, p. 392].

In determining the price structure, the market also determines, as part of the same social process, the allocation of labor and other resources among various lines of production and the "distribution" of income among the various individuals contributing to production. Writes Mises:

The pricing process is a social process. It is consummated by an interaction of all members of society. All collaborate and cooperate, each in the particular role he has chosen for himself in the framework of the division of labor. Competing in cooperation and cooperating in competition all people are instrumental in bringing about the result, viz., the price structure of the market, the allocation of the factors of production to the various lines of want-satisfaction, and the determination of the share of each individual. These three events are not different matters. They are only different aspects of one indivisible phenomenon. ... In the market process they are accomplished *uno acto* [1966, p. 338].

It is thus that the market process gives rise to "not only the price structure but no less the social structure, the assignment of definite tasks to the various individuals" (Mises 1966, p. 311). It is the market and the market alone which permits the development and persistence of a meaningful and purposeful social order. Under the guidance of the market, each individual chooses purposefully to integrate himself with greatest advantage to himself and to his fellows into the social division of labor. In this way, the social system "is steered by the market. ... The market alone puts the whole social system in order and provides it with sense and meaning" (Mises 1966, p. 257).

In Misesian social theory, therefore, the hallmark and *sine qua non* of market society and of social being itself is not its "spontaneity" (whatever that may mean) but its purposefulness. When the social steering mechanism of the market is destroyed, as it is under socialist central planning, systematic and meaningful social cooperation

becomes impossible and is replaced by "a system of groping about in the dark. What is called conscious planning is precisely the elimination of *conscious purposive action* [emphasis is mine]" (Mises 1966, pp. 700-01).

While human cooperation in the division of labor is made possible by the social resultant of market exchange relationships, i.e., the price structure, the market itself is predicated upon an intellectual operation consciously originated and performed by the individual human mind. This operation is what Mises calls "economic calculation in monetary terms" or simply "monetary calculation." According to Mises monetary calculation is "the intellectual basis of the market economy" and "the guiding star of action under the social system of division of labor" (1966, pp. 229, 259). It is a "method of thinking" purposefully created by "acting man," which "made it possible to calculate his actions" (Mises 1966, p. 231).

Calculation is absolutely necessary for an actor to determine the most advantageous allocation of scarce resources in a world in which resources are neither purely nonspecific nor absolutely specific to a wide variety of possible production processes (Mises 1966, pp. 207-08). Under these conditions, therefore, monetary calculation:

is the compass of the man embarking upon production. He calculates in order to distinguish the remunerative lines of production from the unprofitable ones. ... Every single step of entrepreneurial activities is subject to scrutiny by monetary calculation. The premeditation of planned action becomes commercial precalculation of expected costs and expected proceeds. The retrospective establishment of the outcome of past action becomes accounting of profit and loss [Mises 1966, p. 229].

Capital, "the fundamental concept of economic calculation," and the correlative concept of income enable the actor to mentally grasp the distinction between means and ends "with regard to the perpetually changing conditions of highly developed processing industries and the complicated structure of the social cooperation of hundreds of thousands of specialized jobs and performances" (Mises 1966, pp. 260-61). Capital accounting is thus the indispensable precondition of the expression of individual rationality and purpose within the context of the social division of labor, because, without recourse to this intellectual operation, men and women would be unable to evaluate the outcomes, whether consummated or expected, of their actions. According to Mises: "Monetary calculation reaches its full perfection in capital accounting. It establishes the money prices of the available means and confronts this total with the changes brought about by action and by the operation of other factors. This confrontation shows

what changes occurred in the state of the acting man's affairs and the magnitude of those changes; it makes success and failure, profit and loss ascertainable" (1966, p. 230).

Without the possibility of economic calculation, even a human actor in perfect isolation would find his range of purposeful activities or "autistic exchanges" restricted to less than the full range of production possibilities determined by the purely external elements of his environment (including his labor capacities). In characterizing the economies of the isolated individual and of the isolated socialist society as unrealizable "imaginary constructions," Mises declares: "Robinson Crusoe, who ... may have existed, and the general manager of a perfectly isolated socialist commonwealth that never existed would not have been in a position to plan and to act as people can only when taking recourse to economic calculation" (1966, p. 243).

Market and therefore society are impossible without calculable action. Mises is emphatic on this point: "The tasks set to acting within any system of the division of labor cannot be achieved without economic calculation. ... That [the market] is capable of such calculation was instrumental in its evolution and conditions its present-day operation. *The market economy is real because it can calculate* [emphasis mine]." Thus logic dictates that a treatment of the problem of economic calculation precede the systematic elaboration of a theory of the market economy. Catallactics, in turn, must precede the analysis of alternative economic systems, such as socialism, that provide no scope for calculable action. These latter systems of economic organization cannot even be conceptualized without recourse to the calculational modes of thought developed within the market economy. To quote Mises:

The analysis of the problems of the market society, the only pattern of human action in which calculation can be applied in planning action, opens access to the analysis of all thinkable modes of action and of all economic problems with which historians and ethnographers are confronted. All noncapitalistic methods of economic management can be studied only under the hypothetical assumption that in them too cardinal numbers can be used in recording past action and planning future action. This is why economists place the study of the pure market economy in the center of their investigation [1966, pp. 266-67].

But, as Mises points out, economic calculation involves arithmetic computation and "computation requires a common denominator to which all items entered are to be referable" (1966, p. 214). It is for this reason that economic calculation can only be calculation in terms of money prices and that the development of economic calculation as

well as of the application of cardinal numbers in all areas of human life is logically and historically inseparable from the evolution of money and the market economy. As Mises writes:

Thus money becomes the vehicle of economic calculation. ... only because money is the common medium of exchange, because most goods and services can be sold and bought on the market against money, and only as far as this is the case, can men use money prices in reckoning. The exchange ratios between money and the various goods and services as established on the market of the past and as expected to be established on the market of the future are the mental tools of economic planning. Where there are no money prices there are no such things as economic quantities. ... There is no means for man to find out what kind of action would best serve his endeavors to remove his uneasiness as far as possible ... [1966, pp. 208-09]

... [Monetary calculation] developed in the frame and was gradually perfected with the improvement of the market mechanism and with the expansion of the scope of things which are negotiated on markets against money. It was economic calculation that assigned to measurement, number, and reckoning the role they play in our quantitative and computing civilization. The measurements of physics and chemistry make sense for practical action only because there is economic calculation. It is monetary calculation that made arithmetic a tool for a better life. It provides the mode of using achievements of laboratory experiments for the most efficacious removal of uneasiness. ... Our civilization is inseparably linked with our methods of economic calculation. It would perish if we were to abandon this most precious intellectual tool of acting [1966, p 230].

Use of Calculation versus Use of Knowledge: The Social Function of Prices

In Mises's view, then, human society is a profoundly rational phenomenon, a product of the capacity of the human intellect to conceive cardinal numbers and manipulate them in arithmetic operations. To assert therefore that the primary function of the market's price system is to effectuate "the use of knowledge in society" is to seriously misconceive the nature of the social problem. *The* problem of society is first and foremost one of calculating the outcome of purposive action undertaken within the framework of the division of labor. As the only possible tool of calculable action, money prices do not merely permit people to utilize their individual "knowledge of particular circumstances of time and place" to enhance the efficiency with which goods are produced in society, prices render possible the very existence of social production processes. For Mises, therefore, the market provides for far more than a "division of knowledge," it produces "the intellectual division of labor that consists in the cooperation of all

entrepreneurs, landowners, and workers as producers and consumers in the formation of market prices. [W]ithout it, rationality, i.e., the possibility of economic calculation, is unthinkable" (1985b, p. 75).

In fact Mises presents a penetrating critique of the Walrasian view that, in the plans of producers, prices substitute for knowledge of the economic data or, rather, for entrepreneurial understanding and appraisal of future variations of these data. Mises's critique is grounded on the incontrovertible fact that "The prices of the market are historical facts expressive of a state of affairs that prevailed at a definite instant of irreversible historical time" (Mises 1966, p. 223). As such, realized prices can never serve as an unambiguous guide to production, which is always aimed at supplying a market of the more or less remote future involving a different configuration of the economic data. Indeed, if producers were certain that the data underlying future markets would never differ from those determining the present or immediately past state of the market, they could completely dispense with prices and calculation and simply perform the same productive activities over and over again. For, as Mises reminds us, "the main task of economic calculation is not to deal with the problems of unchanging or only slightly changing market situations and prices, but to deal with change" (1966, p. 212). Ironically, a world in which prices (of previously consummated exchanges) convey knowledge upon which to base future-oriented production decisions is a world in which the price system is, as Mises might say, "supererogatory and otiose."

In the real world of action and change, on the other hand, "Exchange ratios are subject to perpetual change because conditions which produce them are perpetually changing. The value that an individual attaches both to money and to various goods and services is the outcome of a moment's choice" (Mises 1966, p. 217). The result, according to Mises, is that "The planning businessman cannot help employing data concerning the unknown future; he deals with future prices and future costs of production" (1966, p. 224). Moreover, since past prices are not causally linked to the emergence of future prices, they cannot embody knowledge relevant to the drafting of present production plans. This is an irrefutable conclusion of praxeological analysis, the neglected negative implication of Mises's regression theorem.

Explains Mises:

In drafting their plans entrepreneurs look first at the prices of the immediate past which are mistakenly called *present* prices. Of course, the entrepreneurs never make these prices enter into their calculations without paying regard to anticipated changes. The prices of the

immediate past are for them only the starting point of deliberations leading to forecasts of future prices. The prices of the past do not influence the determination of future prices. It is, on the contrary, the anticipation of future prices of the products that determines the state of prices of the complementary factors of production. *The determination of prices has, as far as the mutual exchange ratios between various commodities are concerned, no direct causal relationship whatever with the prices of the past* [emphasis mine; 1966, p. 336].

In a qualifying footnote to this passage, Mises notes that, in the case of the exchange ratio between money and other economic goods, the emphasized statement does not apply. This is a reference to Mises's regression theorem, according to which the money unit's past purchasing power is a causal factor in the determination of its current purchasing power (1966, p. 336 fn. 2).

It is clear therefore that in Mises's view the information yielded by the price system does not obviate entrepreneurial forecasting and interpretative understanding of the constellation of data underlying the markets of the future. What role then does the knowledge of past prices play in today's decisions about the allocation of resources? According to Mises, past prices are useful to entrepreneurs in "appraising" the future prices that will emerge in the wake of forecast data changes. Or, put another way, yesterday's prices do not "economize knowledge" but save on the mental effort expended by the entrepreneur in striving to "understand" the effects of anticipated change on tomorrow's price structure, the elements of which serve as the cardinal numbers in today's economic calculations. Recourse to their experience of past prices eliminates the need for entrepreneurs to mentally reconstruct *ab initio* the price structure and the pattern of resource allocation every time there occurs an anticipated shift in the data requiring the calculation of new production decisions. Entrepreneurial appraisalment is enormously simplified when it may proceed by estimating the effects of anticipated variations of the data on a preexisting price structure. As Mises writes:

Numbers applied by acting man in economic calculation do not refer to quantities measured but to exchange ratios as they are expected—on the basis of understanding—to be realized on the markets of the future to which alone all acting is directed and which alone counts for acting man. ... As acting is always directed toward influencing a future state of affairs, economic calculation always deals with the future. As far as it takes past events into consideration, it does so only for the sake of an arrangement of future action. ...

The prices of the past are for the entrepreneur, the shaper of future production, merely a mental tool. The entrepreneurs do not construct afresh every day a radically new structure of prices or allocate anew

the factors of production to the various branches of industry. They merely transform what the past has transmitted in better adapting it to the altered conditions. How much of the previous conditions they preserve and how much they change depends on the extent to which the data have changed. . . . In order to see his way in the unknown and uncertain future man has within his reach only two aids: experience of past events and his faculty of understanding. Knowledge about past prices is a part of this experience and at the same time the starting point of understanding the future [1966, pp. 210, 337].

As one component of experience, past prices are therefore an important, but by no means indispensable, auxiliary for entrepreneurial understanding of the future course of prices. However, since it is, in the final analysis, *future* prices which concern entrepreneurs, Mises concludes that economic calculation and rational allocation of resources could still take place even in the event of a complete obliteration of the memory of past prices:

If the memory of all prices of the past were to fade away, the pricing process would become more troublesome, but not impossible as far as the mutual exchange ratios between various commodities are concerned. It would be harder for the entrepreneurs to adjust production to the demand of the public, but it could be done nonetheless. It would be necessary for them to assemble anew all the data they need as the basis of their operations. They would not avoid mistakes which they now evade on account of experience at their disposal. Price fluctuations would be more violent at the beginning, factors of production would be wasted, want-satisfaction would be impaired. But finally, having paid dearly, people would again have acquired the experience needed for a smooth working of the market process [1966, p. 337].

Let me summarize Mises's position on the social function of prices and the acquisition and use of knowledge in society. The price system is not—and praxeologically cannot be—a mechanism for economizing and communicating the knowledge relevant to production plans. The realized prices of history are an accessory of appraisalment, the mental operation in which the faculty of understanding is used to assess the quantitative structure of price relationships which corresponds to an anticipated constellation of the economic data. Nor are anticipated future prices tools of knowledge; they are instruments of economic calculation. And economic calculation itself is not the means of acquiring knowledge, but the very prerequisite of rational action within the setting of the social division of labor. It provides individuals, whatever their endowment of knowledge, the indispensable tool for attaining a mental grasp and comparison of the means and ends of social action. As Mises says: "It is not the task of economic calculation to expand man's information about future conditions. Its task

is to adjust his actions as well as possible to his present opinion concerning want-satisfaction in the future" (1966, p. 214).

The Problem of Socialism: Calculation or Knowledge?

It is therefore clear that Mises's critique of the possibility of socialism is not about knowledge but about calculation. It proceeds ineluctably from his insight that, although cardinal numbers and their arithmetic properties are "eternal and immutable categories of the human mind," economic calculation is "only a category inherent in acting under special conditions" or what the German Historical School referred to as an "historical category" (Mises 1966, pp. 199, 201). Thus "The system of economic calculation in monetary terms is conditioned by certain social institutions. It can operate only in an institutional setting of the division of labor and private ownership of the means of production, in which goods and services of all orders are bought and sold against a generally used medium of exchange, i.e., money" (Mises 1966, p. 229). Should these preconditions of calculable action disappear in the further course of social evolution, due, for example, to the abolition of private ownership of the nonhuman means of production, rational social action will become impossible and social division of labor will literally disintegrate into its component parts, into primitive household economies.

Simply and starkly put, Mises's position is that "Human cooperation under the system of the social division of labor is possible only in the market economy. Socialism is not a realizable system of society's economic organization because it lacks any method of economic calculation. ... The choice is between capitalism and chaos" (Mises 1966, pp. 679-80). Elsewhere Mises declares "economic calculation" to be "the essential and unique problem of socialism" (1966, p. 703).

Nor did Mises ignore the so-called "knowledge problem" faced by central planners. In fact, in his later discussion of socialism in *Human Action*, he carefully and repeatedly distinguished between the problem of calculation and that of knowledge, by explicitly assuming that the economic planners possessed full knowledge of the relevant economic data (Mises 1966, pp. 689-715).

For example, Mises prefaces his chapter on the "Impossibility of Economic Calculation under Socialism" with the following list of assumptions: "We assume that the director has at his disposal all the technological knowledge of his age. Moreover, he has a complete inventory of all the material factors of production available and a roster enumerating all manpower employable. In these respects the crowd of experts and specialists which he assembles in his offices

provide him with perfect information and answer correctly all questions he may ask them. We assume that the director has made up his mind with regard to the valuation of ultimate ends. ... We may assume, for the sake of argument, that a mysterious power makes everyone agree with one another and with the director in the valuation of ultimate ends" (1966, p. 696).

The planner thus possesses "perfect information" about the general rules of technology and about the particular circumstances of time and place relating to each consumer's value scale and to the availability of each of the variety of factors. Now consider, as Mises does, the planner's decision to build a house under these conditions. Mises argues that the planner still faces the insoluble problem of which of the various known technical methods for realizing his project he should select. Each of the methods employ the given factors in different quantities, each absorbs a different period of production, and each yields a building with a different physical durability.

Mises elaborates the problem confronting the planner in this situation in the following terms:

Which method should the director choose? He cannot reduce to a common denominator the items of various materials and various kinds of labor to be expended. Therefore he cannot compare them. He cannot attach either to the waiting time (period of production) or to the duration of serviceableness a definite numerical expression. In short, he cannot, in comparing costs to be expended and gains to be earned, resort to any arithmetical operation. The plans of his architects enumerate a vast multiplicity of items in kind; they refer to the physical and chemical qualities of various materials and to the physical productivity of various machines, tools, and procedures. But all their statements remain unrelated to each other. There is no means of establishing any connection between them. ... Eliminate economic calculation and you have no means of making a rational choice between the various alternatives [1966, pp. 698-99].

For Mises, therefore, "the crucial and only problem of socialism ... is a purely economic problem, and as such refers merely to means and not to ultimate ends" (1966, p. 697). In other words, it is the problem purely of Robbinsian maximizing, of deciding how *given* means are to be allocated in light of a *given* structure of ends.

In responding to the socialist criticism that capitalist calculation is fallible because it takes place under conditions of uncertainty, Mises leaves no doubt that inability to calculate and lack of knowledge are logically distinct problems and that the former is the rock upon which the socialist ship founders. Writes Mises:

all human action points to the future and the future is always uncertain. The most carefully elaborated plans are frustrated if

expectations concerning the future are dashed to the ground. However, this is a quite different problem. Today we calculate from the point of view of our present knowledge and of our present anticipation of future conditions. We do not deal with the problem of whether or not the director will be able to anticipate future conditions. What we have in mind is that the director cannot calculate from the point of view of his own present value judgments and his own present anticipation of future conditions, whatever they may be. If he invests today in the canning industry, it may happen that a change in consumers' tastes or in hygienic opinions concerning the wholesomeness of canned food will one day turn his investment into a malinvestment. But how can he find out *today* how to build and equip a cannery most economically [1966, pp. 699-700]?

It is because socialism lacks the means to calculate, therefore, that Mises emphatically denies that men "are free to adopt socialism without abandoning economy in the choice of means" or that "Socialism does not enjoin the renunciation of rationality in the employment of the factors of production" (1966, p. 702).

Mises approaches the knowledge versus calculation issue from still another angle. He assumes that human history has, in effect, come to an end and that all further changes in the economic data have ceased. He assumes in addition that the socialist central planner is miraculously endowed with perfect knowledge relating to the full data of this final equilibrium state. Even in this situation the planner confronts a problem requiring economic calculation. The planner *must decide how to utilize most economically the means of production bequeathed by the past, e.g., the existing capital structure and acquired skills and location of the labor force, which are not yet adjusted to their equilibrium configurations.* For, as Mises points out,

as long as the equilibrium is not yet attained, the system is in a continuous movement which changes the data. The tendency toward the establishment of equilibrium, not interrupted by the emergence of any changes in the data coming from without, is in itself a succession of changes in the data. ... The knowledge of conditions which will prevail under equilibrium is useless for the director whose task it is to act today under present conditions. What he must learn is how to proceed in the most economical way with the means available today which are the inheritance of an age with different valuations, a different technological knowledge, and different information about problems of location. He must know which step is the next he must take. ... [Thus] even if ... we assume that a miraculous inspiration has enabled the director without economic calculation to solve all problems concerning the most advantageous arrangement of all production activities and that the precise image of the final goal he must aim at is present to his mind, there remain essential problems which cannot be dealt with without economic calculation [1966, pp. 712-13].

There is a significant implication of our interpretation of Mises's critique of socialism. Although the market economy has perfectly solved the problem of economic calculation—its very existence attests to the veracity of this conclusion—praxeologically, at least, it is on all fours with socialism with regard to the knowledge problem. For the imperfection of knowledge deriving from uncertainty of the future is a category of all human action, which cannot be overcome by recourse to the market price system, entrepreneurial alertness, the competitive discovery process, and so on. In any event, comparisons between centrally planned and market economies on the basis of their alternative mechanisms for discovering and disseminating knowledge have little more than heuristic value, precisely because, even assuming conditions of perfect knowledge, calculable, and therefore purposeful, action is logically impossible under central planning. On the other hand, a market economy in which relatively obtuse and mentally inert entrepreneurs appraise and plan on the basis of spotty and inaccurate knowledge of future conditions could still exist and operate because it would permit the calculations necessary for the Robbinsian economizing of scarce productive factors.

On this basis, we are led to reject the revisionist "discovery-process view" of the socialist calculation debate at least as it applies to Mises's contribution (Hayek's is another matter). This view has been recently enunciated by Israel Kirzner (1988) and Don Lavoie (1985) and basically concludes that the Austrian position in the debate "represented a critique of socialism only because and to the extent that markets under capitalism indeed constitute such a dynamic process of entrepreneurial discovery" (Kirzner 1988, p. 3). But this ignores Mises's key insight that the theory of monetary calculation and calculable action does not belong to the theory of catallactics. As a logical inference from categorial uncertainty, "It is part of the general theory of praxeology" (Mises 1966, p. 398, fn.1) and, as such, is a logical antecedent of catallactic theorems relating to the dynamic role of the entrepreneur-promoter in the functioning of the market process.

The Kirzner-Lavoie approach also errs in distinguishing the advantages of economic calculation from "the broader issue of the social advantages of the price system" (Kirzner 1988, p. 12). As we have documented in great detail above, however, Mises never made this distinction, even in his most mature view of the market process as presented in *Human Action*. In fact Mises conceived the social advantage of the price system to be that it made practicable human society itself by providing the cardinal numbers for computing the costs and benefits of purposive action undertaken within the social division of labor

Finally, Mises, in sharp contrast to the discovery-process approach, denied that prices are directly relevant to the entrepreneurial discovery of information about future market conditions. On the one hand, according to the regression theorem, relative prices of the past are logically unrelated to relative prices which will emerge on future markets. On the other hand, future prices themselves must be appraised in light of the logically prior process of entrepreneurial discovery or, more accurately, "understanding" of yet to emerge market conditions.

Social Evolution as Ideological Struggle

Mises's recognition of the ability of human reason to grasp the benefits of social cooperation and to identify and implement its intellectual and institutional preconditions leads him to affirm that "human action itself tends toward cooperation and association" (Mises 1966, p. 160). The progressive extension and intensification of the division of labor and the concomitant flowering of society is only a tendency in social evolution, however, subject to reinforcement, retardation, or even reversal by ideology. As Mises notes, "There is no evidence that social evolution must move steadily upwards in a straight line. Social standstill and social retrogression are historical facts which we cannot ignore. World history is the graveyard of dead civilizations" (1969, pp. 309-10).

Ideology, as defined by Mises, is the "totality of our doctrines concerning individual conduct and social relations" (1966, p. 178). Since all social interactions and relationships involve conscious human behavior necessarily guided by specific ideas, human society itself, at any point in its history, is an ideological, which is to say rational, creation. Mises is emphatic on this point, declaring:

Society is a product of human action. Human action is directed by ideologies. Thus society and any concrete order of social affairs are an outcome of ideologies. ...

Any existing state of social affairs is the product of ideologies previously thought out. Within society new ideologies may emerge and supersede older ideologies and thus transform the social system. However, society is always the creation of ideologies temporally and logically anterior. Action is always directed by ideas; it realizes what previous thinking has designed [1966, pp. 187-88].

For Mises, then, the complex of human social relations is, in a fundamental sense, the product of rational design. Society is hardly a "spontaneous" or "undesigned" formation, because it is inevitable that each individual excogitate and compare before hand the prospective benefits and costs of his participation in exchange relations and

the social division of labor. Nevertheless, as is clear from his discussion of the market's price structure, Mises does not deny that there may be some unintended, and, at the same time, quite momentous consequences associated with deliberate yet decentralized choices to cooperate catallactically:

Any given social order was thought out and designed before it could be realized. This temporal and logical precedence of the ideological factor does not imply the proposition that people draft a complete plan of the social system as the utopians do. What is and must be thought out in advance is not the concerting of individual actions into an integrated system of social organization, but the actions of individuals with regard to their fellow men and of already formed groups of individuals with regard to other groups. ... Before any act of barter takes place, the idea of mutual exchange of goods and services must be conceived. It is not necessary that the individuals concerned become aware of the fact that such mutuality results in the establishment of social bonds and in the emergence of a social system. The individual does not plan and execute actions intended to construct society. His conduct and the corresponding conduct of others generate social bodies [1966, p. 188].

As a social rationalist, however, Mises leaves no doubt that he considers such ignorance of the remoter consequences of catallactic activity not as a virtue to be hailed in the name of "spontaneity," but as a vice which may ultimately prove destructive of the social division of labor. The reason is that the failure of participants in the division of labor to correctly comprehend the links between their individual actions and social outcomes invites the adoption of ideologies based on erroneous accounts of the nature of society and of social progress. Such falsely-grounded ideologies, in turn, may lead to conduct inconsistent with the continued maintenance of social relations. For example, the struggle for neomercantilist privileges by special interest groups, based on the ideology of interventionism or the "mixed economy," constitutes, according to Mises,

antisocial conduct which shakes the very foundations of social cooperation. ... It is the outcome of a narrow-mindedness which fails to conceive the operation of the market economy and *to anticipate the ultimate effects of one's own actions.*

It is permissible to contend that the immense majority of our contemporaries are mentally and intellectually not adjusted to life in the market society although they themselves and their fathers have *unwittingly created this society by their actions.* But this maladjustment consists in nothing else than in the failure to recognize erroneous doctrines as such. [Emphases mine; 1966, p. 319].

Social maladjustment, which is inspired by fallacious ideology, carries in its wake the possibility of social disintegration and is more likely

to result the greater the degree to which the consequences of human actions are unintended, or, to use Mises's term, "unwitting." To the extent that social norms, policies, and institutions are "undesigned," are not completely and correctly thought out in advance and accounted for in a logically consistent ideology, to that extent does the continued existence of society become problematic. Following up on this insight, Mises advances a speculative theory of spontaneous social disintegration which links up unwitting consequences with ideological failure:

The liberal conception of social life has created the economic system based on the division of labor. The most obvious expression of the exchange economy is the urban settlement, which is only possible in such an economy. In the towns the liberal doctrine has been developed into a closed system and it is here that it has found most supporters. But the more and the quicker wealth grew and the more numerous therefore were the immigrants from the country into the towns, the stronger became the attacks which Liberalism suffered from the principle of violence. Immigrants soon find their place in urban life, they soon adopt, externally, town manners and opinions, but for a long time they remain foreign to civic thought. One cannot make a social philosophy one's own as easily as a new costume. It must be earned—earned with the effort of thought. Thus we find, again and again in history, that epochs of strongly progressive growth of the liberal world of thought, when wealth increases with the development of the division of labor, alternate with epochs in which the principle of violence tries to gain supremacy—in which wealth decreases because the division of labor decays. The growth of the towns and of the town life was too rapid. It was more extensive than intensive. The new inhabitants of the towns had become citizens superficially, but not in ways of thought. ... On this rock all cultural epochs filled with the bourgeois spirit of Liberalism have gone to ruin. ... More menacing than barbarians storming the walls from without are the seeming citizens within—those who are citizens in gesture, but not in thought [1969, p. 49].

If social disintegration may occur "spontaneously," due to an ignorance of the remoter consequences of social action, social progress can only be assured by the widespread adoption of an ideology of social life which *consciously* and correctly accounts for these consequences. This ideology is liberalism. According to Mises:

In Liberalism humanity becomes conscious of the powers which guide its development. The darkness which lay over history recedes. Man begins to understand social life and allows it to develop consciously. ...

... History is a struggle between two principles, the peaceful principle, which advances the development of trade, and the militarist-imperialist principle, which interprets human society not as a friendly division of labor but as the forcible repression of some of its members

by others. The imperialistic principle continually regains the upper hand. The liberal principle cannot maintain itself against it until the inclination for peaceful labour inherent in the masses shall have struggled through to full recognition of its own importance as a principle of social evolution [1969, pp. 48, 302].

The insight that social progress is contingent on the formulation and acceptance of a correct ideology of social life prompts Mises to emphatically reject the social meliorism of older or Enlightenment liberals, which optimistically projected a continuous, uninterrupted improvement in social conditions into the future. To Mises, this—and not the attempt to *rationaly design and construct* the institutional framework proper to man's nature as a cooperant in the social division of labor—constitutes the supreme abuse of reason (1966, pp 864-65). A similar abuse was also committed by the social evolutionists of the nineteenth century—and, one might add, latter-day social evolutionists—who “smuggled into the theory of biological transformation the idea of progress” (Mises 1966, p. 192).

In contrast to the social meliorists and evolutionists, Mises, the social rationalist maintains that “Men are not infallible; they err very often. ... The good cause will not triumph on account of its reasonableness and expediency. Only if men are such that they will finally espouse policies reasonable and likely to attain the ultimate ends aimed at will civilization improve. ... Man is free in the sense that he must daily choose anew between policies that lead to success and those that lead to disaster, social disintegration, and barbarism” (1966, p. 193).

The rationalist view of social evolution, therefore, is not one of placid and automatic improvement insured by “unintended” consequences, “undesigned” institutions, “tacit” knowledge, and “natural selection” of rules of conduct. Social rationalism implies, instead, that human history is the outcome of a conflict between ideologies, which are consciously formulated and adopted by reasoning human beings. Whether an epoch is characterized by social progress, social retrogression, or even social disintegration depends upon which particular ideologies have become current and which individuals have attained ideological “might,” defined by Mises as “the power to influence other people's choices and conduct” (1966, p. 188). Thus, according to Mises “The power that calls into life and animates any social body is *always* ideological might, and the fact that makes an individual a member of any social compound is always his own conduct” (1966, p. 196).

The course of social evolution and the fortunes of humanity therefore are inextricably bound up with the fortunes of the ongoing ideological struggle. No social institution can or ever does evolve in

a wholly spontaneous or unreflective way, unsullied, as it were, by ideological influences.

A case in point is language, generally cited by social evolutionists as the archetype of a social institution that develops in a basically unconscious fashion. But, as Mises argues, men's conscious reflections on social relationships and their deliberate attempts to redesign them according to the ideologies such reflections give rise to, have a powerful impact on linguistic development. This is so because language, "the most important medium for social cooperation," is at bottom ideological: "[I]t is a tool of thinking as it is a tool of social action" (Mises 1969, p. 321; Mises 1966, p. 177). As such, the abstract terms contained in a living language are "the precipitate of a people's ideological controversies, of their ideas concerning issues of pure knowledge and religion, legal institutions, political organization, and economic activities. ... In learning their meaning the rising generation are initiated into the mental environment in which they have to live and to work. This meaning of the various words is in continual flux in response to changes in ideas and conditions" (Mises 1985, p. 232).

In addition, many momentous linguistic changes in history are directly attributable to ideological causes such as political and military events (Mises 1985, pp. 228-30). Gaelic is just one example of a language that first fell into oblivion and then was partially revived as a result of ideological factors (Mises 1944, p. 85; Mises 1985, pp. 229-30). Even in the case in which a particular language is entirely the outcome of peaceful evolution, it would still be the product of a conscious commitment to liberalism, which is the ideological framework necessary to secure the peaceful development of the social division of labor. For, as Mises (1969, pp. 302, 310-11) repeatedly argues, the "oecumenical society" itself, the product of the historical unfolding of social division of labor, is essentially an ideological creation, which has been "slowly forming itself during the last two hundred years under the influence of the gradual germination of the liberal idea. ... only when the modern liberal thought of the eighteenth century had supplied a philosophy of peace and social collaboration was the basis laid for the astonishing development of the economic civilization of that age."

Ultimately, then, the degree and the direction of social evolution is governed wholly by ideological considerations. In Mises's words "The flowering of human society depends on two factors: the intellectual power of outstanding men to conceive sound social and economic theories, and the ability of these or other men to make these ideologies palatable to the majority" (Mises 1966, p. 864).

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Ludwig von Mises and the Austrian School of Economics

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Everyone carries a part of society on his shoulders: no one is relieved of his share of responsibility by others. And no one can find a safe way for himself if society is sweeping towards destruction. Therefore everyone, in his own interests, must thrust himself vigorously into the intellectual battle. No one can stand aside with unconcern: the interests of everyone hang on the result. Whether he chooses or not, every man is drawn into the great historical struggle, the decisive battle into which our epoch has plunged us (Mises 1988, p. 169).

This is the message of Ludwig von Mises. No one has ever fought the battle more courageously than Mises, nor had a more decisive long-run effect. Murray Rothbard is correct when he says “. . . if the world is ever to get out of its miasma of statism, or, indeed, if the economics profession is ever to return to a sound and correct development of economic analysis, both will have to abandon their contemporary bog and move to that high ground that Mises developed for us” (Rothbard 1983, p. 5).

Now, as the battle appears to be turning in favor of freedom, is an appropriate time to reconsider the role of economic theory in these world-wide changes. Specifically, it is time to consider the work of Mises and the Austrian school in the development and dissemination of the economic principles of social progress. Two steps are necessary to complete this task. The first is to demonstrate the pre-eminence of the Austrian school in developing the principles of free enterprise. The second is to demonstrate that Mises is the champion of this tradition in the twentieth century.

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Method and the Austrian Tradition

Carl Menger founded the Austrian school during the marginalist revolution of the late nineteenth century in his attempt to correct the errors of the classical economists. As Menger said:

Adam Smith and this school have neglected to reduce the complicated phenomena of human economy in general, and in particular of its social form, "national economy" to the efforts of individual economies, as would be in accordance with the real state of affairs. They have neglected to teach us to understand them theoretically as the result of individual efforts. Their endeavors have been aimed, rather, and to be sure, subconsciously for the most part, at making us understand them theoretically from the point of view of the "national economy" fiction. On the other hand, the historical school of German economists follows this erroneous conception consciously (Menger 1985, pp. 195–96).

It is the adherence to these methodological precepts of individualism and essentialism that distinguish the Austrian school from all others. Although Mises significantly refined and improved his position, Menger laid the groundwork:

This is the ground on which I stand. In what follows I have endeavored to reduce the complex phenomena of human economic activity to the simplest elements that can still be subjected to accurate observation, to apply to these elements the measure corresponding to their nature, and constantly adhering to this measure, to investigate the manner in which the more complex economic phenomena evolve from their elements according to definite principles (Menger 1976, p. 47).

It is now the task of the reader to judge to what results the method of investigation I have adopted has led, and whether I have been able to demonstrate successfully that the phenomena of economic life, like those of nature, are orderly strictly in accordance with definite laws (Menger 1976, p. 48).

Via this method, Menger solved the paradox of value, derived the subjective theory of value, developed a unified theory of price and reconstructed the origin of social institutions such as money, markets, property, and law. More than this, he began the process, culminating in the work of Mises, that has resulted in universally correct economic laws of social systems. As Menger stated:

The aim of this orientation, which in the future we will call the *exact* one, an aim which research pursues in the same way in all realms of the world of phenomena, is the determination of strict laws of phenomena, of regularities in the succession of phenomena which do not present themselves to us as absolute, but which in respect to the approaches to cognition by which we attain to them simply bear within themselves the guarantee of absoluteness (Menger 1985, p. 59).

In contrast, most other schools of economic thought deny, because of their methodological positions, the existence of universal laws of economics. Most prevalent are empirically based schools such as the German historical school that Menger fought. Menger was quite clear on this:

If, therefore, exact laws are at all attainable, it is clear that these cannot be obtained from the point of view of empirical realism, but only in this way, with theoretical research satisfying the presuppositions of the above rule of cognition.

But the way by which theoretical research arrived at the above goal, a way essentially different from Bacon's empirical-realistic induction, is the following: it seeks to ascertain the *simplest elements* of everything real, elements which must be thought of as strictly typical just because they are the simplest.

The specific goal of this orientation of theoretical research is the determination of regularities in the relationships of phenomena which are guaranteed to be absolute and as such to be complete.

It examines, rather, how more complicated phenomena develop from the simplest, in part even unempirical elements of the real world in their (likewise unempirical) isolation from all other influences . . .

Science starts out, however, with these assumptions, since it would never be able otherwise to reach the goal of exact research, the determination of strict laws. On the other hand, with the assumption of strictly typical elements, of their exact measure, and of their complete isolation from all other causative factors, it does to be sure, and indeed on the basis of the rules of cognition characterized by us above, arrive at laws of phenomena which are not only absolute, but according to our laws of thinking simply cannot be thought of in any other way but as absolute (Menger 1985, pp. 60–61).

Menger, like Mises, leaves no doubt regarding his view of the efficacy of empirically testing economic theory; providing a refutation of positivism and falsification in economics almost a century before Milton Friedman and F. A. Hayek espoused them.

Among economists the opinion often prevails that the empirical laws, "because they are based on experience," offer better guarantees of truth than those results of exact research which are obtained, as is assumed, only deductively from a priori axioms.

The error at the basis of this view is caused by the failure to recognize the nature of the exact orientation of theoretical research, of its relationship to the realistic, and by applying the points of view of the latter to the former.

Nothing is so certain as that the results of the exact orientation of

theoretical research appear insufficient and unempirical in the field of economy just as in all the other realms of the world of phenomena, when measured by the standard of realism. This is, however, self-evident, since the results of exact research, and indeed in all realms of the world of phenomena, are true only with certain presuppositions, with presuppositions which in reality do not always apply. Testing exact theory of economy by the full empirical method is simply a methodological absurdity, a failure to recognize the bases and presuppositions of exact research. At the same time it is a failure to recognize the particular aims which the exact sciences serve. To want to test the pure theory of economy by experience in its full reality is a process analogous to that of the mathematician who wants to correct the principles of geometry by measuring real objects, without reflecting that the latter are indeed not identical with the magnitudes which pure geometry presumes or that every measurement of necessity implies elements of inexactitude. Realism in theoretical research is not something higher than exact orientation, but something different.

The results of realistic orientation stand in an essentially different relationship to the empirical method than those of exact research. The former are based, of course, on the observation of phenomena in their "empirical reality" and complexity, and of course the criterion of their truth is accordingly the empirical method. An empirical law lacks the guarantee of absolute validity a priori, i.e., simply according to its methodological presuppositions. It states certain regularities in the succession and coexistence of phenomena which are by no means necessarily absolute. But bearing this firmly in mind, we note that it must agree with full empirical reality, from the consideration of which it was obtained. To want to transfer this principle to the results of exact research is, however, an absurdity, a failure to recognize the important difference between exact and realistic research. To combat this is the chief task of the preceding investigations (Menger 1985, pp. 69–70).

While referring to the German historical school, Menger also refuted the modern hermeneutic economists.

There is scarcely any need to remark that the nature and significance of the exact orientation of research is completely misunderstood in the modern literature on national economy. In German economics, at least in the historical school, the art of abstract thinking, no matter how greatly distinguished by depth and originality and no matter how broadly supported empirically—in brief, everything that in other theoretical sciences establishes the greatest fame of scholars is still considered, along with the products of compilatory diligence, as something secondary, almost as a stigma. The power of truth, however, will finally also be tested for those who, sensing their inability to solve the highest problems of the social sciences, would like to raise their own inadequacy as a standard for the value of scientific work in general (Menger 1985, p. 65).

Neither Hayek, who has come to accept the empirical method of Karl Popper, nor the modern hermeneuticians who advance the epistemology of subjective interpretation, have any grounding in Menger. Only Mises has accepted Menger's basic deductive procedure and forged ahead to refine it into praxeology. Mises is the true heir of the Austrian tradition and the person who has advanced the edifice of absolute economic laws in this century.

Hayek versus Menger

As Hayek progressively left his grounding in the praxeological method, he drifted further and further into error. This process has culminated in Hayek's latest work on socialism which he claims is based on Menger:

But to me, at any rate, [*Investigations*'] main interest to the economist in our days seems to lie in the extraordinary insight into the nature of social phenomena which is revealed incidentally in the discussion of problems mentioned to exemplify different methods of approach . . . Discussions of somewhat obsolete views, as that of the organic or perhaps better physiological interpretation of social phenomena, gave him an opportunity for an elucidation of the origin and character of social institutions which might, with advantage, be read by present-day economists and sociologists (Hayek 1976, p. 23).

Menger was the only one of these to have come after Darwin, yet all attempted to provide a rational reconstruction, conjectural history, or evolutionary account of the emergence of cultural institutions (Hayek 1988, p. 70).

Adequate explanations of [the market, etc.] were disseminated . . . especially by the Austrian school following Menger, into what became known as the "subjective" or "marginal utility" revolution in economic theory. [The most elementary and important] was the discovery that economic events could not be explained by preceding events acting as determining causes that enabled these revolutionary thinkers to unify economic theory into a coherent system (Hayek 1988, p. 97).

What Menger wrote about using organic analogies in the social sciences in no way justifies Hayek's claim. Menger stated clearly that the analysis of social development must be built from individual action and that reason is the guiding force in understanding social processes.

In [the organic] category belong above all the attempts of those who think that they have solved the problem involved merely by designating as "organic" the developmental process we are discussing. The process by which social structures originate without action of the common will may well be called "organic," but it must not be believed

that even the smallest part of the noteworthy problem of the social sciences that we alluded to above has been solved by this image or by any mystic allusions attached to it (Menger 1985, p. 149).

Yet Hayek makes just such allusions when he claims that the spontaneous order of the market "forms itself" or:

The answer to [how we came to acquire the economic order of the market] is built upon the old insight, well known to economics, that our values and institutions are determined not simply by preceding causes but as part of a process of unconscious self-organisation of a structure or pattern. This is true not only of economics, but in a wide area, and is well known today in the biological sciences (Hayek 1988, p. 9).

Menger sees two mistakes made in the analysis of social processes: the mystic one mentioned above, and the view that society is a product of the "common will," i.e., created by positive legislation.

Just as meaningless is another attempt to solve the problem discussed here. I mean the theory, which has attained widespread currency, that recognizes in social institutions something *original*, that is, not something that has developed, but an *original* product of the life of the people. This theory (which, incidentally, is also applied by a few of its adherents, for whom a unified principle means more than historical truth or the logic of things, by way of a peculiar mysticism to social institutions created by positive laws) indeed avoids the error of those who reduce all institutions to acts of positive common will. Still, it obviously offers us no solution of the problem discussed here, but evades it. The origin of a phenomena is by no means explained by the assertion that it *was present from the very beginning* or that it *developed originally* (Menger 1985, p. 149).

But Hayek is reduced to such a conclusion, "Although also acclaimed as a biologist, Aristotle lacked any perception of two crucial aspects of the formation of any complex structure, namely, evolution and the self-formation of order" (Hayek 1988, p. 45). Appeals to words like evolution or self-formation are not solutions to the problems of the origin and development of social institutions. Menger clearly looked to individual action as the foundation of the solution.

Such a phenomenon must obviously have developed at some time from its simpler elements; a social phenomenon, at least in its most original form, must clearly have developed from individual factors. The view here referred to is merely an analogy between the development of social institutions and that of natural organisms which is completely worthless for the purpose of solving our problem. It states, to be sure, that institutions are unintended creations of the human mind, but not *how* they came about. These attempts at interpretation are comparable to the procedure of a natural scientist who thinks he is solving the problem of the origin of natural organisms by alluding

to their "originality," "natural growth," or their "primeval nature" (Menger 1985, p. 149).

In contrast, Hayek approvingly quotes Popper, who stated, "Cultural evolution continues genetic evolution by other means" (Hayek 1988, p. 16). He continues:

For example, by the time culture began to displace some innate modes of behavior, genetic evolution had probably also already endowed human individuals with a great variety of characteristics which were better adjusted to the many different environmental niches into which men had penetrated than those of any non-domesticated animal. . . . Among the most important of these innate characteristics which helped to displace other instincts was a great capacity for learning from one's fellows, especially by imitation (Hayek 1988, p. 18).

Menger pointed out the poverty of this line of argument:

The previous attempts to interpret the *changes* of social phenomena as "organic processes" are no less inadmissible than the above theories which aim to solve "organically" the problem of the *origin* of unintentionally created social structures. There is hardly need to remark that the changes of social phenomena cannot be interpreted in a social-pragmatic way, insofar as they are not the intended result of the agreement of members of society or of positive legislation, but are the unintended product of social development. But it is just as obvious that not even the slightest insight into the nature and the laws of the movement of social phenomena can be gained either by the mere allusion to the "organic" or the "primeval" character of the processes under discussion, nor even by mere analogies between these and the transformations to be observed in natural organisms. The worthlessness of the above orientation of research is so clear that we do not care to add anything to what we have already said (Menger 1985, p. 150).

Hayek bases his analysis on exactly these allusions and analogies:

Despite such differences, all evolution, cultural as well as biological, is a process of continuous adaptation to unforeseeable events, to contingent circumstances which could not have been forecast (Hayek 1988, p. 25).

Economics has from its origins been concerned with how an extended order of human interaction comes into existence through a process of variation, winnowing and sifting far surpassing our vision or our capacity to design. . . . We are led—for example by the pricing system in market exchange—to do things by circumstances of which we are largely unaware and which produce results that we do not intend (Hayek 1988, p. 14).

Menger rejected these mystic forces and Hayek's characterization

of individuals as mindless, passive, and ignorant:

If this significant problem of the social sciences is truly to be solved, this cannot be done by way of superficial and, for the most part, inadmissible analogies. It can be done, in any case, only by way of direct consideration of social phenomena, not “organically,” “anatomically,” or “physiologically,” but only in a *specifically sociological* way. The road to this, however, is *theoretical* social research, the nature and main orientations of which (the exact and the empirical-realistic) we have characterized above (Menger 1985, p. 150).

Hayek relies upon evolution to explain language, law, morals, markets, and money (Hayek 1988, p. 24); in contrast Menger claims that these institutions can be understood as built upon individual action.

[These are] the unintended result of innumerable efforts of economic subjects pursuing *individual* interests. The theoretical understanding of them, the theoretical understanding of their nature and their movement can thus be attained in an exact measure only in the same way as the understanding of the above mentioned social structures. That is, it can be attained by reducing them to their elements, to the *individual* factors of their causation, and by investigating the laws by which the complicated phenomena of human economy under discussion here are built up from these elements. This, however, as scarcely needs saying, is that method which we have characterized above as the one adequate for the exact orientation of theoretical research in the realm of social phenomena in general. The methods for the exact understanding of the origin of the “organically” created social structures and those for the solution of the main problems of exact economics are by nature identical (Menger 1985, pp. 158–59).

Hayek versus Mises

Menger began to build the principles of economics from what he saw as the essence of these individual factors—the human need to satisfy material ends. From this idea of subjective value, he proceeded to derive principles of action of an isolated individual, then the more complex principles; two-person exchange (based upon mutual benefit), the social division of labor, and finally, a consistent, unified theory of price (see Menger 1976). These principles were the basis of his advocacy of *laissez faire* (see Rothbard 1991).

Eugen von Böhm-Bawerk, accepting Menger’s methodological position, constructed the theories of advanced social production, capital and interest, and demolished the underpinnings of Marxian economics (Böhm-Bawerk 1959).

Refining and building upon this work, Mises constructed a very different picture of society’s origin and development from that of Hayek (Salerno 1990). His answer to a Hayekian view of society is:

To those pretending that man would be happier if he were to renounce the use of reason and try to let himself be guided by intuition and instincts only, no other answer can be given than an analysis of the achievements of human society. In describing the genesis and working of social cooperation, economics provides all the information required for an ultimate decision between reason and unreason. If man reconsiders freeing himself from the supremacy of reason, he must know what he will have to forsake (Mises 1966, p. 91).

Mises saw society as a strategy of acting individuals in their struggle against scarcity; purposefulness is the essence of the market, not spontaneity.

Seen from the point of view of the individual, society is the great means for the attainment of all his ends (Mises 1966, p. 165).

Society is concerted action, cooperation. Society is the outcome of conscious and purposeful behavior. This does not mean that individuals have concluded contracts by virtue of which they have founded human society. The actions which have brought about social cooperation and daily bring it about anew do not aim at anything else than cooperation and coadjuvancy with others for the attainment of definite singular ends. The total complex of the mutual relations created by such concerted actions is called society (Mises 1966, p. 143).

For Mises the division of labor (which is predicated on the inherent differences in individuals and natural resources) is the essence of society and the linchpin of all aspects of civilization.

Society is division of labor and combination of labor (Mises 1966, p. 143).

The fundamental social phenomenon is the division of labor and its counterpart human cooperation (Mises 1966, p. 157).

The fundamental facts that brought about cooperation, society, and civilization and transformed the animal man into a human being are the facts that work performed under the division of labor is more productive than isolated work and that man's reason is capable of recognizing this truth. But for these facts men would have forever remained deadly foes of one another, irreconcilable rivals in their endeavors to secure a portion of the scarce supply of means of sustenance provided by nature (Mises 1966, p. 144).

The law of association makes us comprehend the tendencies which resulted in the progressive intensification of human cooperation. We conceive what incentive induced people not to consider themselves simply as rivals in a struggle for the appropriation of the limited supply of means of subsistence made available by nature. We realize what has impelled them and permanently impels them to consort with one another for the sake of cooperation. Every step forward on the way to a more developed mode of the division of labor serves the

interests of all participants. In order to comprehend why man did not remain solitary, searching like the animals for food and shelter for himself only and at most also for his consort and his helpless infants, we do not need to have recourse to a miraculous interference of the Deity or to the empty hypostasis of an innate urge toward association. Neither are we forced to assume that the isolated individuals or primitive hordes one day pledged themselves by a contract to establish social bonds. The factor that brought about primitive society and daily works toward its progressive intensification is human action that is animated by the insight into the higher productivity of labor achieved under the division of labor (Mises 1966, p. 160).

The degree to which individuals extend and intensify the division of labor depends on their understanding and acceptance of it. In contrast to Hayek, who says, "The curious task of economics is to demonstrate to men how little they really know about what they imagine they can design" (Hayek 1988, p. 76), Mises attached an important role to teaching people economic principles and persuading them to pursue their "rightly understood interests."

The principle of the division of labor is one of the great basic principles of cosmic becoming and evolutionary change. The biologists were right in borrowing the concept of the division of labor from social philosophy and in adapting it to their field of investigation . . . But one must never forget that the characteristic feature of human society is purposeful cooperation; society is an outcome of human action, i.e., of a conscious aiming at the attainment of ends. No such element is present, as far as we can ascertain, in the processes which have resulted in the emergence of the structure-function systems of plant and animal bodies and in the operation of the societies of ants, bees, and hornets. Human society is an intellectual and spiritual phenomenon. It is the outcome of a purposeful utilization of a universal law determining cosmic becoming, viz., the higher productivity of the division of labor. As with every instance of action, the recognition of the laws of nature is put into the service of man's efforts to improve his conditions (Mises 1966, p. 145).

The body of economic knowledge is an essential element in the structure of human civilization; it is the foundation upon which modern industrialism and all the moral, intellectual, technological, and therapeutical achievements of the last centuries have been built. It rests with men whether they will make the proper use of the rich treasure with which this knowledge provides them or whether they will leave it unused. But if they fail to take the best advantage of it and disregard its teachings and warnings, they will not annul economics; they will stamp out society and the human race (Mises 1966, p. 885).

The prerequisite for advanced social production is calculation that allows purposeful action within the framework of the division of

labor. Calculation requires money prices and thus, money and free exchange, which requires private property.

Economic calculation is the fundamental issue in the comprehension of all problems commonly called economic (Mises 1966, p. 199).

Monetary calculation is the guiding star of action under the social system of division of labor. It is the compass of the man embarking upon production.

The system of economic calculation in monetary terms is conditioned by certain social institutions. It can operate only in an institutional setting of the division of labor and private ownership of the means of production in which goods and services of all orders are bought and sold against a generally used medium of exchange, i.e., money.

Monetary calculation is the main vehicle of planning and acting in the social setting of a society of free enterprise directed and controlled by the market and its prices.

Our civilization is inseparably linked with our methods of economic calculation. It would perish if we were to abandon this most precious intellectual tool of action (Mises 1966, pp. 229–30).

From this analysis Mises made his criticism of socialism, that it cannot calculate and thus, it is not an *economic* system at all. The attempt to implement socialism must lead to poverty, death, and retrogression of civilization. Mises said, “In abolishing economic calculation the general adoption of socialism would result in complete chaos and the disintegration of social cooperation under the division of labor” (Mises 1966, p. 861). While Mises saw calculation as *the* problem of socialism, Hayek views it as a knowledge problem:

To the naive mind that can conceive of order only as the product of deliberate arrangement, it may seem absurd that in complex conditions order, and adaptation to the unknown, can be achieved more effectively by decentralizing decisions, and that a division of authority will actually extend the possibility of overall order. Yet that decentralization actually leads to more information being taken into account. This is the main reason for rejecting the requirements of constructivist rationalism (Hayek 1988, pp. 76–77).

Mises demonstrated that even with *perfect* information, the central planners in socialism cannot rationally calculate how to combine resources to render efficient production (Ebeling 1991). They can only grope in the dark; as Mises put it, socialism is “planned chaos,” an irrational endeavor that must leach off and mimic capitalism to provide even a subsistence standard of living to its citizens.

The paradox of "planning" is that it cannot plan, because of the absence of economic calculation. What is called a planned economy is no economy at all. It is just a system of groping about in the dark. There is no question of a rational choice of means for the best possible attainment of the ultimate ends sought. What is called conscious planning is precisely the elimination of conscious purposive action (Mises 1966, pp. 700–01).

If no other objections could be raised to the socialist plans than that socialism will lower the standard of living of all or at least of the immense majority, it would be impossible for praxeology to pronounce a final judgment. Men would have to decide the issue between capitalism and socialism on the ground of judgments of value and of judgments of relevance. . . . However, the true state of affairs is entirely different. Man is not in a position to choose between these two systems. Human cooperation under the system of the social division of labor is possible only in the market economy. Socialism is not a realizable system of society's economic organization because it lacks any method of economic calculation (Mises 1966, p. 679).

Mises and the Austrian Tradition

These principles, representing the pinnacle of free-market economic theory, cannot be found in any other modern school of economic thought. By failing to correctly understand the process of the social creation of wealth these other schools have not played a significant, independent role in the current advancement of freedom. Advocates of the free market within other schools have relied upon the basic Austrian arguments or have been relatively ineffective since their economic theories are more easily rebuffed.

What effective defense of the free market has been made by econometrics? By its nature all such work tells us only of what has happened and not what can happen—it cannot result in universal laws applicable to any conceivable historical episode. As such it is easily ignored by those who wish to conduct social experiments for the future. Furthermore, econometrics is coming under increasing criticism as a method capable of rendering useful knowledge at all (see Hoppe 1988).

This criticism extends with equal force to modern neoclassical theory, since it is built upon positivism (Friedman 1974). Milton Friedman tells us that all proper economic theory must be testable and subject to falsification; that economic propositions, like those in physics, are hypothetical, tentative, and forever subject to testing and potential rejection. Yet what basic principles of economics have neoclassical economists rejected for failing tests of statistical significance? The laws of supply and demand? The principle of diminishing marginal utility? The concept of opportunity cost? The idea that exchange leads to

mutual benefit? Such basic principles are either non-testable, and thus, not positivist economic theories at all, or routinely rejected in econometric tests. Yet all *economic* defenses of the free market are built from basic principles. Friedman and other neoclassical economists say that economic theory must be empirical but they do economic theory deductively, although not as well as Mises.

Neoclassical economics has failed to provide any role in defense of the free market to the extent that it stands outside the Austrian tradition. It contains no free-market principles that are both unique and true. It should be kept in mind that after Mises's devastating article on the inability of socialism to calculate, socialists tried to refute him by using mathematical economics and econometrics to show that, in theory at least, the problem could be solved by a system of equations *if* the economy is perfectly competitive (Ebeling 1991). Their failure has not prevented others from employing the pre-eminent neoclassical theory as an argument *against* the free market. It is a common barb that the free market would be a superior economic system *if* it was perfectly competitive. And since it obviously is not perfectly competitive, then government control is essential.

To the contrary, Mises has shown that the argument for free markets does not depend on *any* type of competition, perfect or otherwise. In contrast, Hayek claims:

One revealing mark of how poorly the ordering principle of the market is understood is the common notion that "cooperation is better than competition." Cooperation, like solidarity, presupposes a large measure of agreement on ends as well as on methods employed in their pursuit. It makes sense in a small group whose members share particular habits, knowledge and beliefs about possibilities. It makes hardly any sense when the problem is to adapt to unknown circumstances; yet it is this adaptation to the unknown on which the coordination of efforts in the extended order rests. Competition is a procedure of discovery, a procedure involved in all evolution, that led man unwittingly to respond to novel situations; and through further competition, not through agreement, we gradually increase our efficiency.

To operate beneficially, competition requires that those involved observe rules rather than resort to physical force. Rules alone can unite an extended order. Neither all ends pursued, nor all means used, are known or need to be known to anybody, in order for them to be taken account of within a spontaneous order. Such an order forms of itself (Hayek 1988, pp. 19–20).

Biological and cultural evolution share other features too. For example, they both rely on the same principle of selection: survival or reproductive advantage. Variation, adaptation and competition are essentially the same kind of process, however different their particular

mechanisms, particularly those pertaining to propagation. Not only does all evolution rest on competition; continuing competition is necessary even to preserve existing achievements (Hayek 1988, p. 26).

Mises has shown that the social division of labor is not an arena of competition but cooperation, a complex network of voluntary interaction that is absolutely necessary for the continuing life and prosperity of the world's population. If people fail to understand this and act against their "rightly understood interests" then prosperity and civilization will end.

What makes friendly relations between human beings possible is the higher productivity of the division of labor. It removes the natural conflict of interests. For where there is division of labor, there is no longer question of the distribution of a supply not capable of enlargement. Thanks to the higher productivity of labor performed under the division of tasks, the supply of goods multiplies. A pre-eminent common interest, the preservation and further intensification of social cooperation, becomes paramount and obliterates all essential collisions. Catallactic competition is substituted for biological competition. It makes for harmony of the interests of all members of society. The very condition from which the irreconcilable conflicts of biological competition arise—viz., the fact that all people by and large strive after the same things—is transformed into a factor making for harmony of interests. Because many people or even all people want bread, clothes, shoes, and cars, large-scale production of these goods becomes feasible and reduces the costs of production to such an extent that they are accessible at low prices. The fact that my fellow man wants to acquire shoes as I do, does not make it harder for me to get shoes, but easier. What enhances the price of shoes is the fact that nature does not provide a more ample supply of leather and other raw material required, and that one must submit to the disutility of labor in order to transform these raw materials into shoes. The catallactic competition of those who, like me, are eager to have shoes makes shoes cheaper, not more expensive.

This is the meaning of the theorem of the harmony of the rightly understood interests of all members of the market society (Mises 1966, pp. 673–74).

Most "free-market" economists have failed to absorb Mises's analysis of capitalism and socialism and thus hold to some form of a mixed economy. As Mises has shown this view is untenable.

The market economy must be strictly differentiated from the second thinkable—although not realizable—system of social cooperation under the division of labor: the system of social or governmental ownership of the means of production. This second system is commonly called socialism, communism, planned economy, or state capitalism. The market economy or capitalism, as it is usually called,

and the socialist economy preclude one another. There is no mixture of the two systems possible or thinkable; there is no such thing as a mixed economy, a system that would be in part capitalistic and in part socialist. Production is directed by the market or by the decrees of a production tsar or a committee of production tsars.

If within a society based on private ownership by the means of production some of these means are publicly owned and operated—that is, owned and operated by the government or one of its agencies—this does not make for a mixed system which would combine socialism and capitalism. . . . These publicly owned and operated enterprises are subject to the sovereignty of the market. They must fit themselves, as buyers of raw materials, equipment, and labor, and as sellers of goods and services, into the scheme of the market economy. They are subject to the laws of the market and thereby depend on the consumers who may or may not patronize them. They must strive for profits or, at least, to avoid losses. The government may cover losses of its plants or shops by drawing on public funds. But this neither eliminates nor mitigates the supremacy of the market; it merely shifts it to another sector.

Nothing that is in any way connected with the operation of a market is in the praxeological or economic sense to be called socialism. The notion of socialism as conceived and defined by all socialists implies the absence of a market for factors of production and of prices of such factors. The “socialization” of individual plants, shops, and farms—that is, their transfer from private into public ownership—is a method of bringing about socialism by successive measures. It is a step on the way toward socialism, but not in itself socialism (Mises 1966, pp. 258–59).

This step-by-step process, in reverse, is the council given to the countries of Eastern and Central Europe by today’s self-proclaimed, free-market economists. After moving toward capitalism, they are to stop at some optimum amount of government intervention. But Mises showed long ago that interventionism is an unstable middle ground between capitalism and socialism that must continue in motion toward one or the other.

The system of interventionism or of the hampered market economy differs from the German pattern of socialism by the very fact that it is still a market economy. The authority interferes with the operation of the market economy, but does not want to eliminate the market altogether. It wants production and consumption to develop along lines different from those prescribed by an unhampered market, and it wants to achieve its aim by injecting into the working of the market orders, commands, and prohibitions for whose enforcement the police power and its apparatus of violent compulsion and coercion stand ready. But these are *isolated* acts of an integrated system which determines all

prices, wages and interest rates and thus places full control of production and consumption into the hands of the authorities.

The system of the hampered market economy or interventionism aims at preserving the dualism of the distinct spheres of government activities on the one hand and economic freedom under the market system on the other hand. What characterizes it as such is the fact that the government does not limit its activities to the preservation of private ownership of the means of production and its protection against violent or fraudulent encroachments. The government interferes with the operation of business by means of orders and prohibitions (Mises 1966, p. 718).

The interventionist doctrinaires repeat again and again that they do not plan the abolition of private ownership of the means of production, of entrepreneurial activities, and of market exchange. . . . It is necessary, they say, that the state interfere with the market phenomena whenever and wherever the "free play of the economic forces" results in conditions that appear as "socially" undesirable. In making this assertion they take it for granted that it is the government that is called upon to determine in every single case whether or not a definite economic fact is to be considered as reprehensible for the "social" point of view and, consequently whether or not the state of the market requires a special act of government interference.

All these champions of interventionism fail to realize that their program thus implies the establishment of full government supremacy in all economic matters and ultimately brings about a state of affairs that does not differ from what is called the German or the Hindenburg pattern of socialism. If it is in the jurisdiction of the government to decide whether or not definite conditions of the economy justify its intervention, no sphere of operation is left to the market. Then it is no longer the consumers who ultimately determine what should be produced, in what quantity, of what quality, by whom, where, and how—but it is the government. For as soon as the outcome brought about by the operation of the unhampered market differs from what the authorities consider "socially" desirable, the government interferes. That means the market is free as long as it does precisely what the government wants it to do. . . . Thus the doctrine and the practice of interventionism ultimately tend to abandon what originally distinguished them from outright socialism and to adopt entirely the principles of totalitarian all-round planning (Mises 1966, pp. 723–24).

In Mises's view what we are witnessing today is not the collapse of socialism, since socialism cannot be realized in full, but the collapse of a form of interventionism. He predicted this in 1949: "The interventionist interlude must come to an end because interventionism cannot lead to a permanent system of social organization" (Mises 1966, p. 858). This must happen because interventionism restricts

the goods available to consumers; and fails to bring about the end aimed at, leading to a situation worse than the pre-intervention once it has exhausted the “surplus” it seeks to confiscate (Mises 1966, p. 858). The outcome of changes in Europe depend upon understanding and accepting these Misesian ideas.

Optimists hope that at least those nations which have in the past developed the capitalist market economy and its civilization will cling to this system in the future too. There are certainly as many signs to confirm as to disprove such an expectation. It is vain to speculate about the outcome of the great ideological conflict between the principles of private ownership and public ownership, of individualism and totalitarianism, of freedom and authoritarian regimentation. All that we can know beforehand about the result of this struggle can be condensed in the following three statements:

(1) We have no knowledge whatever about the existence and operation of agencies which would bestow final victory in this clash on those ideologies whose application will secure the preservation and further intensification of societal bonds and the improvement of mankind’s material well-being. Nothing suggests the belief that progress toward more satisfactory conditions is inevitable or a relapse into very unsatisfactory conditions impossible.

(2) Men must choose between the market economy and socialism. They cannot evade deciding between these alternatives by adopting a “middle-of-the-road” position, whatever name they may give to it.

(3) In abolishing economic calculation the general adoption of socialism would result in complete chaos and the disintegration of social cooperation under the division of labor (Mises 1966, p. 861).

We are all participating in this great ideological struggle and thus economic education holds paramount importance.

Economics must not be relegated to classrooms and statistical offices and must not be left to exoteric circles. It is the philosophy of human life and action and concerns everybody and everything. It is the pith of civilization and of man’s human existence.

There is no means by which anyone can evade his personal responsibility. Whoever neglects to examine to the best of his abilities all the problems involved voluntarily surrenders his birthright to a self-appointed elite of supermen. In such vital matters blind reliance upon “experts” and uncritical acceptance of popular catchwords and prejudices is tantamount to the abandonment of self-determination and to yielding to other people’s domination. As conditions are today, nothing can be more important to every intelligent man than economics. His own fate and that of his progeny is at stake (Mises 1966, p. 878).

Conclusions

The Austrian tradition is identified by and built upon praxeology—the application of deductive reasoning to the irrefutable fact of human action. This method is the red thread that runs from Menger to Böhm-Bawerk to Mises to Murray Rothbard and the modern practitioners of Austrian economics. Working within this tradition, economists have produced a great edifice of irrefutable, universally applicable economic theory. They have shown how the free market advances mankind in its struggle against scarcity and why socialism cannot do so. They have taught us that we must choose one of these two social arrangements, since no system exists between them. We must make our selection and advance, by education and persuasion, either capitalism or socialism. Let us choose wisely.

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The End of Socialism and the Calculation Debate Revisited

Murray N. Rothbard*

At the root of the dazzling revolutionary implosion and collapse of socialism and central planning in the “socialist bloc” is what everyone concedes to be a disastrous economic failure. The peoples and the intellectuals of Eastern Europe and the Soviet Union are crying out not only for free speech, democratic assembly, and *glasnost*, but also for private property and free markets. And yet, if I may be pardoned a moment of nostalgia, four-and-a-half-decades ago, when I entered graduate school, the economics Establishment of that era was closing the book on what had been for two decades the famed “socialist calculation debate.” And they had all decided, left, right, and center, that there was not a thing economically wrong with socialism: that socialism’s only problems, such as they might be, were *political*. Economically, socialism could work just as well as capitalism.

Mises and the Challenge of Calculation

Before Ludwig von Mises raised the calculation problem in his celebrated article in 1920,¹ everyone, socialists and non-socialists alike, had long realized that socialism suffered from an *incentive problem*. If, for example, everyone under socialism were to receive an equal income, or, in another variant, everyone was supposed to produce “according to his ability” but receive “according to his needs,” then, to sum it up in the famous question: Who, under socialism, will take out the garbage? That

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¹Mises’s article, published in 1920 in German, “Die Wirtschaftsrechnung im sozialistischen Gemeinwesen,” was only made available in English in 1935: Mises, “Economic Calculation in the Socialist Commonwealth,” in F. A. Hayek, ed., *Collectivist Economic Planning* (London: Routledge and Sons, 1935), pp. 87–130. The article was republished as a monograph by the Mises Institute with a notable postscript by Professor Joseph T. Salerno (Ludwig von Mises, *Economic Calculation in the Socialist Commonwealth* [Auburn, Ala.: Ludwig von Mises Institute, 1990]).

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is, what will be the incentive to do the grubby jobs, and, furthermore, to do them well? Or, to put it another way, what would be the incentive to work hard and be productive *at any job*?

The traditional socialist answer held that the socialist society would transform human nature, would purge it of selfishness, and remold it to create a New Socialist Man. That new man would be devoid of any selfish, or indeed any self-determined, goals; his only wish would be to work as hard and as eagerly as possible to achieve the goals and obey the orders of the socialist State. Throughout the history of socialism, socialist *ultras*, such as the early Lenin and Bukharin under "War Communism," and later Mao Tse-tung and Che Guevara, have sought to replace material by so-called "moral" incentives. This notion was properly and wittily ridiculed by Alexander Gray as "the idea that the world may find its driving force in a Birthday Honours List (giving to the King, if necessary, 165 birthdays a year)."² At any rate, the socialists soon found that voluntary methods could hardly yield them the New Socialist Man. But even the most determined and bloodthirsty methods could not avail to create this robotic New Socialist Man. And it is a testament to the spirit of freedom that cannot be extinguished in the human breast that the socialists continued to fail dismally, despite decades of systemic terror.

But the uniqueness and the crucial importance of Mises's challenge to socialism is that it was totally unrelated to the well-known incentive problem. Mises in effect said: All right, suppose that the socialists have been able to create a mighty army of citizens all eager to do the bidding of their masters, the socialist planners. What exactly would those planners tell this army to do? How would they know what products to order their eager slaves to produce, at what stage of production, how much of the product at each stage, what techniques or raw materials to use in that production and how much of each, and where specifically to locate all this production? How would they know their costs, or what process of production is or is not efficient?

Mises demonstrated that, in any economy more complex than the Crusoe or primitive family level, the socialist planning board would simply not know what to do, or how to answer any of these vital questions. Developing the momentous concept of *calculation*, Mises pointed out that the planning board could not answer these questions because socialism would lack the indispensable tool that private entrepreneurs use to appraise and calculate: the existence of a market in the means of production, a market that brings about money

²Alexander Gray, *The Socialist Tradition* (London: Longmans, Green, 1946), p. 90.

prices based on genuine profit-seeking exchanges by private owners of these means of production. Since the very essence of socialism is collective ownership of the means of production, the planning board would not be able to plan, or to make any sort of rational economic decisions. Its decisions would necessarily be completely arbitrary and chaotic, and therefore the existence of a socialist planned economy is literally “impossible” (to use a term long ridiculed by Mises’s critics).

The Lange-Lerner “Solution”

In the course of intense discussion throughout the 1920s and 1930s, the socialist economists were honest enough to take Mises’s criticism seriously, and to throw in the towel on most traditional socialist programs: in particular, the original communist vision that workers, not needing such institutions as bourgeois money fetishism, would simply produce and place their products on some vast socialist heap, with everyone simply taking from that heap “according to his needs.” The socialist economists also abandoned the Marxian variant that everyone should be paid according to the labor time embodied into his product. In contrast, what came to be known as the Lange-Lerner solution (or, less commonly but more accurately, the Lange-Lerner-Taylor solution), acclaimed by virtually all economists, asserted that the socialist planning board could easily resolve the calculation problem by ordering its various managers to fix accounting prices. Then, according to the contribution of Professor Fred M. Taylor, the central planning board could find the proper prices in much the same way as the capitalist market: trial and error. Thus, given a stock of consumer goods, if the accounting prices are set too low, there will be a shortage, and the planners will raise prices until the shortage disappears and the market is cleared. If, on the other hand, prices are set too high, there will be a surplus on the shelves, and the planners will lower the price, until the markets are cleared. The solution is simplicity itself.³

In the course of his two-part article and subsequent book, Lange concocted what could only be called the Mythology of the Socialist Calculation Debate, a mythology which, aided and abetted by Joseph Schumpeter, was accepted by virtually all economists of whatever ideological stripe. It was this mythology which I found handed down as

³Oskar Lange’s well-known article was originally in two parts: “On the Economic Theory of Socialism,” *Review of Economic Studies* 4 (October 1936): 53–71, and *ibid.* 5 (February 1937): 132–42; Fred M. Taylor’s article was “The Guidance of Production in a Socialist State,” *American Economic Review* 19 (March 1929); Taylor was reprinted and Lange revised and published in Oskar Lange and Fred M. Taylor, *On the Economic Theory of Socialism*, B. Lippincott, ed. (Minneapolis: University of Minnesota Press, 1938).

the Orthodox Line when I entered Columbia University's graduate school at the end of World War II—a line promulgated in lectures by no less an expert on the Soviet economy than Professor Abram Bergson, then at Columbia. In 1948, indeed, Professor Bergson was selected to hand down the Received Opinion on the subject by a committee of the American Economic Association, and Bergson interred the socialist calculation question with the Orthodox Line as its burial rite.⁴

The Lange-Bergson Orthodox Line went about as follows: Mises, in 1920, had done an inestimable service to socialism by raising the problem of economic calculation, a problem of which socialists had not generally been aware. Then Pareto and his Italian disciple Enrico Barone had shown that Mises's charge, that socialist calculation was impossible, was incorrect, since the requisite number of supply, demand, and price equations existed under socialism as under a capitalist system. At that point, F. A. Hayek and Lionel Robbins, abandoning Mises's extreme position, fell back on a second line of defense: that, while the calculation problem could be solved *theoretically*, in practice it would be too difficult. Thereby Hayek and Robbins fell back on a practical problem, or one of degree of efficiency rather than of a drastic difference in kind. But now, happily, the day has been saved for socialism, since Taylor-Lange-Lerner have shown that, by jettisoning utopian ideas of a money-less or price-less socialism, or of pricing according to a labor theory of value, the socialist Planning Board can solve these pesky equations simply by the good old capitalist method of trial and error.⁵

Bergson, attempting to be magisterial in his view of the debate, summed up Mises as contending that "without private ownership of, or (what comes to the same thing for Mises) a free market for the means of production, the rational evaluation of these goods for the purposes of calculating costs is ruled out . . ." Bergson correctly adds that to put Mises's point

somewhat more sharply than is customary, let us imagine a Board of Supermen, with unlimited logical faculties, with a complete scale of values for the different consumers goods, and present and future consumption, and detailed knowledge of production techniques. Even such a Board would be unable to evaluate rationally the means of production. In the absence of a free market for these goods, decisions

⁴Abram Bergson, "Socialist Economics," in H. S. Ellis, ed., *A Survey of Contemporary Economics* (Philadelphia: Blakiston, 1948), pp. 412–48.

⁵Lange was aided in this construction by being able to use Hayek's collection of articles on the subject, which had just been published the year before his first article, as a useful foil. Hayek's volume included the seminal article by Mises, other contributions by Pierson and Halm, two articles by Hayek himself, and the alleged refutation of Mises by Barone. See Hayek, *Collectivist Economic Planning*.

on resource allocation in Mises' view necessarily would be on a haphazard basis.

Bergson sharply comments that this "argument is easily disposed of." Lange and Schumpeter both point out that, as Pareto and Barone had shown,

once tastes and techniques are given, the values of the means of production can be determined unambiguously by imputation without the intervention of a market process. The Board of Supermen could decide readily how to allocate resources so as to assure the optimum welfare. It would simply have to solve the equations of Pareto and Barone.⁶

So much for Mises. As for the Hayek-Robbins problem of practicality, Bergson adds, that can be settled by the Lange-Taylor trial-and-error method; any remaining problems are only a matter of degree of efficiency, and political choices. The Mises problem has been satisfactorily solved.

Some Fallacies of the Lange-Lerner Solution

The breathtaking naivete of the Orthodox Line should have been evident even in the 1940s. As Hayek later chided Schumpeter on the assumption of "imputation" outside the market, this formulation "presumably means . . . that the valuation of the factors of production is implied in, or follows necessarily from, the valuation of consumers' goods. But . . . implication is a logical relationship which can be meaningfully asserted only of propositions simultaneously present to one and the same mind."⁷

Economists were convinced of the Lange solution because they had already come under the sway of the Walrasian general equilibrium model; Schumpeter, for example, was an ardent Walrasian. In this model, the economy is always in static general equilibrium, a changeless world in which all "data"—tastes or value scales, alternative technologies, and lists of resources—are known to everyone, and where costs are known and always equal to price. The Walrasian world is also one of "perfect" competition, where prices are given to all managers. Indeed, both Taylor and Lange make the point that the Socialist Planning Board will be better able to calculate than capitalist markets, since the socialist planners can ensure "perfect competition," whereas the real world of capitalism is shot through with various sorts of "monopolies"! The socialist planners can act like the

⁶Bergson, "Socialist Economics," p. 446.

⁷F. A. Hayek, "The Use of Knowledge in Society" (1945), in Hayek, *Individualism and Economic Order* (Chicago: University of Chicago Press, 1948), p. 90.

absurdly fictional Walrasian “auctioneer,” bringing about equilibrium rapidly by trial and error.

Set aside the obvious absurdity of trusting a coercive governmental monopoly to act somehow as if it were in “perfect competition” with parts of itself. Another grievous flaw in the Lange model is thinking that general equilibrium, a world of certainty where there is no room for the driving force of entrepreneurship, can somehow be used to depict the real world. The actual world is one not of changeless “givens” but of incessant change and systemic uncertainty. Because of this uncertainty, the capitalist entrepreneur, who stakes assets and resources in attempting to achieve profits and avoid losses, becomes the crucial actor in the economic system, an actor who can in no way be portrayed by a world of general equilibrium. Furthermore, it is ludicrous, as Hayek pointed out, to think of general equilibrium as the only legitimate “theory,” with all other areas or problems dismissed as mere matters of practicality and degree. No economic theory worth its salt can be worthwhile if it omits the role of the entrepreneur in an uncertain world. The Pareto-Barone-Lange, etc. “equations” is not simply excellent theory that faces problems in practice; for in order to be “good,” a theory must be useful in explaining real life.⁸

Another grave flaw in the Lange-Taylor trial-and-error approach is that it concentrates on consumer good pricing. It is true that retailers, given the stock of a certain type of good, can clear the market by adjusting the prices of that good upward or downward. But, as Mises pointed out in his original 1920 article, consumers goods are not the real problem. Consumers, these “market socialists” are postulating, are free to express their values by using money they had earned on a range of consumers’ goods. Even the labor market—at least in principle⁹—can be treated as a market with self-owning suppliers who are free to accept or reject bids for their labor and to move to different occupations. The real problem, as Mises has insisted from the beginning, is in all the intermediate markets for land and capital goods. Producers have to use land and capital resources to

⁸The silliness of hailing Barone’s essay as a refutation of Mises is highlighted by the fact that Barone’s article was published in 1908, twelve years before Mises’s article which it is supposed to have refuted. The date was well known to, and made no impression upon, Ludwig von Mises. Moreover, Barone and Pareto themselves had only scorn for any notion that their equations could aid socialist planning. See Trygve J. B. Hoff, *Economic Calculation in the Socialist Society* (1949; Indianapolis, Ind.: Liberty Press, 1981), pp. 222–23.

⁹Here, as in other parts of his argument—as we shall see further below—Mises is leaning over backward to concede the market socialists their best case, and is not considering whether such free consumer or labor markets are really likely in a world where the state is the only seller, as well as the only purchaser, of labor.

decide what the stocks of the various consumer goods should be. Here there are a huge number of markets where the State monopoly can only be both buyer and seller for each transaction, and these intra-monopoly, intra-state transactions permeate the most vital markets of an advanced economy—the complex lattice-work of the capital markets. And here is precisely where calculational chaos necessarily reigns, and there is no way for rationality to intrude on the immense number of decisions on the allocation of prices and factors of production in the structure of capital goods.

Mises's Rebuttal: The Entrepreneur

Moreover, Mises's brilliant and devastating rebuttal to his Lange-Lerner "market socialism" critics has virtually never been considered—neither by the economics establishment nor by the post-World War II Hayekians. In both cases, the writers were eager to dispose of Mises as having safely made his pioneering contribution in 1920, but being superseded later, either by Lange-Lerner or by Hayek, as the case may be. In both cases, it was inconvenient to ponder that Mises continued to elaborate his position with a penetrating critique of his critics, or that Mises's "extreme" formulation may, after all, have been correct.¹⁰

Mises began his rebuttal in *Human Action* by discussing the "trial-and-error" method, and pointing out that this process only works in the capitalist market. There the entrepreneurs are strongly motivated to make greater profits and to avoid losses, and further, such a criterion does not apply to the capital goods or land market under socialism where all resources are controlled by one entity, the government.

Continuing his reply, Mises pressed on to a brilliant critique, not only of socialism, but of the entire Walrasian general equilibrium model. The major fallacy of the "market socialists," Mises pointed out, is that they look at the economic problem from the point of view of

¹⁰Mises's later rebuttal is in his *Human Action* (New Haven: Yale University Press, 1949), pp. 694–711. For the establishment, the debate was supposed to be over by 1938. For an example of a Hayekian survey of the debate that does not bother to so much as mention *Human Action*, see Karen I. Vaughn, "Introduction," in Hoff, *Economic Calculation*, pp. ix–xxxvii. Indeed, in an earlier paper, Vaughn had sneered that "Mises' so-called final refutation in *Human Action* is mostly polemic and glosses over the real problems . . ." Vaughn, "Critical Discussion of the Four Papers," in Lawrence Moss, ed. *The Economics of Ludwig von Mises* (Kansas City: Sheed and Ward, 1976), p. 107. The Hayekian doctrine will be treated further below.

For a refreshing example of an outstanding Misesian contribution to the debate that does not neglect or deprecate *Human Action* but rather builds upon it, see Joseph T. Salerno, "Ludwig von Mises as Social Rationalist," *Review of Austrian Economics* 4 (1990): 36–48. Also see Salerno, "Why Socialist Economy is Impossible," a Postscript to Mises, *Economic Calculation in the Socialist Commonwealth* (Auburn, Ala.: Ludwig von Mises Institute, 1990).

the manager of the individual firm, who seeks to make profits or avoid losses within a rigid framework of a given, external allocation of capital to each of the various branches of industry and indeed to the firm itself. In other words, the "market socialist" manager is akin, not to the real driving force of the capitalist market, the capitalist entrepreneur, but rather to the relatively economically insignificant manager of the corporate firm under capitalism. As Mises brilliantly puts it:

the cardinal fallacy implied in [market socialist] proposals is that they look at the economic problem from the perspective of the subaltern clerk whose intellectual horizon does not extend beyond subordinate tasks. They consider the structure of industrial production and the allocation of capital to the various branches and production aggregates as rigid, and do not take into account the necessity of altering this structure in order to adjust it to changes in conditions. . . . They fail to realize that the operations of the corporate officers consist merely in the loyal execution of the tasks entrusted to them by their bosses, the shareholders. . . . The operations of the managers, their buying and selling, are only a small segment of the totality of market operations. The market of the capitalist society also performs those operations which allocate the capital goods to the various branches of industry. The entrepreneurs and capitalists establish corporations and other firms, enlarge or reduce their size, dissolve them or merge them with other enterprises; they buy and sell the shares and bonds of already existing and of new corporations; they grant, withdraw, and recover credits; in short they perform all those acts the totality of which is called the capital and money market. It is these financial transactions of promoters and speculators that direct production into those channels in which it satisfies the most urgent wants of the consumers in the best possible way.¹¹

Mises goes on to remind the reader that the corporate manager performs only a "managerial function," a subsidiary service that "can never become a substitute for the entrepreneurial function." Who are the capitalist-entrepreneurs? They are "the speculators, promoters, investors and moneylenders, [who] in determining the structure of the stock and commodity exchanges and of the money market, circumscribe the orbit within which definite tasks can be entrusted to the manager's discretion." The crucial question, Mises continues, is not managerial activities, but: "In which branches should production be increased or restricted, in which branches should the objective of production be altered, what new branches should be inaugurated?" In short, the crucial decisions in the capitalist economy are the allocation of capital to firms and industries. "With regard to these issues," Mises

¹¹Mises, *Human Action*, pp. 703-04.

adds, "it is vain to cite the honest corporation manager and his well-trying efficiency. Those who confuse entrepreneurship and management close their eyes to the economic problem . . . The capitalist system is not a managerial system; it is an entrepreneurial system."

But here, Mises triumphantly concludes, no "market socialist" has ever suggested preserving or carrying over, much less understood the importance of, the specifically entrepreneurial functions of capitalism:

Nobody has ever suggested that the socialist commonwealth could invite the promoters and speculators to continue their speculations and then deliver their profits to the common chest. Those suggesting a quasi-market for the socialist system have never wanted to preserve the stock and commodity exchanges, the trading in futures, and the bankers and money-lenders as quasi-institutions.¹²

Mises has been cited as stating, in *Human Action*, that it is absurd for the socialist planning board to tell their managers to "play market," to act *as if* they are owners of their firms in trying to maximize profits and avoid losses. But it is important to stress that Mises was focusing, not so much on the individual managers of socialist "firms," but on the speculators and investors who decide the crucial allocations of capital throughout the structure of industry. It is at least conceivable that one can order a manager to play market and act as if he were enjoying the profits and suffering losses; but it is clearly ludicrous to ask investors and capital speculators to act as if their fortunes were at stake. As Mises adds:

one cannot *play* speculation and investment. The speculators and investors expose their own wealth, their own destiny. This fact makes them responsible to the consumers, the ultimate bosses of the capitalist economy. If one relieves them of this responsibility, one deprives them of their very character.¹³

One time, during Mises's seminar at New York University, I asked him whether, considering the broad spectrum of economies from a purely free market economy to pure totalitarianism, he could single out one criterion according to which he could say that an economy was essentially "socialist" or whether it was a market economy. Somewhat to my surprise, he replied readily: "Yes, the key is whether the economy has a stock market." That is, if the economy has a full-scale market in titles to land and capital goods. In short: Is the allocation of capital basically determined by government or by private owners? At the time, I did not fully understand the vital importance

¹²Ibid., pp. 704–05.

¹³Ibid., p. 705.

of Mises's answer, which I realized recently when poring over the great merits of the Misesian, as compared to the Hayekian, analysis of the socialist calculation problem.

For Mises, in short, the key to the capitalist market economy and its successful functioning is the entrepreneurial forecasting and decisionmaking of private owners and investors. The key is emphatically *not* the more minor decisions made by corporate managers within a framework already set by entrepreneurs and the capital markets. And it is obvious that Lange, Lerner, and the other market socialists merely envisioned the relatively lesser managerial decisions. These economists, who had never grasped the function of speculation or capital markets, therefore had no idea that they would need to be or could be replicated in a socialist system.¹⁴ And this is not surprising, since in the Walrasian general micro-equilibrium model, there is no capital structure, there is no role for capital, and capital theory has become totally submerged into "growth theory," that is, growth of a homogeneous "level," or blob, of aggregate macro-capital. The allocation of capital is considered external and given, and receives no consideration.

The Structure of Capital

Joseph Schumpeter and Frank H. Knight are interesting examples of two eminent economists who were personally anti-socialist but were seduced by their Walrasian devotion to general equilibrium and their lack of a genuine capital theory into strongly endorsing the orthodox view that there is no economic calculation problem under socialism. In particular, in capital theory, both Schumpeter and Knight were disciples of J. B. Clark, who denied any role at all for time in the process of production. For Schumpeter, production takes no time because production and consumption are somehow always "synchronized." Time is erased from the picture, even to assuming away the existence of any accumulated stocks of capital goods, and therefore of any age structure of such goods. Since production is magically synchronized, there is then no necessity for land or labor to receive advances in payment from capitalists out of accumulated savings. Schumpeter achieves this feat by sundering capital completely from its embodiment in capital goods, and limiting the concept to a money fund used to purchase such goods.¹⁵

Frank Knight, the doyen of the Chicago School, was also an ardent

¹⁴The fact that some socialist bloc countries, such as Hungary, now permit a stock market, albeit small and truncated, and that other ex-communist countries are seriously considering introducing such capital markets, demonstrates the enormous importance of the de-socialization now under way in Eastern Europe.

¹⁵See Murray N. Rothbard, "Breaking Out of the Walrasian Box: The Cases of Schumpeter and Hansen," *Review of Austrian Economics* 1 (1987): 98-100, 107.

believer in the Clarkian view that time preference has no influence on interest paid by producers, and that production is synchronized so that time plays no role in the production structure. Hence, Knight believed, along with modern orthodoxy, that capital is a homogeneous, self-perpetuating blob that *has no* lattice-like, time-oriented structure. Knight's fiercely anti-Böhm-Bawerkian, anti-Austrian views on capital and interest led him to a then-famous war of journal articles over capital theory during the 1930s, a war he won by default when Austrianism disappeared because of the Keynesian Revolution.¹⁶

In his negative review of Mises's *Socialism*, Frank Knight, after hailing Lange's "excellent" 1936 article, brusquely dismisses the socialist calculation debate as "largely sound and fury." To Knight, it is simply "truistical" that the "technical basis of economic life" would continue as before under socialism, and that therefore "the managers of various technical units in production—farms, factories, railways, stores, etc.—would carry on in essentially the same way." Note, there is no reference whatever to the crucial capital market, or to the allocation of capital to various branches of production. If capital is an automatically renewing homogeneous blob, all one need worry about is growth in the amount of that blob. Hence, Knight concludes that "socialism is a political problem, to be discussed in terms of social and political psychology, and economic theory has relatively little to say about it."¹⁷ Certainly, that is true of Knight's orthodox-Chicagoite brand of economic theory!

It is instructive to compare the naivete and the brusque dismissal

¹⁶On Knight vs. Hayek, Machlup, and Boulding in the 1930s, see F. A. Hayek, "The Mythology of Capital," in W. Fellner and B. Haley, eds., *Readings in the Theory of Income Distribution* (Philadelphia: Blakiston, 1946), pp. 355–83. For a Knightian attack on the Austrian discounted marginal productivity theory on behalf of what is now the orthodox undiscounted (by time-preference) marginal productivity theory, see Earl Rolph, "The Discounted Marginal Productivity Doctrine," *ibid.*, pp. 278–93. For an Austrian rebuttal, see Murray N. Rothbard, *Man, Economy, and State*, vol. 1 (Los Angeles: Nash, 1970), pp. 431–33; and Walter Block, "The DMVP-MVP Controversy: A Note," *Review of Austrian Economics* 4 (1990): 199–207.

¹⁷Frank H. Knight, "Review of Ludwig von Mises, *Socialism*," *Journal of Political Economy* 46 (April 1938): 267–68. In another review in the same issue of the journal, Knight claims that there *would* be a "capital market" under socialism, but it is clear that he is referring only to a market for loans, and not to a genuine market in equities throughout the production structure. Here again, Mises has a devastating critique of this sort of scheme in *Human Action*, pointing out that managers bidding for governmental planning board funds would not be bidding for or staking their own property, and hence they would "not be restrained by any financial dangers they themselves run in promising too high a rate of interest for the funds borrowed. . . . All the hazards of this insecurity fall only upon society, the exclusive owner of all resources available. If the director were without hesitation to allocate the funds available to those who bid most, he would simply . . . abdicate in favor of the least scrupulous visionaries and scoundrels." See Knight, "Two Economists on Socialism," *Journal of Political Economy* 46 (April 1938): 248; and Mises, *Human Action*, p. 705.

of the problem by Schumpeter and Knight with the penetrating Misesian critique of socialism by Professor Georg Halm:

Because capital is no longer owned by many private persons, but by the community, which itself disposes of it directly, a rate of interest *can* no longer be determined. A pricing process is always possible only when demand and supply meet in a market. . . . In the socialist economy . . . there can be no demand and no supply when the capital from the outset is in the possession of its intending user, in this case the socialistic central authority.

Now it might perhaps be suggested that, since the rate of interest cannot be determined automatically, it should be fixed by the central authority. But this likewise would be quite impossible. It is true that the central authority would know quite well how many capital goods of a given kind it possessed or could procure . . . ; it would know the capacity of the existing plant in the various branches of production; *but it would not know how scarce capital was*. For the scarcity of means of production must always be related to the demand for them, whose fluctuations give rise to variations in the value of the good in question . . .

If it should be objected that a price for consumption-goods would be established, and that in consequence the intensity of the demand and so the value of the means of production would be determinate, this would be a further serious mistake. . . . The demand for means of production, labor and capital goods, is only indirect.

Halm goes on to add that if there were only one single factor of production in making consumers' goods, the socialist "market" might be able to determine its proper price. But this can not be true in the real world where *several* factors of production take part in the production of goods in various markets.

Halm then adds that the central authority, contrary to his above concession, would not *even* be able to find out how much capital it is employing. For capital goods are heterogeneous, and therefore how "can the total plant of one factory be compared with that of another? How can a comparison be made between the values of even only two capital-goods?" In short, while under capitalism such comparisons can be made by means of money prices set on the market for every good, in the socialist economy the absence of genuine money prices arising out of a market precludes any such value comparisons. Hence, there is also no way for a socialist system to rationally estimate the costs (which are dependent on prices in factor markets) of any process of production.¹⁸

¹⁸Georg Halm, "Further Considerations on the Possibility of Adequate Calculation in a Socialist Community," in Hayek, *Collectivist Economic Planning*, pp. 162-65. Also see *ibid.*, pp. 13-200.

Mises's Rebuttal: Valuation and Monetary Appraisal

In his original 1920 article, Mises emphasized that "as soon as one gives up the conception of a freely established monetary price for goods of a higher order, rational production becomes completely impossible." Mises then states, prophetically:

One may anticipate the nature of the future socialist society. There will be hundreds and thousands of factories in operation. Very few of these will be producing wares ready for use; in the majority of cases what will be manufactured will be unfinished goods and production goods. All these concerns will be interrelated. Every good will go through a whole series of stages before it is ready for use. In the ceaseless toil and moil of this process, however, the administration will be without any means of testing their bearings. It will never be able to determine whether a given good has not been kept for a superfluous length of time in the necessary processes of production, or whether work and material have not been wasted in its completion. How will it be able to decide whether this or that method of production is the more profitable? At best it will only be able to compare the quality and quantity of the consumable end-product produced, but will in the rarest cases be in a position to compare the expenses entailed in production.

Mises points out that while the government may be able to know what ends it is trying to achieve, and what goods are most urgently needed, it will have no way of knowing the other crucial element required for rational economic calculation: valuation of the various means of production, which the capitalist market can achieve by the determination of money prices for all products and their factors.¹⁹

Mises concludes that, in the socialist economy "in place of the economy of the 'anarchic' method of production, recourse will be had to the senseless output of an absurd apparatus. The wheels will turn, but will run to no effect."²⁰

Moreover, in his later rebuttal to the champions of the Pareto-Barone equations, Mises points out that the crucial problem is not simply that the economy is not and can never be in the general equilibrium state described by these differential equations. In addition to other grave problems with the equilibrium model (e.g.: that the socialist planners do not now know their value scales in future

¹⁹Mises, "Economic Calculation in the Socialist Commonwealth," pp. 106–08.

²⁰*Ibid.*, p. 106. This conclusion of 1920 is strikingly close to the quip common in the Poland of 1989, as reported by Professor Krzysztof Ostaszewski of the University of Louisville: that the socialist planned economy is "a value-shredding machine run by an imbecile."

equilibrium; that money and monetary exchange cannot fit into the model; that units of productive factors are neither perfectly divisible nor infinitesimal—and that marginal utilities of different people cannot be equated—on the market or anywhere else), the equations “do not provide any information about the human actions by means of which the hypothetical state of equilibrium” has been or can be reached. In short, the equations offer no information whatever on how to get from the existing disequilibrium state to the general equilibrium goal.

In particular, Mises points out, “even if, for the sake of argument, we assume that a miraculous inspiration has enabled the director without economic calculation to solve all problems concerning the most advantageous arrangement of all production activities and that the price image of the final goal he must aim at is present to his mind,” there remain crucial problems on the path from here to there. For the socialist planner does not start from scratch and then build a capital goods structure most perfectly designed to meet his goals. He necessarily starts with a capital goods structure produced at many stages of the past and determined by past consumer values and past technological methods of production. There are different degrees of such past determinants built into the existing capital structure, and anyone starting today must use these resources as best he can to meet present and expected future goals. For these heterogeneous choices, no mathematical equations can be of the slightest use.²¹

Finally, the unique root of Mises’s position, and one that distinguishes him and his “socialist impossibility” thesis from Hayek and the Hayekians, has been neglected until the present day. And this neglect has persisted despite Mises’s own explicit avowal in his memoirs of the root and groundwork of his calculation thesis.²² For Mises was *not*, like Hayek and his followers, concentrating on the flaws in the general equilibrium model when he arrived at his position; nor was he led to his discussion solely by the triumph of the socialist revolution in the Soviet Union. For Mises records that his position on socialist calculation emerged out of his first great work,

²¹Mises, *Human Action*, pp. 706–09. As Mises puts it: “socialists of all shades of opinion, repeat again and again that what makes the achievement of their ambitious plans realizable is the enormous wealth hitherto accumulated. But in the same breath they disregard the fact that this wealth consists to a great extent in capital goods produced in the past and more or less antiquated from the point of view of our present valuations and technological knowledge.” *Ibid.*, p. 710.

²²In Mises’s *Notes and Recollections* (Spring Mills, Penn.: Libertarian Press, 1978), p. 112. Also see the discussion in Murray N. Rothbard, *Ludwig von Mises: Scholar, Creator, Hero* (Auburn, Ala.: Ludwig von Mises Institute, 1988), pp. 35–38.

The Theory of Money and Credit (1912). In the course of that notable integration of monetary theory and “micro” marginal utility theory, Mises was one of the very first to realize that subjective valuations of the consumers (and of laborers) on the market are purely ordinal, and are in no way measurable. But market prices are cardinal and measurable in terms of money, and market money prices bring goods into cardinal comparability and calculation (e.g., a \$10 hat is “worth” five times as much as a \$2 loaf of bread).²³ But Mises realized that this insight meant it was absurd to say (as Schumpeter would) that the market “imputes” the values of consumer goods back to the factors of production. Values are not directly “imputed”; the imputation process works only indirectly, by means of money prices on the market. Therefore socialism, necessarily devoid of a market in land and capital goods, must lack the ability to calculate and compare goods and services, and therefore any rational allocation of productive resources under socialism is indeed *impossible*.²⁴

For Mises, then, his work on socialist calculation was part and parcel of his expanded integration of direct and monetary exchange, of “micro” and “macro,” that he had begun but not yet completed in *The Theory of Money and Credit*.²⁵

Fallacies of Hayek and Kirzner

The orthodox line of the 1930s and 40s was wrong in claiming that Hayek and his followers (such as Lionel Robbins) abandoned Mises’s “theoretical” approach by bowing down to the Pareto-Barone equations, falling back on “practical” objections to socialist planning.²⁶ As we have already seen, Hayek scarcely ceded to mathematical equations of general equilibrium the monopoly of correct economic theory. But it is also true that Hayek and his followers fatally and radically changed the entire focus of their “Austrian” position, either by mis-

²³On the market, then, consumers *evaluate* goods and services ordinally, whereas entrepreneurs *appraise* (estimate and forecast future prices) cardinally. On valuation and appraisal, see Mises, *Human Action*, pp. 327–330; Salerno, “Mises as Social Rationalist,” pp. 39–49; and Salerno, “Socialist Economy is Impossible.”

²⁴Mises says in his memoirs: “They [the socialists] failed to see the very first challenge: How can economic action that always consists of preferring and setting aside, that is, of making unequal valuations, be transformed into equal valuations, by the use of equations? Thus the advocates of socialism came up with the absurd recommendation of substituting equations of mathematical catallactics, depicting an image from which human action is eliminated, for the monetary calculation in the market economy.” Mises, *Notes and Recollections*, p. 112.

²⁵This integration was later completed by his business-cycle theory in the 1920s, and then in his monumental treatise *Human Action*.

²⁶Except for the unfortunate emphasis of Hayek and Robbins on the alleged socialist difficulty of computing or “counting” the equations. See below.

construing Mises's argument or by consciously though silently shifting the crucial terms of the debate.

It is no accident, in short, that Hayek and the Hayekians dropped Mises's term "impossible" as embarrassingly extreme and imprecise. For Hayek, the major problem for the socialist planning board is its lack of *knowledge*. Without a market, the socialist planning board has no means of knowing the value-scales of the consumers, or the supply of resources or available technologies. The capitalist economy is, for Hayek, a valuable means of disseminating knowledge from one individual to another through the pricing "signals" of the free market. A static, general equilibrium economy would be able to overcome the Hayekian problem of dispersed knowledge, since eventually all data would come to be known by all, but the everchanging, uncertain data of the real world prevents the socialist planning board from acquiring such knowledge. Hence, as is usual for Hayek, the argument for the free economy and against statism rests on an argument from ignorance.

But to Mises the central problem is not "knowledge." He explicitly points out that *even if* the socialist planners knew perfectly, and eagerly wished to satisfy, the value priorities of the consumers, and *even if* the planners enjoyed a perfect knowledge of all resources and all technologies, they *still* would not be able to calculate, for lack of a price system of the means of production. The problem is not knowledge, then, but calculability. As Professor Salerno points out, the *knowledge* conveyed by present—or immediate "past"—prices is consumer valuations, technologies, supplies, etc. of the immediate or recent past. But what acting man is interested in, in committing resources into production and sale, is *future* prices, and the present committing of resources is accomplished by the entrepreneur, whose function is to *appraise*—to anticipate—future prices, and to allocate resources accordingly. It is precisely this central and vital role of the *appraising entrepreneur*, driven by the quest for profits and the avoidance of losses, that cannot be fulfilled by the socialist planning board, for lack of a market in the means of production. Without such a market, there are no genuine money prices and therefore no means for the entrepreneur to calculate and appraise in cardinal monetary terms.

More philosophically, the entire Hayekian emphasis on "knowledge" is misplaced and misconceived. The purpose of human action is not to "know" but to employ means to satisfy goals. As Salerno perceptively summarizes Mises's position:

The price system is not—and praxeologically cannot be—a mechanism for economizing and communicating the knowledge relevant to production plans [the Hayekian position]. The realized prices of history are an accessory of appraisalment, the mental operation in

which the faculty of understanding is used to assess the quantitative structure of price relationships which corresponds to an anticipated constellation of economic data. Nor are anticipated future prices tools of knowledge; they are instruments of economic calculation. And economic calculation itself is not the means of acquiring knowledge, but the very prerequisite of rational action within the setting of the social division of labor. It provides individuals, whatever their endowment of knowledge, the indispensable tool for attaining a mental grasp and comparison of the means and ends of social action.²⁷

In a recent article, Professor Israel Kirzner argues for the Hayekian position. For Hayek and for Kirzner, the market is a "discovery procedure," that is, an unfolding of knowledge. There is, in this view of the market and of the world, no genuine recognition of the entrepreneur, not as a "discoverer," but as a dynamic risk taker, risking losses if his appraisal and forecast go awry. Kirzner's commitment to the "discovery process" fits all too well with his own original concept of the entrepreneurial function as being that of "alertness," and of different entrepreneurs as being variously alert to the opportunities that they see and discover. But this outlook totally misconceives the role of the entrepreneur. The entrepreneur is not simply "alert"; he forecasts; he appraises; he meets and bears risk and uncertainty by questing for profits and risking losses. As Salerno points out, for all their talk of dynamism and uncertainty, the Hayek-Kirzner "entrepreneur" is curiously bloodless and passive, receiving and passively imbibing knowledge imparted to him by the market. The Hayek-Kirzner entrepreneur is far closer than they like to think to the Walrasian automaton, to the fictional "auctioneer" who avoid all real trades in the marketplace.²⁸

Unfortunately, while lucidly expounding the Hayekian position, Kirzner obfuscates the history of the debate by claiming that the later Mises, along with Hayek, changed his position (or, at the least, "elaborated" it) from his original, "static" view of 1920. But on the contrary, as Salerno points out, the "later" Mises explicitly spurned

²⁷Salerno, "Mises as Social Rationalist," p. 44.

²⁸Israel M. Kirzner, "The Economic Calculation Debate: Lessons for Austrians," *Review of Austrian Economics* 2 (1988): 1-18. Hayek coined the term "discovery procedure" in F. A. Hayek, "Competition as a Discovery Procedure," in *New Studies in Philosophy, Politics, Economics and the History of Ideas* (Chicago: University of Chicago Press, 1978), pp. 179-90. For a critique of Kirzner's concept of entrepreneurship, see Murray N. Rothbard, "Professor Hébert on Entrepreneurship," *Journal of Libertarian Studies* 7 (Fall 1985): 281-85. For Hayek's own contributions to the socialist calculation debate after Lange-Lerner, see F. A. Hayek, "Socialist Calculation III: The Competitive 'Solution'" (1940), and "The Use of Knowledge in Society," (1945), in *Individualism and Economic Order*, pp. 181-208; 77-91.

uncertainty of the future as the key to the calculation problem. The key to the calculation question, stated Mises in *Human Action*, is *not* that "all human action points to the future and the future is always uncertain." No, socialism has

quite a different problem. Today we calculate from the point of view of our present knowledge and of our present anticipation of future conditions. We do not deal with the problem of whether or not the [socialist] director will be able to anticipate future conditions. What we have in mind is that the director cannot calculate from the point of view of his own present value judgments and his own present anticipation of future conditions, whatever they may be. If he invests today in the canning industry, it may happen that a change in consumers' tastes or in the hygienic opinions concerning the wholesomeness of canned food will one day turn his investment into a malinvestment. But how can he find out today how to build and equip a cannery most economically?

Some railroad lines constructed at the turn of the century would not have been built if the people had at that time anticipated the impending advance of motoring and aviation. But those who at the time built railroads knew which of the various possible alternatives for the realization of their plans they had to choose from the point of view of their appraisements and anticipations and of the market prices of their day in which the valuations of the consumers were reflected. It is precisely this insight that the director will lack. He will be like a sailor on the high seas unfamiliar with the methods of navigation . . .^{29,30}

Solving Equations and Lange's Last Word

One of the unfortunate formulations of Hayek and the Hayekians in the 1930s, giving rise to the general misunderstanding that the only problems of socialist planning are "practical" not "theoretical," was their stress on the alleged difficulty of socialist planners in computing or solving all the demand and supply functions, all the "simultaneous differential equations" needed to plan prices and the allocation of resources. If socialistic planning is to rely on the Pareto-Barone equations, then how will all of them be known, especially in a world of necessarily changing data of values, resources, and technology?

Lionel Robbins began this equation-difficulty approach in his

²⁹Mises, *Human Action*, p. 696. Also see Salerno, "Mises as Social Rationalist," pp. 46-47ff.

³⁰Kirzner apparently believes that Mises's concentration on entrepreneurship in his *Human Action* discussion of socialism demonstrates that Mises had gone over to the Hayek position. Kirzner seems to overlook the vast difference between Mises's forecasting and appraisal view of entrepreneurship and his own "alertness" doctrine, which totally leaves out the possibility of entrepreneurial loss.

study of the 1929 depression, *The Great Depression*. Conceding, with Mises, that the planners could determine consumer preferences by allowing a market in consumer goods, Robbins correctly added that the socialist planners would also have to “know the relative efficiencies of the factors of production in producing all the possible alternatives.” Robbins then unfortunately added:

On paper we can conceive this problem to be solved by a series of mathematical calculations. We can imagine tables to be drawn up expressing the consumers' demands . . . And we can conceive technical information giving us the productivity . . . which could be produced by each of the various possible combinations of the factors of production. On such a basis a system of simultaneous equations could be constructed whose solution would show the equilibrium distribution of factors and the equilibrium production of commodities.

But in practice this solution is quite unworkable. It would necessitate the drawing up of millions of equations on the basis of millions of statistical tables based on many more millions of individual computations. By the time the equations were solved, the information on which they were based would have become obsolete and they would need to be calculated anew.³¹

While Robbins's strictures about changes in data were and still are true enough, they helped divert the emphasis from Mises's even-if-static and full-knowledge calculation approach, to Hayek's emphasis on uncertainty and change. More important, they gave rise to the general myth that Robbins's strictures against socialism, unlike Mises's, were only “practical” in the sense of not being able to calculate all these simultaneous equations. Furthermore, in the concluding essay in his *Collectivist Economic Planning*, Hayek set forth all the reasons why the planners could not know essential data, one of which is that they would have to solve “hundreds of thousands” of unknowns. But

this means that, at each successive moment, every one of the decisions would have to be based on the solution of an equal number of simultaneous differential equations, a task which, with any of the means known at present, could not be carried out in a lifetime. And yet these decisions would . . . have to be made continuously . . .³²

It is fascinating to note the twists and turns in Oskar Lange's reaction to the equation-solving argument. In his 1936 article, which was long considered the last word on the subject, Lange ridiculed the

³¹Lionel Robbins, *The Great Depression* (New York: Macmillan, 1934), p. 151.

³²F. A. Hayek, “The Present State of the Debate,” in Hayek, *Collectivist Economic Planning*, p. 212.

very terms of the problem. Adopting his “quasi-market” socialist approach, and ignoring the crucial Misesian problem of the necessary absence of any market in land or capital, Lange simply stated that there is no need for planners to worry about these equations, since they would be “solved” by the socialist market:

Neither would the Central Planning Board have to solve hundreds of thousands . . . or millions . . . of equations. The only “equations” which would have to be “solved” would be those of the consumers and the managers of production plants. These are exactly the same “equations” which are solved in the present economic system and the persons who do the “solving” are the same also. Consumers . . . and managers . . . “solve” them by a method of trial and error . . . And only few of them have been graduated in higher mathematics. Professor Hayek and Professor Robbins themselves “solve” at least hundreds of equations daily, for instance, in buying a newspaper or in deciding to take a meal in a restaurant, and presumably they do not use determinants or Jacobians for that purpose.³³

Thus, the orthodox neoclassical economic establishment had settled the calculation dispute with Lange-Lerner the acclaimed winner. Accordingly, when the end of World War II brought communism/socialism to his native Poland, Professor Oskar Lange left the plush confines of the University of Chicago to play a major role in bringing his theories to bear on the brave new world of socialist Poland. Lange became Polish ambassador to the United States, then Polish delegate to the United Nations Security Council, and finally chairman of the Polish Economic Council. And yet not once in this entire period or later, did Poland—or any other communist government, for that matter—attempt to put into practice anything remotely like Lange’s fictive accounting-type, play-at-market socialism. Instead, they all put into effect the good old Stalinist command-economy model.

It did not take long for Oskar Lange to adjust to the persistence of the Stalinist Model. Indeed, it turns out that Lange, in post-war Poland, argued strongly for the historical necessity of the persistence of the Stalinist model as opposed to his own market socialism. Arguing

³³Oskar Lange, “On the Economic Theory of Socialism, Part One,” p. 67. The Norwegian economist and defender of Mises’s position, Trygve Hoff, commented that “Quite apart from the fact that the equations the central authority would have to solve are of quite a different nature to those of the private individual, the latter tend to solve themselves automatically, which Dr. Lange must admit the former do not.” Hoff, *Economic Calculation in the Socialist Society*, pp. 221–22. This excellent book on the socialist calculation controversy was originally published in Norwegian in 1938. In contrast to Bergson’s almost contemporaneous survey article, Hoff’s English-language translation, published in 1949 in Britain but not in the United States, sank without a trace.

against his own quasi-decentralized market-socialist solution, Lange, in 1958, revealed that “in Poland, we had some discussions whether such a period of highly centralized planning and management was historical necessity or a great political mistake. Personally, I hold the view that it was a historical necessity.”

Why? Lange now claimed:

(a) that the “very process of the social revolution which liquidates one social system and establishes another requires centralized disposal of resources by the new revolutionary state, and consequently centralized management and planning.”

(b) second, in underdeveloped countries—and which socialist country was not underdeveloped?—“Socialist industrialization, and particularly very rapid industrialization, which was necessary in the first socialist countries, particularly in the Soviet Union . . . requires centralized disposal of resources.” Soon, however, Lange promised, the dialectic of history will require the socialist government to organize quasi-market, decentralized decision-making within the overall plan.³⁴

Shortly before his death in 1965, however, Oskar Lange, in his neglected last word on the socialist calculation debate, implicitly revealed that his socialist-market “solution” had been little more than a hoax, to be jettisoned quickly when he indeed saw a way for the Planning Board to solve all those hundreds of thousands or millions of simultaneous equations! Strangely gone was his gibe that everyone “solves equations” every day without having to do so formally. Instead, technology had now supposedly come to the rescue of the Planning Board! As Lange put it:

Were I to rewrite my essay [“On the Economic Theory of Socialism”] today my task would be much simpler. My answer to Hayek and Robbins would be: so what’s the trouble? Let us put the simultaneous equations on an electronic computer and we shall obtain the solution in less than a second. The market process with its cumbersome *tatonnements* appears old-fashioned. Indeed, it may be considered as a computing device of the pre-electronic age.³⁵

Indeed, Lange claims that the computer is superior to the market, because the computer can perform long-range planning far better, since it somehow already knows “future shadow prices” which markets cannot seem to obtain.

³⁴Oskar Lange, “The Role of Planning in Socialist Economy,” in *The Political Economy of Socialism* (1958) in M. Bornstein, ed., *Comparative Economic Systems*, rev. ed. (Homewood, Ill.: Richard D. Irwin, 1969), pp. 170–71.

³⁵Oskar Lange, “The Computer and the Market,” in A. Nove and D. Nuti, eds. *Socialist Economics* (London: Penguin Books, 1972), pp. 401–02.

Lange's naive enthusiasm for the magical planning qualities of the computer in its early days can only be considered a grisly joke to the economists and the people in the socialist countries who have seen their economies go inexorably from bad to far worse despite the use of computers. Lange apparently never became familiar with the computer adage, *GIGO* ("garbage in, garbage out"). Nor could he have become familiar with the recent estimate of a top Soviet economist that, even assuming that the planning board and its computers could learn the correct data, it would take even the current generation of computers 30,000 years to process the information and allocate the resources.³⁶

But there is a more important flaw in Lange's last article than his naivete about the magical powers of the then-new technology of the computer. His eagerness to embrace a way of solving those equations he earlier had claimed didn't need conscious solving, demonstrates that he had been disingenuous in claiming that his pseudo-market trial-and-error method would provide a facile way for the socialist society to solve the calculation problem.

Socialist Impossibility and the Argument from Existence

Ever since 1917, or at least since Stálin's great leap forward into socialism in the early 1930s, the defenders of the possibility of socialism against Mises's strictures had one final, clinching, fallback argument. When all the arguments over general equilibrium or equations or entrepreneurship or Walrasian *tatonnements* or the command economy or pseudo-markets had been hashed over, the defenders of socialism could simply fall back on one point: Well, socialism exists, doesn't it? When all is said and done, it exists, and therefore it must be, for one reason or another, possible. Mises must clearly be wrong, even if the "practical" arguments of Hayek or Robbins, arguments of mere degrees of efficiency, need to be soberly considered. At the end of his celebrated survey essay on socialist economics Professor Abram Bergson put the point starkly:

there can hardly be any room for debate: of course, socialism can work. On this, Lange certainly is convincing. If this is the sole issue, however, one wonders whether at this stage such an elaborate theoretic demonstration is in order. After all, the Soviet planned economy has been operating for thirty years. Whatever else may be said of it, it has not broken down.³⁷

³⁶Yuri M. Maltsev, "Soviet Economic Reform: An Inside Perspective," *The Freeman* (March 1990).

³⁷Bergson, "Socialist Economics," p. 447.

In the first place, this triumphal conclusion now rings hollow, since the economies of the Soviet Union and the other socialist bloc countries have now manifestly broken down. And now it also turns out that the Soviet GNP and production figures that Bergson, the CIA, and other Sovietologists have been taking at face value for decades have been nothing but a pack of lies, designed to deceive not the United States, but the Soviet managers' own ruling elite. Even now, Western Sovietologists are reluctant to believe the Soviet economists who are finally trying to tell them the truth about these alleged and much revered data.

But apart from all that, this sort of seemingly decisive empiricist counter to the Misesian critique reveals the perils of using allegedly simple and brute "facts" to rebut theory in the sciences of human action. For why must we assume that the Soviet Union and the Eastern European countries ever really enjoyed full and complete socialism? There are many reasons to believe that, try as they might, the communist rulers were never able to impose total socialism and central planning. For one thing, it is now known that the entire Soviet economy and society has been shot through with a vast network of black markets and evasions of controls, fueled by a pervasive system of bribery known as *blat* to allow escape from those controls. Managers who could not meet their annual production quotas were approached by illegal entrepreneurs and labor teams to help them meet the quotas and get paid off the books. And black markets in foreign exchange have long been familiar to every tourist. Long before the Eastern European collapse of communism, these countries stopped trying to stamp out their black markets in hard currency, even though they were blatantly visible in the streets of Warsaw, Budapest, and Prague. Without uncontrolled black markets fueled by bribery, the communist economies may well have collapsed long ago.³⁸ This historical point has also been bolstered by Michael Polanyi's "span of control" theory, which denies the possibility of effective central planning from a rather different viewpoint than Mises's.³⁹

But the decisive rebuttal has, once again, been levelled by Mises in *Human Action*: the Soviet Union and Eastern European economies were not fully socialist because they were, after all, islands in a world capitalist market. The communist planners were therefore able, albeit clumsily and imperfectly, to use prices set by world markets as

³⁸One source on this pervasive system in the Soviet Union is Konstantin M. Simis, *USSR: The Corrupt Society* (New York: Simon & Schuster, 1982).

³⁹Michael Polanyi, *The Logic of Liberty* (Chicago: University of Chicago Press, 1951), pp. 111–37 and passim.

indispensable guidelines for the pricing and allocation of capital resources. As Mises pointed out:

People did not realize that these were not isolated social systems. They were operating in an environment in which the price system still worked. They could resort to economic calculation on the ground of the prices established abroad. Without the aid of these prices their actions would have been aimless and planless. Only because they were able to refer to these foreign prices were they able to calculate, to keep books, and to prepare their much talked about plans.⁴⁰

Mises's insight was confirmed as early as the mid-1950s, when the British economist Peter Wiles visited Poland, where Oskar Lange was helping to plan Polish socialism. Wiles asked the Polish economists how they planned the economic system. As Wiles reported:

What actually happens is that "world prices", i.e. *capitalist world prices*, are used in all intra-[Soviet] bloc trade. They are translated into rubles . . . entered into bilateral clearing accounts.

Wiles then asked the Polish communist planners the crucial question. Since the Poles were, as good Marxist-Leninists, presumably committed to the triumph, as soon as possible, of world-wide socialism, Wiles asked: "What would you do if there were no capitalist world" from which you could obtain all those crucial prices? The Polish planners' rather cynical answer: "We'll cross that bridge when we come to it." Wiles added that "In the case of electricity the bridge is already under their feet: there has been great difficulty in pricing it since there is no world market."⁴¹ But fortunately for the world and for the Polish planners themselves, they were never truly forced to cross that bridge.

Epilogue:

The End of Socialism and Mises's Statue

In his supposedly definitive article of 1936 vindicating economic calculation under socialism, Oskar Lange delivered a once-famous gibe at Ludwig von Mises. Lange began his essay by ironically hailing Mises's services to socialism: "Socialists have certainly good reason to be grateful to Professor Mises, the great *advocatus diaboli* of their cause. For it was his powerful challenge that forced the socialists to

⁴⁰Mises, *Human Action*, pp. 698–99.

⁴¹Peter J. D. Wiles, "Changing Economic Thought in Poland," *Oxford Economic Papers* 9 (June 1957): 202–03. Also see Murray N. Rothbard, "Ludwig von Mises and Economic Calculation Under Socialism," in Lawrence Moss, *The Economics of Ludwig von Mises*, pp. 67–77.

recognize the importance of an adequate system of economic accounting. . . . the merit of having caused the socialists to approach this problem systematically belongs entirely to Professor Mises." Lange then went on to taunt Mises:

Both as an expression of recognition for the great service rendered by him and as a memento of the prime importance of sound economic accounting, a statue of Professor Mises ought to occupy an honorable place in the great hall of the Ministry of Socialization or of the Central Planning Board of the socialist state.

Lange went on to say that "I am afraid that Professor Mises would scarcely enjoy what seemed the only adequate way to repay the debt of recognition incurred by the socialists . . ." For one thing, Lange concluded, to complete Mises's discomfiture

a socialist teacher might invite his students in a class on dialectical materialism to go and look at the statue, in order to exemplify the Hegelian *List der Vernunft* [cunning of Reason] which made even the staunchest of *bourgeois* economists unwittingly serve the proletarian cause.⁴²

Curiously enough, Lange, during his years as socialist planner in Poland, never got around to erecting the statue to Mises at the Ministry of Socialization in Warsaw. Perhaps socialist planning was not successful enough to accord Mises that honor—or perhaps there were not enough resources to build the statue. In any case, the opportunity has been lost. The countries of Eastern Europe now stand in the rubble wrought by what used to be called in the 1930s "the great socialist experiment." Emerging gloriously out of the rubble of the collapse of socialism are a myriad of Misesian economists, to whom socialism is little more than a grisly joke. Even as early as the 1960s it was a common quip among economists that, at international economic conferences, "the Western economists talk about the glories of planning while the Eastern economists talk about the virtues of the free market." Now Misesian economists are springing out of the ruins of socialism in Poland, Lithuania, Czechoslovakia, Hungary, Yugoslavia (especially Croatia and Slovenia) and the Soviet Union. Neither socialist planning nor Marxism-Leninism hold any charms for the economists of the once-socialist nations.

In all of these countries, the giant statues of Lenin are being unceremoniously toppled from the public squares. Whether or not the coming free societies of Eastern Europe choose to replace them with statues of Ludwig von Mises, as the prophet of their liberation, one

⁴²Lange, "The Economic Theory of Socialism," p. 53.

thing seems certain: there will be no statues erected to Oskar Lange in Cracow or Warsaw. It is hard to see how even the cunning of Reason and the Hegelian dialectic can make Lange out to be a prophet or an important contributor to the laissez-faire Polish economy of the future. Perhaps the closet approach was a bitter quip pervading Eastern Europe during the revolutionary year of 1989: "Communism can be defined as the longest route from capitalism to capitalism."

Ludwig von Mises on Principle

Larry J. Eshelman*

Ludwig von Mises was one of this century's most principled and uncompromising defenders of laissez faire. He was also an outspoken advocate of utilitarianism and the doctrine of social expediency, and a critic of any kind of objective ethics such as natural law or natural rights. This raises the obvious question as to how successful Mises was in turning the sow's ear of social expediency into the silk purse of laissez faire.

Murray N. Rothbard's answer is that Mises was not successful—that no one, not even Mises, could accomplish such a feat (1982, pp. 205–13). Henry Hazlitt (1964) and Leland Yeager (1992), on the other hand, have argued that utilitarianism really is not the sow's ear that its critics have made it out to be—or at least not the brand of utilitarianism that they attribute to Mises: indirect utilitarianism. Furthermore, they argue that only utilitarianism, properly understood, can provide a moral foundation for laissez faire.

While I agree with Rothbard that utilitarianism, whether direct or indirect, cannot provide a principled defense of laissez faire, I shall argue that Mises's method of justifying laissez faire has more in common with the natural rights approach of Herbert Spencer and Auberon Herbert than the utilitarianism of Bentham and Mill. It should be stressed that I am not disputing the easily documented fact that Mises proclaimed himself to be a utilitarian, and was highly critical, even scornful of natural law and natural rights doctrines (Rothbard 1980). One can dredge up quote after quote where Mises defends utilitarianism and social expediency and attacks natural law and natural rights theories. On the other hand, one cannot ignore Mises's "apparent use of natural law-type constructs, in spite of his explicit rejection of natural law" (Tucker and Rockwell 1991, p. 48).

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In trying to understand Mises's relationship to the natural law tradition, one should keep in mind, as Mises pointed out, that the natural law tradition is made up of a "bewildering diversity of doctrines" (1957, p. 45). The same can be said of utilitarianism. Defenders, as well as critics, of these traditions rarely agree as to what constitutes their defining criteria. For example, if one believes that the essence of the natural law tradition is the fusion of the "ought" and the "is," or the doctrine that Nature has a purpose and morality consists in following Nature's intentions, then clearly Mises stands opposed to that tradition. There are, however, other important features of the natural rights tradition, especially with regard to methodology, that generally distinguish it from the utilitarian tradition.

In the next three sections I distinguish three different senses in which one may be properly labeled a utilitarian: (1) a nonmoral *functionalist* sense concerned with whether means are efficient; (2) a moral sense concerned with *social harmony*; and (3) a methodological sense in which alternative institutions and actions are *compared* with regard to how well they promote utility. It is my contention that Mises was a utilitarian in only the first two senses, and that his criticism of the natural rights tradition is aimed mainly at what he conceived to be its irrational, nonfunctional aspects—i.e., its appeal to intuition. In the remaining sections I argue that Mises's methodological approach to morality is more akin to the principled (or *categorical*) stance taken by defenders of the natural rights tradition rather than the *comparative* stance taken by utilitarians such as Bentham and Mill.¹

Functionalism versus Intuitionism

It is important to begin by clarifying what Mises means by utilitarianism, and this can best be done by understanding what he was contrasting utilitarianism with. For Mises the alternative to utilitarianism is an appeal to "intuition" (1922, p. 360; 1966, p. 883; 1957, pp. 53, 58), to an "inner voice" (1933, p. 41; 1957, p. 53), to

¹I am not claiming that these three senses of utilitarianism are explicit in Mises's writings, but only that they help resolve the apparent conflict between Mises's principled stance toward liberty and his professed belief in social expediency. My approach to Mises's utilitarianism is similar to that taken by Hans-Hermann Hoppe with regard to Rothbard's natural rights: "my approach . . . seems to be more in line with what Rothbard actually does when it comes to justifying the specific norms of libertarianism than the rather vague methodological prescriptions of the natural rights theorists" (Hoppe 1988, p. 61). I hope to show that in spite of his professed utilitarianism, Mises takes a principled approach to ethics that has much in common with the approach taken by Rothbard and Hoppe.

“considerations hidden to the human mind” (1966, p. 148), to “arbitrary laws imposed upon man by a tyrannical Deity with which man has to comply without asking any further questions” (1962, p. 105). For the intuitionist moral laws are viewed as “instruments by means of which God or Nature directs human action according to inscrutable design” (1945, p. 223). Mises places natural law and natural rights in the intuitionist camp, and therefore rejects them as irrational and arbitrary.

Although I think that this turns the natural law tradition into a straw man, it must be admitted that there have been strong intuitionist elements within the natural law and natural rights tradition. For example, Aquinas postulated the special faculty of *synderesis* as the source of our knowledge of principles of natural law, and Locke’s principal argument for natural rights seems to hinge on the premise that God is our Maker (1988, p. 271). What makes Bentham’s utilitarianism appealing to many rationalists, including Mises, is that Bentham swept away the remaining intuitionist vestiges of natural law. Unfortunately, Bentham threw out more than the murky bath waters of intuitionism.

To avoid stacking the deck against the natural law and natural rights traditions by identifying utilitarianism with reason and natural law with intuition, I suggest that we re-label this contrast as “functionalism” versus “intuitionism.” As Hayek pointed out, if we refer to “any critical examination of such rules and of institutions with respect to the function they perform in the structure of society” as utilitarianism, then “every one who does not regard all existing values as unquestionable but is prepared to ask why they should be held would have to be described as a utilitarian. Thus Aristotle, Thomas Aquinas, and David Hume, would have to be described as utilitarians” (1976, p. 17). What Aristotle, Aquinas, Hume, Bentham, Mill, and Mises have in common is not some appeal to “the greatest happiness for the greatest number,” but a belief that morality serves some earthly social function and can be understood by reason, as opposed to something “imposed on mankind by mysterious powers” (1933, p. 42).

Although the term “utilitarianism” has become identified with Bentham’s doctrine of “the greatest happiness for the greatest number,” i.e., with the maximization of utility or social welfare, one must keep in mind that when Mises advocates utilitarianism he is often simply advocating that we ask what the purpose of a policy, institution, etc. is and judge it by how well it achieves this purpose. As such, functionalism is not a moral doctrine, although it can be applied to morality. In the next section I will examine functionalism as it relates

to morality, but here I am concerned with generic, nonmoral functionalism.

The functionalist judges acts (or policies) in terms of how adequate (or efficient) they are as means for accomplishing a given end. In other words, all "oughts" are hypothetical or conditional and are of the form: "If you want to accomplish *E*, then you ought to do *M*." The end or goal is not judged. Only the means are judged as to whether or not they are appropriate to the given end. Even if one considers the goal evil, one can still judge certain means as more appropriate for accomplishing that goal, and thus good, relative to the goal. Thus Mises, as a functionalist, says, "if there were people who consider it as the ultimate end of their endeavors to destroy civilization . . . , then we could not help applying to their doctrines the standard of their ultimate end" (1949b, p. 300). (There remains the question as to whether it would be ethical to give helpful advice to someone who is intent upon destroying civilization.)

This is the brand of utilitarianism with which Mises, like most economists, feels most comfortable. He can make judgments without abandoning the value-free stance of the economist. Mises speaks (1966, p. 764) as a nonmoral functionalist when he asserts, "Economics does not say that . . . government interference with the prices of only one commodity . . . is unfair, bad, or unfeasible. It says . . . that it makes conditions worse, not better, *from the point of view of the government and those backing its interference.*" Rothbard (1982, p. 206) quotes this passage and asks, "[H]ow does Mises know *what* the advocates of the particular policy consider desirable?" But I do not think this criticism hits the mark. Mises's point is simply that such policies will not accomplish their proclaimed goals. Those who advocate a minimum wage, for example, may really want to make nonunion labor uncompetitive, but their *proclaimed* goal is that they want to help the poor. By showing that certain policies will have the opposite effect from that proclaimed, the functionalist can undermine the arguments used in support of these policies.

If people's goals were so diverse that hardly any two people shared the same goals, the functionalist would not have much to contribute. But Mises contends that most people share certain goals. In particular, he asserts that most "people prefer life to death, health to sickness, nourishment to starvation, abundance to poverty" (1966, p. 154). In so far as the socialist or interventionist argues that his policy will make people more prosperous, he is subject to criticism from the functionalist standpoint (1927, pp. 7-8; 1966, p. 183). It should be stressed that Mises is not giving any *moral* relevance to the fact that the majority prefers prosperity to poverty. For the

generic functionalist such facts concerning majority preferences have only practical relevance—i.e., arguments concerning appropriate means will be relevant to more people than if only a minority shared this goal.

In order for nonmoral functionalism to be an appropriate mode of argument, however, it is not enough that everyone agree upon the end in question. While it may be true that most people value prosperity and abundance, it is not true that these are their only goals (Rothbard 1982, p. 209). Almost any policy purporting to achieve a particular end will affect other ends as well. The functionalist cannot ignore these other ends. Suppose, for example, most people are willing to trade off some prosperity for increased economic equality. The functionalist's argument that certain alternative policies lead to greater prosperity is no longer relevant if these policies cause greater inequality. In fact, Mises recognizes this weakness in the functionalist argument. He suggests that the socialist might reply to the argument that there is greater prosperity under capitalism as follows: "Granted that each individual will be worse off under socialism than even the poorest under capitalism. Yet we spurn the market economy in spite of the fact that it supplies everybody with more goods than socialism. We disapprove of capitalism on ethical grounds as an unfair and amoral system. We prefer socialism on grounds commonly called noneconomic and put up with the fact that it impairs everybody's material well-being" (1966, p. 679). Mises's comment is, "If no other objections could be raised to the socialist plans than that socialism will lower the standard of living of all or at least of the immense majority, it would be impossible for praxeology to pronounce a final judgment" (1966, p. 679).²

Another problem with nonmoral functionalism is that it is not very useful for making a case against forms of statist intervention that have little effect upon prosperity, e.g., oppression of the majority against a small minority (Rothbard 1982, p. 211). In order to attack these forms of statist intervention, the *laissez-faire* liberal needs a stronger argument than nonmoral functionalism—he needs some kind of moral argument. As we will see in the next section, Mises indeed does resort to a form of moral functionalism when defending *laissez-faire* liberalism. I will argue in the subsequent sections, however, that his moral functionalism is not the moral utilitarianism of Bentham and Mill.

²Mises believes, however, that a "final judgment" can be made, because economic calculation is not possible under socialism, and so socialism is not a realizable system.

Social Harmony

The functionalist approaches morality by first determining the function or end of morality, and then assessing various moral rules according to how well they serve this function. For Mises, as for most moral functionalists, the function of morality is the preservation of the social order: "Everything that serves to preserve the social order is moral; everything that is detrimental to it is immoral" (1927, p. 34). "The ultimate yardstick of justice is conduciveness to the preservation of social cooperation. Conduct suited to preserve social cooperation is just, conduct detrimental to the preservation of society is unjust" (1957, p. 54). If man were not a social being, he would not need morality. "Morality consists in the regard for the necessary requirements of social existence that must be demanded of each individual member of society. A man living in isolation has no moral rules to follow" (1927, p. 33). Throughout Mises's writings the stress is on the "preservation of society" (1966, p. 149), the "preservation of peace" (1966, p. 149), and the "preservation of social cooperation" (1962, p. 105). For Mises, "Human society is an association of persons for cooperative action" (1927, p. 18), and cooperation presupposes peace. "Society has arisen out of the works of peace; the essence of society is peacemaking" (1922, p. 59). "The goal of liberalism is the peaceful cooperation of all men" (1944, p. 50).³

To avoid the ambiguities associated with "utilitarianism" as a moral theory and to avoid begging the question against "natural rights," I suggest we call anyone who views the primary aim of justice to be the "securing a peaceful living together" a *social harmonist*.⁴ A moral rationalist, in the sense of a social harmonist, is someone who believes that a society of morally rational individuals would exist in a state of social harmony. In other words, it would be a peaceful society with no need for coercion. Societies only have to resort to coercion because not everyone is rational in this social sense. Mises explicitly states that social harmony is the ideal and is possible: "The ultimate ideal envisioned by liberalism is the perfect cooperation of all mankind, taking place peacefully and without friction" (1927, p. 105). "If all men were able to realize that the alternative to peaceful social cooperation is the renunciation of all that distinguishes *Homo sapiens* from the beasts of prey, and if all had the moral strength always to act accordingly,

³This paragraph and many similar observations throughout this essay concerning Mises's social theory owe much to Joseph Salerno's essay, "Ludwig von Mises as Social Rationalist" (1990).

⁴I am borrowing the label "harmonist" from Mises, although giving it a somewhat wider connotation (1957, p. 40).

there would not be the need for the establishment of a social apparatus of coercion and oppression" (1962, p. 98).

Mises's stress upon preserving social peace certainly fits in with the utilitarian tradition of J. S. Mill. When discussing justice, Mill stresses social peace: "It is their observance [of the rules of justice] which alone preserves peace among human beings; if obedience to them were not the rule, and disobedience the exception, everyone would see in everyone else an enemy against whom he must be perpetually guarding himself" (Mill 1971, p. 54).

It should be pointed out, however, that this stress upon social harmony, although part of the utilitarian tradition, is not unique to that tradition. Herbert Spencer, for example, describes his theory of justice as an "attempt to find a definite expression for the fundamental principle of harmonious social order" (Spencer 1978, p. 66). Given that some utilitarians have claimed Spencer as a fellow-traveler, it should be noted that Lysander Spooner, who has never been mistaken for a utilitarian, states that the natural law is "the science of peace; and the only science of peace; since it is the science which alone can tell us on what conditions mankind can live in peace, or ought to live in peace, with each other" (Spooner 1982, p. 5). Along these same lines, Locke wrote that the law of nature "willeth the Peace and Preservation of all Mankind" (Locke 1988, p. 271).

More generally, according to A. P. D'Entrèves, one of the foremost scholars of natural law, the primary focus of much of the natural law tradition has been on the preservation of society:

No doubt natural law, as a moral precept, extends to "all acts of virtue." But human laws cover only those aspects of human behavior which imply a coordination with other men. Thus, properly speaking, the laws of men do not primarily aim at virtue, but only at securing a peaceful living together: they do not forbid all that is evil, but only that which imperils society. (D'Entrèves 1970, p. 84)

Thus, we must include as social harmonists not only utilitarians such as Bentham and Mill but also modern natural rights theorists such as Locke and Spencer and most ancient and medieval natural law theorists. If there are any natural law theorists who really advocate the principle, "let justice be done, though the world perish," as opposed to, "let justice be done, lest the world perish," then they are not social harmonists.

But if the debate between natural law theorists and utilitarians is not over utility as defined in terms of social harmony, then what is it about? I suggest that the basic difference is one of methodology.

This difference has been succinctly summarized by another modern defender of natural law, Paul Sigmund, as follows:

For natural law theorists . . . utility is a result of the observance of natural law principles, whereas for utilitarians the principles of justice are an indication or codification of long-run utility. Both take account of the same moral experience and both often come to the same conclusions, but one emphasizes the *a priori* and universal character of our moral conclusions about man in society, and the other emphasizes the basis for these conclusions in human desires and in a posteriori effects which follow their adoption. (1971, p. 152)

Among classical defenders of natural rights, Herbert Spencer most clearly articulated this methodological distinction in order to distinguish his moral theory from the utilitarianism of Bentham and Mill. Spencer did not reject the label "utilitarianism," since he too saw happiness as the "ultimate end" (1989, p. 109) or "creative purpose" (1970, p. 61). What he objected to was making happiness "the rule of human conduct" (1970, p. 60) since the idea of the greatest happiness was "capricious" (1970, p. 27). Instead of trying to estimate the empirical consequences of an action or a policy, morality should be concerned with ascertaining "the *conditions* by conforming to which this greatest happiness may be attained" (1970, p. 61). Spencer did not object to being called a utilitarian, provided this label was qualified with the word "rational" to distinguish his doctrine from the "empirical utilitarianism" of Bentham and Mill (Spencer 1978, p. 494).⁵

Utilitarians have tended to either dismiss or misinterpret Spencer's point about method (in so far as they have paid any attention to Spencer at all). J. S. Mill is typical in this respect. Mill, in reply to Spencer's criticism of utilitarianism, asserted that there was no essential disagreement between Spencer and himself (and Bentham), dismissing Spencer's stress upon necessary consequences as not very important (Mill 1971, p. 56). Others have taken Spencer's methodological point more seriously but have interpreted it as being the distinction between direct (act) utilitarianism and indirect utilitarianism. According to John Gray,

Indirect utilitarianism may be defined as that species of utilitarian theory in which a strong distinction is marked between the critical and practical levels of moral thought, and in which the principle of

⁵Locke, who wrote before utilitarianism had been developed as a distinct theory, made a similar methodological distinction: "Utility is not the basis of the law or the ground of obligation, but the consequence of obedience to it" (Sigmund 1971, p. 93).

utility is evoked, solely or primarily, at the critical level. Utilitarian appraisals apply, not to conduct, but to the considerations which govern conduct—not only social rules, but the whole body of sentiments, attitudes and dispositions which lead us to one thing rather than another. (Gray 1989, p. 122)

Gray classifies both J. S. Mill and Spencer as indirect utilitarians.

Although it is true that Spencer believed that direct utilitarianism would lead to social “confusion” (1970, p. 16), his objection was much deeper than this. What Spencer mainly objected to in the utilitarian philosophy was its lack of principle, i.e., its stress on expediency. Now this may seem to be consistent with Gray’s point about indirect utilitarianism: “Indirect utilitarianism is distinct from a sophisticated act-utilitarianism view, then, because it requires that certain practices and conventions be accorded enough weight for their claims to be able to *resist erosion* by utilitarian appraisals” (Gray 1989, p. 130, italics added). Spencer thought, however, that if anything, it was “incomparably less difficult” to “trace out the consequences a given act will entail” than to do so for “some public measure,” but that in neither case could one make “trustworthy inferences” (1970, p. 73). Ironically, in one of the key texts that is supposed to provide evidence that Mill was an indirect, and therefore, a principled utilitarian Mill states, “All persons are deemed to have a *right* to equality of treatment, except when some recognized social expediency requires the reverse” (Mill 1971, p. 56). A little later he says, “Thus to save a life, it may not only be allowable, but a duty to steal or take by force the necessary food or medicine, or to kidnap and compel to officiate the only qualified medical practitioner” (Mill 1971, p. 57). (Perhaps this is a utilitarian’s ideal of resisting “erosion,” but to nonutilitarians it looks more like a mud slide.)

Of course Mill’s failure to take a principled stance should not be used to convict all indirect utilitarians. I argue in the next section, however, that what I call the comparative–categorical contrast better captures the distinction Spencer was trying to make than the direct–indirect contrast. The direct–indirect distinction is a question of what one should compare. The direct utilitarian compares acts, choosing those whose consequences provide more utility. The indirect utilitarian compares rules, institutions, policies, sentiments, choosing those whose consequences provide more utility. In both cases, a *comparative* approach is taken. The distinction between direct and indirect utilitarianism is based on a distinction between what is being compared. Spencer, on the other hand, rejects the comparative approach, taking instead a *categorical* approach to social harmony.

Comparative versus Categorical Harmonists

The comparative harmonist compares the alternatives, whether they be acts, rules, institutions, etc. and picks the best from among these alternatives. Comparative harmonists differ as to how to choose among alternatives. Some argue that happiness should be maximized, others that pain and suffering should be minimized. Others argue for maximizing liberty instead of happiness. Still others, like Hayek, argue for maximizing expectations or “chances of anyone selected at random” (Hayek 1976, pp. 129–30). Some, like Bentham, presuppose that happiness can be quantified and summed, whereas others resort to devices such as taking the stance of an impartial spectator or making decisions behind a veil of ignorance. But in all cases these doctrines assume a moral framework in which the moral theorist chooses the best from among the alternatives. Thus the comparative harmonist can be described as a maximizer, although it should be stressed that this means choosing the best among known alternatives, not the best among all possible alternatives.

The categorical harmonist, on the other hand, believes there are only two moral alternatives: social harmony or social chaos, the way of reason or the way of the beasts.⁶ As Cicero put it, “There are two types of conflict: one proceeds by debate, the other by force. Since the former is the proper concern of man, but the latter of beasts, one should only resort to the latter if one may not employ the former” (Cicero 1991, p. 14). The categorical harmonist views those who are not rational, i.e., who seriously imperil social harmony, as enemies of the social order and thus subject to coercion. Whereas for the comparative harmonist the primary moral relationship is maximization, for the categorical harmonist it is reciprocity—social harmony is possible only among those who are committed to social harmony.

The categorical harmonist separates people into two general classes—those within the law and those outside. Those who by their actions demonstrate that they either have contempt for the social order or are incapable of acting in accordance with social harmony are declared outlaws and treated accordingly. Thus Locke writes, “In transgressing the law of nature, the offender declares himself to live by another rule than that of *reason* and common equity” (1988, p. 272). Furthermore, by putting oneself outside the reach of reason, one forfeits one’s right to be treated as a reasonable being: “[O]ne may destroy a man who makes war upon him, or has

⁶Or to use Murray Rothbard’s apt phrase, the categorical harmonist adopts a “polar analysis” (1970, p. 264).

discovered an enmity to his being, for the same reason that he may kill a wolf or a lion; because such men are not under the ties of the common law of reason, have no other rule, but that of force and violence" (1988, p. 279).⁷

The comparative harmonist, on the other hand, does not automatically declare those who disregard the conditions for social harmony to be outlaws. His moral world is not so black-and-white, and for this reason gives the illusion of being more humane and tolerant. Since the underlying principle of morality for the comparative harmonist is to maximize utility (or happiness or social welfare), the fact that an individual is behaving irrationally—acting in ways that are harmful to the social welfare—does not exclude this individual from being included in the utility calculus.

This basic difference in moral outlook is reflected in how the categorical and comparative harmonist justify punishment. For both the categorical and the comparative harmonist, there is a presumption against the use of physical force. This is what distinguishes social harmonists from social nihilists—those who believe that might is right. Categorical and comparative harmonists differ, however, concerning what overrides this presumption against the use of force. For the categorical harmonist, force is justified only against someone who shows a disregard for social harmony. (The nihilist, by declaring through his actions that he believes that might is right, can hardly complain when we use force against him.) For the comparative

⁷In another passage Locke states, "a criminal, who having renounced reason, the common rule and measure, God hath given to mankind, hath by the unjust violence and slaughter he hath committed upon one, declared war against all mankind, and therefore may be destroyed as a *lion* or a *tiger*, one of those wild savage beasts, with whom men can have no society nor security: And upon this is grounded the great law of nature, *who so sheddeth mans blood, by man shall his blood be shed*" (1988, p. 274). Auberon Herbert takes a similar stance: "My justification [in knocking a thief down] was, that he had established between himself and the rest of society the force relation, and therefore I had to deal with him as I should have dealt with a wild beast that had attacked me" (Herbert 1978, p. 101). "The men who do so restrain their neighbor, . . . are men who disallow this universal law [against aggression], and therefore lose the rights which they themselves possess under it" (p. 141). This same reciprocity based moral framework is presupposed by Rothbard's discussion (in the context of animal rights) of what he calls the "Martian problem": "If we should ever discover and make contact with beings from other planets, could *they* be said to have the rights of human beings? It would depend on their nature. If four hypothetical 'Martians' were like human beings—conscious, rational, able to communicate with us and participate in the division of labor, then presumably they too would possess the rights now confined to 'earth-bound' humans. But suppose, on the other hand, that the Martians also had the characteristics, the nature, of the legendary vampire, and could only exist by feeding on human blood. In that case, regardless of their intelligence, the Martians would be our deadly enemy and we would not consider that they were entitled to the rights of humanity" (Rothbard 1982, p. 156).

harmonist, on the other hand, force is justified only by showing that the consequences outweigh the intrinsically negative utility of the use of force. Thus, for a categorical harmonist punishment is viewed primarily as restitutive and retributive, whereas for a comparative harmonist punishment is viewed primarily as a deterrent and for reforming the criminal. The former is backward looking and proper to a nomocratic social theory where justice is measured against one's relationship to law and the need to preserve social harmony. The latter is forward looking and proper to a teleocratic social theory where justice is measured against a goal—the maximization of utility.

In a society based on a categorical moral framework, if someone disturbs the order of society, he is expected to restore the order—to make restitution. If he refuses to be bound by that order, he, in effect, declares himself an enemy of that order and becomes an outlaw and is no longer protected by the law (or more precisely, not protected by the law to the extent of, and in proportion to, his disregard for social harmony). In a society based on a comparative moral framework, on the other hand, punishment is justified only if it positively contributes to the overriding purpose of maximizing utility. The murderer's happiness counts just as much as everyone else's, including his potential victims. (This is a logical consequence of the principle that "equal amounts of happiness are equally desirable, whether felt by the same or different persons" [Mill 1971, p. 56].) The reason the murderer can be justifiably restrained and punished is that the resulting pain and suffering caused to the murderer (and, indirectly, to his mother, friends, etc.) is outweighed by the pain prevented to the rest of society. Punishment is justified only if the pain inflicted by punishment is outweighed by the expected social benefits. Likewise, punishing someone who has not done anything that threatens the peace of society is justified if the pain inflicted is outweighed by the social benefit. Admittedly, comparative harmonists can come up with plausible rationales why punishing the innocent would rarely maximize utility. The point is, however, that, unlike the categorical harmonist, the comparative harmonist has to do this in a roundabout and rather tenuous manner, making some rather strong assumptions about future consequences and the interpersonal comparison of utilities.

Both the similarities and the differences between the comparative and categorical harmonists are illustrated by how their defenders attempt to justify these two moral frameworks. Both begin with the individual's desire for happiness, but even here there is a subtle difference in emphasis. Whereas the comparative harmonist stresses the individual's desire to maximize his own happiness, the categorical

harmonist tends to stress the universal law of self-preservation. Many categorical harmonists go so far as to argue that each individual has a duty to preserve himself. Locke, for example, attempted to ground this obligation by arguing that men are the “workmanship of one omnipotent, and infinitely wise maker” (1988, p. 271), and so are ultimately the property of God. Others, such as Aristotelian rights theorists, have argued that the duty of self-preservation follows from man’s inherent nature. But the categorical harmonist is not necessarily committed to justifying a duty to preserve oneself—i.e., he need not be committed to the strong assumption that a person who fails to defend himself is irrational and violates his nature or God’s trust, and so should be condemned. What distinguishes the categorical harmonist is that he starts with the fact that it is reasonable to expect most people to try to preserve themselves (whether they have a duty to or not), and, in particular, to defend themselves from attack.

It is in the next step of the argument, the move from the individual’s desire for happiness to the derivation of the basic principle of morality, that the comparative and categorical harmonists most radically differ. The comparative harmonist’s argument is always some version of Mill’s notorious inference from the fact that each individual desires his own happiness to the desirability of the general happiness (1971, p. 37). The categorical harmonist, on the other hand, asks: Given the nearly universal law that people will defend themselves when attacked, under what conditions is social harmony possible? The prototypical answer is given by Spencer. After noting that the desire for self-preservation applies to all creatures, and thus lacks an ethical quality, he takes the next step:

Ethical character arises only with the distinction between what the individual *may* do in carrying on his life-sustaining activities, and what he *may not* do. This distinction obviously results from the presence of his fellows. Among those who are in close proximity, or even some distance apart, the doing of each are apt to interfere with the doings of others; and in the absence of proof that some may do what they will without limit, while others may not, mutual limitation is necessitated. The non-ethical form of the right to pursue ends, passes into the ethical form, when there is recognized the difference between acts which can be performed without transgressing the limits, and others which cannot be so performed. (Spencer 1981, p. 150)

Auberon Herbert makes a similar move. Beginning with the premise that “Underneath all life lies the great law of self-preservation,” he

notes that this is "a law which we may fulfill either by using force as the animals do, or by universally accepting the reasonable relation which, forbidding force, guarantees equal freedom to all" (Herbert 1978, p. 101).

In brief, although the comparative harmonist shares with the categorical harmonist the goal of preserving society, this is seen only as a first step, albeit a necessary one, toward a more ambitious goal. The comparative harmonist judges the institutions of a society as inadequate, no matter how peaceful that society may appear on the surface, if these institutions can be modified so as to increase the total social welfare. Of course, one must weigh the costs of making any modification against future gains, and in practice a comparative harmonist may be very conservative in weighing these costs, as Bentham was, but in principle any institution is always subject to revision since someone may come up with a new alternative that is even better than any of the previous alternatives that have been considered in the past. In essence the comparative harmonist is always a social tinkerer.

Mises and Maximization

We can now address the question of whether Mises was a utilitarian in the maximizing, comparative sense or whether he was a categorical harmonist. In this section I argue that the evidence clearly indicates that he was not a maximizer, and in the next section I take up the question of whether he can more properly be classified as a categorical harmonist.

Now it may seem that when Mises says that laissez-faire liberalism promises "the most abundant possible satisfaction of all those desires that can be satisfied by the things of the outer world" (1927, p. 4), he does not leave much doubt that he is a moral utilitarian of the maximizing variety. But as was pointed out in the first section, when the issue is an agreed-upon policy goal, e.g., prosperity, then Mises can as a value-free economist recommend certain liberal policies as the best means for accomplishing this goal. In any case, one should not read too much into such statements. After all, natural rights liberals also believe that laissez faire will lead to a better world. More relevant are statements such as "the only yardstick that must be applied to [law and legality, the moral code and social institutions] is that of expediency with regard to human welfare" (1966, p. 147). Here Mises leaves no doubt that he is advocating a moral doctrine, not functionalism in general, and this moral doctrine seems to imply the maximization of social welfare. But compare this passage to a very similar passage: "The ultimate yardstick of justice

is conduciveness to the preservation of social cooperation. Conduct suited to preserve social cooperation is just, conduct detrimental to the preservation of society is unjust" (1957, p. 54). No categorical harmonist would have problems with this passage. Furthermore, in the former passage the very next sentence reads, "The utilitarian economist does not say: *Fiat justia, pereat mundus*. He says: *Fiat justia, ne pereat mundus*." This is one of Mises's favorite points: the utilitarian rejects "Let justice be done, though the world perish" for "Let justice be done, lest the world perish." The contrast is between destroying and preserving the social order, not between maximizing and failing to maximize utility. Or consider the following passage, "The policy of liberalism is the policy of the common good, the policy of subjecting particular interests to the public welfare" (1922, p. 456). Taken out of context, this is the kind of statement that one would typically attribute to a social harmonist concerned with maximizing utility. Mises immediately adds, however, that this is "a process that demands from the individual not so much a renunciation of his own interests as a perception of the harmony of all individual interests" (1922, p. 456). What Mises clearly means is that in order for social harmony to be possible, individuals cannot completely ignore other individuals. This is fully consistent with the categorical harmonist's argument for rights.⁸

It becomes even more difficult to attribute a maximizing interpretation to these passages in the light of other statements made by Mises that seem to explicitly reject a maximizing view of utilitarianism. These statements can be divided into two categories that parallel the two major objections that critics have raised against utilitarianism: (1) Utilitarianism demands that individuals be willing to sacrifice themselves to the greater good, but why should any individual agree to do this? (2) Utilitarianism presupposes that interpersonal comparisons of utility can be made; yet, this presupposition is highly dubious, if not incoherent.⁹

Mises employs both these objections against moral doctrines that he rejects. With regard to the first objection, Mises's major criticism of "anti-utilitarian" doctrines, in addition to his rejection of their

⁸Compare Herbert: "Man is predestined to find his complete happiness, as Mr. Spencer teaches, only when the happiness of others becomes to him an integral part of his own; but this development of his nature cannot take place unless he is living under those true conditions which belong to a free life" (Herbert 1978, pp. 116–17).

⁹See, for example, Narveson (1988, pp. 150–153). In addition to these two fundamental objections, critics have also argued that utilitarianism has certain counter-intuitive implications—e.g., the punishment of the innocent under certain circumstances.

appeal to intuition, is that they require self-sacrifice. According to Mises, one of the contributions of "utilitarianism" is that the "dualism of motivation assumed by most ethical theorists" was overthrown (1922, p. 357). "Utilitarian philosophy . . . reduced these apparent antagonisms [selfishness vs. altruism, economics vs. ethics, individual vs. society] to the opposition of short-run and long-run interests" (1957, p. 55). This may be true of Mises's brand of "utilitarianism," as it is true of those categorical doctrines of social harmony that stress reciprocity, but it is not true of any maximizing doctrine of social harmony.

It is instructive to contrast Mises with Henry Hazlitt on this point. Although Hazlitt, who describes himself as a utilitarian, believes that "for 99 percent of the people 99 percent of the time, the actions called for by enlightened self-interest and morality are identical" (1964, p. 124), "[t]here remains the rare case when the individual must be called upon to make a 'genuine' sacrifice" (p. 125). He cites Bentham's argument that we can be forced to help in Good Samaritan situations if the cost to us is not too great, and as an example he mentions forcing a doctor to "attend a patient suffering from a contagious disease" or to aid victims of an epidemic (p. 111). In these cases there is a conflict between long-term self-interest and social utility, and the maximizing-utilitarian sides with social utility. Mises, on the other hand, never admits to such a conflict, but repeatedly claims, as we have seen, that one of the major discoveries of "utilitarianism" is that there is no such conflict.¹⁰

With regard to the second objection to utilitarianism, given that Mises believes that only ordinal comparisons of utility can be made and that interpersonal comparisons of utility make no sense, it would be surprising if he were then to try to base his moral theory upon the maximization of utility. In fact, he is explicitly critical of any such doctrine:

Some economists believe that it is the task of economics to establish how in the whole of society the greatest possible satisfaction of all people or of the greatest number could be attained. They do not realize that there is no method which would allow us to measure the

¹⁰Even Mises's defense of conscription (one of his few lapses from a pure libertarian position) is not cast in terms of maximizing utility, but as a condition that may sometimes be necessary in order to preserve society from "ruthless oppressors" (1966, p. 282). Underlying his argument is the assumption that defense is a public good. This assumption met with little resistance, even among categorical harmonists (Spencer, for example, makes a similar case for conscription [1978, p. 87]), until the public goods argument itself was challenged by Rothbard (1962, pp. 883-90; 1970, ch. 1).

state of satisfaction attained by various individuals. They misconstrue the character of judgments which are based on the comparison between various people's happiness. While expressing arbitrary value judgments, they believe themselves to be establishing facts. (Mises 1966, p. 242)

He then adds, "The reformers searching for the maximum of general satisfaction have told us merely what state of other people's affairs would best suit them" (1966, p. 243). In another context he raises the question, "Is society, people asked, merely a sum of individuals or is it more than this and thereby an entity endowed with independent reality? The question is nonsensical. Society is neither the sum of individuals nor more nor less. Arithmetical concepts cannot be applied to the matter" (1957, pp. 251–52).¹¹

It should be emphasized that a comparative harmonist cannot escape Mises's objection against making judgments based on interpersonal comparisons of utility by resorting to such devices as assuming the role of an impartial spectator or making decisions behind a veil of ignorance. In fact, Mises explicitly criticizes the "old liberals" for assuming the stance of a "perfect king" whose only objective is to make his citizens happy (a precursor to the impartial spectator):

[T]he economists compare this hypothetical system [embodying their own value judgments], which in their eyes embodies the moral law itself, with the market economy. The best they can say of the market economy is that it does not bring about a state of affairs different from that produced by the supremacy of the perfect autocrat. They approve of the market economy only because its operation, as they see it, ultimately attains the same results the perfect king would aim at. (Mises 1966, p. 691)

Mises contends that the fiction of the "perfect king" contributed to the modern notion of a godlike state.

Although one can find passages where Mises quotes Bentham's "greatest happiness" principle without comment (e.g., 1966, p. 175), on other occasions he is rather dismissive. For instance, he characterizes it as expressing "not very aptly" the view that *laissez-faire* liberalism does not favor any special group (1927, p. 7). In another passage he interprets it as simply meaning that social man "must adjust his conduct to the requirements of social cooperation and look upon his fellow men's success as an indispensable condition of his

¹¹Contrast Mill's statement that "the truths of arithmetic are applicable to the valuation of happiness, as of all other measurable quantities" (Mill 1971, p. 56).

own" (1966, p. 833). He goes on say that "if we interpret welfare in this manner, the concept is void of any special significance. It can be invoked for the justification of every variety of social organization. . . . A principle that is broad enough to cover all doctrines, however, conflicting with one another, is of no use at all" (1966, p. 834).¹²

In summary, Mises believed, like Spencer and Herbert, that it was legitimate to speak of the general welfare as the ultimate goal of morality, but also like Spencer and Herbert, he did not believe that one could give this principle any operational content. Its main value is that it distinguishes the social harmonist from the moral intuitionist, but there is always the danger that it will be used as a cover for special interests. As Mises stresses, "No decent man likes to be so rash as to raise objections against the realization of welfare"; however, "in the mouths of the welfare propagandists the notion of welfare has a definite meaning. They intentionally employ a term, the generally accepted connotation of which precludes any opposition" (1966, p. 834). Although Mises does not believe that an appeal to the general welfare can provide a definite guide to policy, he does not want to play into the hands of the welfare propagandists by being misinterpreted as being opposed to the general welfare.

Freedom is Indivisible

Having argued that Mises is not a comparative harmonist, but actually an astute critic of any maximizing moral framework, we must now consider whether he can more properly be described as a categorical harmonist. This brings us back to the central question with which we began: How could Mises be both a principled defender of *laissez faire* and a defender of the doctrine of social expediency? Our argument so far has been that the passages where Mises explicitly defends social expediency can be interpreted as defending the functionalist doctrine that morality is concerned with preserving society and attacking any appeal to mysteriously intuited principles. The question remains as to whether Mises's principled approach to *laissez faire* is a categorical approach.

¹²Mises made a similar statement in his final book: "That every human action has to be judged and is judged by its fruits or results is an old truism. It is a principle with regard to which the Gospels agree with the often badly misunderstood teachings of utilitarian philosophy. But the crux is that people widely differ from one another in their appraisal of the results. What some consider as good or best is often passionately rejected by others as entirely bad. The utopians did not bother to tell us what arrangement of affairs of state would best satisfy their fellow citizens. They merely expounded what conditions of the rest of mankind would be most satisfactory to themselves" (1962, pp. 96-97).

As we have seen, for the categorical harmonist social harmony is not a relative, i.e., comparative matter, but a black-and-white, i.e., categorical matter. In Auberon Herbert's words, "It must be the battle of principles—the principle of liberty against the principle of force" (Herbert 1978, p.51); "force and reason . . . are the two opposite poles" (p. 91). "Force—whether disguised or not under the forms of voting—has but one meaning. It means universal confusion and strife" (p. 335). Mises in very similar words contrasts the "principle of violence" and the "principle of peace": "Violence and law, war and peace, are the two poles of social life" (1922, p. 34). "History is a struggle between two principles, the peaceful principle, which advances the development of trade, and the militarist-imperialist principle, which interprets society not as a friendly division of labor, but as the forcible repression of some members by others" (1922, p. 268). Furthermore, the principle of violence cannot form the basis of a social coherent theory: "Try to realize completely the principle of violence, even only in thought, and its anti-social character is unmasked. It leads to chaos, to the war of all against all. No sophistry can evade that. All anti-liberal social theories must necessarily remain fragments or arrive at the most absurd conclusions" (1922, p. 37). "It is impossible to defend honestly the case for violence against the case for peaceful cooperation. Thus the advocates of violence are resorting to the trick of calling the methods of violence and threat of violence to which they resort 'nonviolence'. . . . The fundamental antagonism between the realm of mutual peaceful agreement and that of compulsion and coercion cannot be eradicated by idle talk about two 'sectors' of the economy, the private and the public. There is no conciliation between constraint and spontaneity" (1968, p. 37).

For Mises the sole justification for force is social preservation:

Society welcomes as members all who can see the benefit of peace and social collaboration in work. It is to the personal advantage of every individual that he should be treated as a citizen with equal rights. But the man who, ignoring the advantages of peaceful collaboration, prefers to fight and refuses to fit himself into the social order, must be fought like a dangerous animal. It is necessary to take up this attitude against the anti-social criminal and savage tribes. Liberalism can approve of war only as a defense. For the rest it sees in war the anti-social principle by which social cooperation is annihilated. (1922, p. 284)

Note that Mises, like Locke and other categorical harmonists, compares the anti-social individual to a dangerous animal. Likewise, for

Mises, “[a]n unbridgeable gulf separates man from all those beings that lack the ability to grasp the meaning of social cooperation” (1962, p. 105). Unfortunately, not every member of our species can cross this gulf, for “[t]here have always been people who were emotionally unfit to conceive the fundamental principle of cooperation under the system of the division of tasks” (1962, pp. 88–89).¹³

Mises’s categorical approach is perhaps best represented by his claim that “freedom is indivisible” (1957, p. 376), and his rejection of a middle way between socialism and capitalism (1950b). “The liberal program is an indivisible and indissoluble whole, not an arbitrary assembled patchwork of diverse components. Its various parts condition one another. The idea that political freedom can be preserved in the absence of economic freedom, and vice versa, is an illusion” (1949a, p. 38). The same principle is appealed to when Mises argues against interventionism: “There is no middle way. Control is indivisible” (1949c, p. 55).¹⁴

¹³Mises has very little to say about the justification of punishment. On a number of occasions he does say that force must be used to protect society, e.g., “In order to preserve peaceful cooperation, one must be ready to resort to violent suppression of those disturbing the peace” (1950a, p. 303). He does note that, “To punish criminal offenses committed in a state of emotional excitement or intoxication more mildly than other offenses is tantamount to encouraging such excesses” (1966, p. 16). This might be taken to mean that he holds a deterrence theory of punishment. This does not mean, however, that his position is one of maximization. Categorical harmonists recognize that punishment has a deterrence effect, but they typically believe that this must be subject to proportionality—i.e., one must not punish a person more severely than his anti-social act would merit. According to Locke, one “may bring such evil on any one, who hath transgressed that Law, as may make him repent the doing of it, and thereby deter him, and by his Example others, from doing the like mischief,” but one may do so “only to retribute to him . . . what is proportionate to his Transgression” (Locke 1988, p. 272). At least twice Mises mentions the possibility of considering criminals to be mentally ill, but he does so for the sake of argument, not because he agrees with this premise: “We may agree that he who acts antisocially should be considered mentally sick and in need of care. But as long as not all are cured . . . some provision must be taken lest they jeopardize society” (1966, p. 149; 1944, p. 48).

¹⁴Herbert likewise argued that freedom is indivisible: “The nature of man is indivisible; you cannot cut him across, and give one share of him to the state and leave the other for himself” (1978, p. 140). The view that there is no middle way is common to the natural rights tradition. As we have seen, Locke contrasted the “common law of reason” with the “rule . . . of force and violence” (1988, p. 279). He was just as explicit in his *Letter on Toleration*: “There are two sorts of contests amongst men; the one managed by law, the other by force: and they are of that nature, that where the one ends, the other always begins” (Locke 1991, p. 45). Lysander Spooner also makes use of a similar “no middle ground argument”: “There is . . . no middle ground between absolute communism, on the one hand, which holds that a man has a right to lay his hands on any thing, which has no other man’s hands upon it, no matter who may have been the producer; and the principle of individual property, on the other hand, which says that each man has an absolute dominion, as against all other men, over the products and acquisitions of his own labor, whether he retains them in his actual possession, or not” (Spooner 1855, p. 88).

Although he does not explicitly distinguish them, Mises has two arguments against a middle way.¹⁵ The first argument is the “tar-baby” argument. Like Br’er Rabbit and the Tar Baby, each act of intervention creates more problems than it solves and leads to new interventions. This process escalates until one has created such a mess that it is almost impossible to extract oneself. This argument is especially applicable to economic policies such as price controls (Mises 1950b, pp. 22–24), but it can also be applied to “social” policies such as drug controls (Thornton 1991).

Mises’s other argument against a middle way is the the “slippery-slope” argument. He argues, for example, that government intervention *implies* socialism:

All these champions of interventionism fail to realize that their program thus implies the establishment of full government supremacy in all economic matters. . . . Thus the doctrine and the practice of interventionism ultimately tend to abandon what originally distinguished them from outright socialism and to adopt entirely the principles of totalitarian all-round planning. (Mises 1966, pp. 723–24)

Mises is not saying that the slide to totalitarianism is inevitable. No one can predict the outcome. The slide down the slope may be slow or it may be fast, and it may be halted before descending all the way to the bottom. But assuming, as Mises does, that the social world is ultimately ruled by ideas, then to sacrifice principle for the sake of social expediency is to kick over the intellectual prop which has prevented descent down the slide to totalitarianism. Mises makes this quite clear when arguing against the regulation of drugs:

[O]nce the principle is admitted that it is the duty of government to protect the individual against his own foolishness, no serious objections can be advanced against further encroachments. . . . And why limit the government’s benevolent providence to the protection of the individual’s body only? Is not the harm a man can inflict on his mind and soul even more disastrous than any bodily evils? . . . The mischief done by bad ideologies, surely, is much more pernicious, both for the individual and for the whole of society, than that done by narcotic drugs. (Mises 1966, pp. 733–34)

¹⁵Note, however, that when discussing “why all men should receive equal treatment under the law” (1927, p. 28), Mises does explicitly distinguish two arguments that parallel the distinction I make above. The first is an economic argument concerning the conditions for prosperity, the second, a moral or social harmonist argument concerning the conditions for social peace.

For Mises the issue is one of principle: "We see that as soon as we surrender the principle that the state should not interfere in any questions touching on the individual's mode of life, we end by regulating and restricting the latter down to the smallest detail" (1927, p. 54).

The slippery-slope argument has played a central role in the categorical defense of rights.¹⁶ Unlike comparative harmonists, categorical harmonists are not moved by the purported fact that an exception will have certain positive consequences. They see this as the first step down a slippery slope. Although comparative harmonists may recognize the value of a principled approach and the danger of allowing exceptions, they argue that the absolutist, categorical approach implied by the slippery-slope argument is too extreme. They may admit that intervention often has negative consequences that outweigh any positive benefits, but insist that this must be established case by case.

Such an attitude is exemplified by Yeager in a panel discussion on utilitarianism and natural rights: "I do not know for sure what position to take on things. I do not have an infallible pipeline to the truth" (Shah 1988, p. 9). When questioned as to what position he takes with regard to insider trading his response is: "I cannot take a firm position for or against insider trading. If I were to study the actual factual details of particular cases, I do not know whether I would come out condemning it or not" (p. 5). Rothbard, another panelist, is quick to point out that Yeager's answer "shows the difference between viewing liberty and the free market as an organic tendency versus holding it as an absolute principle" (i.e., between what I have been calling a comparative and a categorical approach), and adds, "I am in favor of saying that there is nothing wrong with insider trading except for breach of contract" (p. 5).

It seems to me that there is little doubt that Mises, in spite of his professed utilitarianism, would have sided with Rothbard on this issue. It is because Mises takes such a principled stance with regard to government intervention that he is often perceived as "dogmatic." Critics ask how Mises can dismiss the middle way of intervention in such an *a priori* fashion? For the comparative harmonist one must weigh the evidence in each case—any *a priori* claim to the contrary is a veiled appeal to intuition or "an infallible pipeline to the truth."

¹⁶Herbert, for example, argues in response to those who do not see a sharp dichotomy between the principle of force and the principle of peace and who want to "judge each case on its merits" that "apart from any fixed principle, the merits will be always determined by our varying personal inclinations. It is all slope, ever falling away into slope, with no firm level standing place to be found anywhere" (Herbert 1978, p. 281).

Liberty of Conscience

The charge that the categorical harmonist must fall back on intuition has some historical justification. As we have seen, the categorical harmonist's stance is that force is only justified against those who are not reasonable—i.e., when rational interaction breaks down. The problem has always been deciding when this happens. Clearly, if one person uses force against another person who is amenable to reason, then the user of force is the one who has opted out of rational discourse. But this still leaves the problem of determining when the other party is or is not amenable to reason. The fact that my opponent does not agree with me may only mean that I have not given him a good reason to agree.

Up until the sixteenth century, categorical harmonists, as represented by natural law theorists, still relied heavily upon our supposed common religious and moral intuitions to determine what is reasonable. But in the context of the religious wars of the sixteenth century, social theorists started to face the fact that people's intuitions differed. Whereas during the Middle Ages the foundation for society had been considered to be "peace and unity," it was realized by a few social theorists in the sixteenth century, such as Sebastian Castelleo, that coerced unity was the major cause of strife. This became the central insight of the seventeenth century defenders of toleration, e.g., Roger Williams, Henry Robinson, and the Levellers. The argument was summarized by Locke at the end of the seventeenth century: "It is not the diversity of opinions, which cannot be avoided; but the refusal of toleration to those that are of different opinions, which might have been granted, that has produced all the bustles and wars, that have been in the Christian world, upon account of religion" (Locke 1991, p. 52).

The major theme of these social theorists was that any defense of toleration must be a principled defense. In discussing the question of a state sanctioned church, Locke asks which church are we to choose? He notes that it "will be answered, undoubtedly, that it is the orthodox church which has the right of authority over the erroneous or heretical." To which he scornfully replies, "This is, in great and specious words, to say just nothing at all. For every church is orthodox to itself; to others, erroneous or heretical. Whatsoever any church believes, it believes to be true; and the contrary thereupon it pronounces to be error" (Locke 1991, p. 24). Nor can we allow the prince to choose, for "the religion of every prince is orthodox to himself. . . . If it be once permitted to introduce anything into religion, by the means of laws and penalties, there can be no bounds put to it; but it will, in the same

manner, be lawful to alter everything, according to that rule of truth which the magistrate has framed unto himself" (Locke 1991, p. 37). In other words, there is no middle ground.

It should be stressed that Locke's insight that "every one is orthodox to himself" (Locke 1991, p. 14), did not imply relativism. Locke believed that there was "but one truth, one way to heaven" (Locke 1991, p. 19). His point was that men disagreed about what this truth was, and that it was intellectually dishonest to assume away this disagreement. Diversity of opinion must be our starting point—it is implied by each man's uniqueness, his fallibility, and the scarcity of time. No one has "the leisure, patience, and means, to collect together all the proofs concerning most of the opinions he has. . . . And yet we are forced to determine ourselves on the one side or the other. The conduct of our lives, and the management of our great concerns, will not bear delay" (Locke 1933, p. 382). Any moral theory that ignores scarcity (including that of time) and diversity (including that of opinions) fails to apply to the world as it is.

Thus if there is to be social harmony, there is no alternative but to tolerate each other. Quoting Locke again:

Since therefore it is unavoidable to the greatest part of men, if not all, to have several opinions, without certain and indubitable proofs of their truth; and it carries too great an imputation of ignorance, lightness, or folly, for men to quit and renounce their former tenets presently upon the offer of an argument, which they cannot immediately answer, and show the insufficiency of: it would methinks become all men to maintain peace, and the common offices of humanity and friendship, in the diversity of opinions; since we cannot reasonably expect, that anyone should readily and obsequiously quit his own opinion, and embrace ours with a blind resignation to an authority, which the understanding of man acknowledges not. (1933, p. 382)

Later natural rights theorists realized that this argument for religious tolerance could be generalized to apply to all opinions and practices. Spencer, for example, argued that just as "[t]he advocate of religious freedom does not acknowledge the right of any council, or bishop, to choose for him what he shall believe or what he shall reject[,] [s]o the opponent of a poor law, does not acknowledge the right of any government, or commissioner, to choose for him who are worthy of his charity, and who are not" (Spencer 1981, p. 197). Herbert applied this same argument against public education (1978, p. 73) and compulsory taxes. In the case of the latter he argued,

Because free countries have affirmed many years ago that a compulsory church rate is immoral and oppressive, for the sake of the burden laid upon individual consciences; and in affirming this truth they have unconsciously affirmed the wider truth, that *every tax or rate, forcibly taken from an unwilling person, is immoral and oppressive*. The human conscience knows no distinction between church rates and other compulsory rates and taxes. The sin lies in the disregarding of each other's convictions, and is not affected by the subject matter of the tax. (Herbert 1978, pp. 393–94)

Note that this general argument against coercion is basically the same argument that Locke used against religious intolerance—given that people disagree about the best course of action, on the one hand, and the necessity of action (and the impossibility of waiting until there is agreement), on the other hand, the only peaceful solution is toleration, i.e., the mutual respect of each other's rights. This argument was also the basis for Spencer's case against utilitarianism: Given all the conflicting alternative proposals advocated under the banner of utility, if nothing were "to be done till all agreed upon them, we might stand still to the end of time." On the other hand, "[i]f each man carried out, independently of a state power, his own notions of what would best secure 'the greatest happiness of the greatest number,' society would quickly lapse into confusion" (1970, p. 16). To avoid this dilemma, the utilitarian has to fall back upon an "umpire," i.e., the government, for without the authority of government "such a morality must ever remain inoperative" (p. 16). Consequently, "Let but rulers think, or profess to think, that their measures will benefit the community, and your philosophy stands mute in the presence of the most egregious folly, or the blackest misconduct" (Spencer 1970, p. 4). Once we clear away all the euphemisms, the stark reality of the comparative approach (whether direct or indirect) stares us in the face: whoever can gain control of government is who decides. Once the decision as to what is and is not permitted is given to government, then as Locke asserted, "there can be no bounds put to it" (Locke 1991, p. 37).

Central to Spencer's argument is the insight that utilitarianism as a moral doctrine is "inoperative" and has to fall back upon the authority of the government. In other words, utilitarianism fails to satisfy the requirement that a moral principle be "praxeologically realizable" or "operational," to use Hans-Hermann Hoppe's terminology (1988a, p. 261).¹⁷ This was also Spencer's objection against

¹⁷As Hoppe explains, "it must be possible for us, who invariably must act and employ resources, to actually implement such a criterion and consistently act upon it." Given

proposals for a “right to a maintenance”:

One party says that a bare subsistence is all that is implied. Another, that the applicant can demand all the comforts usually enjoyed by those in his station. Another, that he may as fairly claim the luxuries of life as those above him. And the extreme party will be content with nothing short of the socialist principle, of community of property. Who is to say which of these is the true expression of the right? The gradations are infinite, and how can it be decided where the claim begins and where it ends? Who can tell the rate-payer how much of his property can be justly demanded by his fellow creature? Who can tell the pauper when he asks for more pay, that he receives just as much as he is entitled to? or can explain to him why he has a right to what he already receives, but no right to anything more? And yet, if this were really a right, ought it not be capable of such a definition? (Spencer 1981, p. 205)

This inherent indeterminacy was what Herbert had in mind when he said that no one can draw a “force line,” i.e., a line between the legitimate (apart from self-defense) and illegitimate uses of force (1978, p.89). In response to the suggestion that we “allow society . . . to decide such matters as we are all pretty well agreed should be so decided,” Herbert replies, “[t]here never can be agreement amongst men as to what these matters are” (p. 131). Ultimately, one ends up “sanctioning not only the right of some men to coerce others, but their right to decide how and when and for what purposes they shall coerce others. It is the power holders, freed from any general principle that controls and directs them, who have to decide as to the limits and application of their own power. For who else can do so?” (pp. 131–32). The argument is not that it is difficult to draw a line between the proper and the improper use of force. Anyone can draw a line. The problem is that no two people agree where this line should be drawn. There are only two stopping points—the doctrine that force can only be used in self-defense and the doctrine that might is right. The point that Herbert continually stresses is that when the issue is seen as where to draw this “force line,” i.e., the attempt to find a middle way somewhere between these two points, the decision will always be

some criterion such as the greatest happiness or the stance of an impartial spectator, Hoppe asks, “what if [we] . . . do not choose the same but incompatible societies—the criterion of maximum average utility has already done its work—but there is still disagreement” (Hoppe 1988a, p. 262). Elsewhere Hoppe notes that “in advocating a consequentialist position, utilitarianism is strictly speaking no ethic at all when it fails to answer the all-decisive question ‘what am I justified in doing now?’” (1988b, p. 54).

made by those who have the most power, i.e., the question will ultimately be decided in favor of might.¹⁸

This brings us to the most misunderstood part of the categorical harmonist's argument—the appeal to *equal* rights. In Spencer's words, quoted earlier, the crucial move was that “in the absence of proof that some may do what they will without limit, while others may not, mutual limitation is necessitated” (Spencer 1981, p. 150). Note the similarity between Spencer's argument and Locke's with regard to toleration. After arguing that all churches are orthodox to themselves, Locke concludes, “So that the controversy between these churches about the truth of their doctrines, and the purity of their worship, is on both sides equal” (Locke 1991, p. 24). The point is not that the doctrines are equally good, but that there is no evidence that anyone on earth has been given the prerogative to decide. As Herbert asks, “Who shall decide between us? There is no moral tribunal before which you can summon unlimited power” (1978, p. 312).

Mises's Categorical Defense of Liberty

In an earlier section we saw that Mises takes a principled stance to liberty, and how this is in line with the categorical moral tradition. In this section I argue that the basis for his principled stance is the same as that developed by Locke (and others before him) and generalized by Spencer and Herbert.

First, note that with regard to the critical issue of toleration, Mises takes a principled approach:

Liberalism demands tolerance as a matter of principle, not from opportunism. It demands toleration even of obviously nonsensical

¹⁸This is a common theme running throughout Herbert's writings: “Admit that any one . . . may restrain by force the exercise of the faculties of others, and in what sea of moral confusion you are at once plunged. Who is to decide which is the better man or the more civilized race, or how much freedom is to be allowed or disallowed. To settle this question men must sit as judges in their own case; and this means that the strongest will declare themselves the most civilized, and will assign such portions of freedom as they choose to the rest of the nation or the rest of the world as the case may be. Are you prepared for this?” (1978, p. 98). “Once admit that force is right in itself, and then you cannot pick out any special sect or party, confer special privileges upon them, and declare that they alone, and nobody else are entitled to use force. That would be a mere arbitrary and fanciful selection, as arbitrary and fanciful as picking out certain opinions, and declaring that these are orthodox, and that all other opinions are heterodox. If force is good in the hands of some men, it is good in the hands of other men; if it is a good instrument to serve some causes, it is good to serve other causes” (p. 231). “[U]ntil they have found some law by which they can distinguish the right from the wrong use of power, by which they can justly satisfy not only their own minds but the minds of others, they are simply leaving in suspension the greatest matter that affects human beings” (pp. 132–33).

teachings, absurd forms of heterodoxy, and childishly silly superstitions. It demands toleration for doctrines and opinions that it deems detrimental and ruinous to society and even for movements that it indefatigably combats. For what impels liberalism to demand and accord toleration is not consideration for the content of the doctrine to be tolerated, but the knowledge that only tolerance can create and preserve the condition of social peace without which humanity must relapse into the barbarism and penury of centuries long past. (Mises 1927, pp. 56–57)

It should be emphasized that Mises's defense of toleration is "utilitarian" only in the sense that every categorical harmonist's argument is utilitarian—it is concerned with the conditions that make social harmony possible. It is only because most comparative harmonists abandon their comparative approach when it comes to the question of toleration and take a principled approach that this is not noticed.

Second, Mises, when discussing toleration, draws on the same insight expressed by Locke's slogan "everyone is orthodox to himself" (Locke 1991, p. 14): "Mere opportunists excepted, everyone is convinced of the rightness of his opinions. But, if such a conviction by itself were a justification for intolerance, then everyone would have a right to coerce and persecute everyone else of another way of thinking. . . . In such a case there must always be war and enmity between men" (1922, pp. 166–67). According to Mises, one of the major "blunders" of rationalism was its "neglect of the problem of erroneous thinking. Most of the rationalist philosophers failed to see that even honest men, sincerely devoted to the search for truth, could err. . . . A doctrine of which they disapproved could in their opinion have been prompted only by purposeful deceit" (1957, p. 270). Mises is here simply applying the insight of Locke concerning religious disagreements to rationalism.

Third, Mises, like Locke and Spencer, objects to the uniformitarian assumption that underlies most moral systems: "One of the motives that impel men to search for an absolute and immutable standard of value is the presumption that peaceful cooperation is possible only among people guided by the same judgments of value" (1957, p. 51). According to Mises, rationalists made a similar mistake, which is their other major blunder: "[T]hey assumed that all men are endowed with the same power of reasoning" (1957, p. 270). The fact of the matter is that there is diversity of opinion. Postulating immutable standards of value, even if true, will not make this diversity of opinion go away, nor will a faith in the rationality of man. The great insight of *laissez-faire* liberalism is that a free society "can function

in spite of the fact that its members disagree in many judgments of value" (1957, p. 61; 1966, p. 693).

Finally, Mises, like Spencer and Herbert, sees the case for liberty as a generalization of the case for religious toleration. The socialist is just as blind as the religious fanatic to the insight that everyone is orthodox to himself:

No socialist author ever gave a thought to the possibility that the abstract entity which he wants to vest with unlimited power . . . could act in a way which he himself disapproves. A socialist advocates socialism because he is fully convinced that the supreme dictator of the socialist commonwealth will be reasonable from his—the individual socialist's—point of view, that he will aim at those ends of which he—the individual socialist—fully approves, and that he will try to attain these ends by choosing means which he—the individual socialist—would also choose. Every socialist calls only that system a genuinely socialist system in which these conditions are completely fulfilled; all other brands claiming the name socialism are counterfeit systems entirely different from true socialism. (Mises 1966, pp. 692–93)

In another passage Mises is even more explicit in identifying socialism with intolerance and fanaticism:

It is customary to call the point of view of the advocates of the welfare state the "social" point of view as distinguished from the "individualistic" and "selfish" point of view of the champions of the rule of law. In fact, however, the supporters of the welfare state are utterly anti-social and *intolerant zealots*. For their ideology tacitly implies that the government will execute what they themselves deem right and beneficial. They entirely disregard the possibility that there could arise disagreement with regard to the question of what is right and expedient and what is not. (Mises 1922, pp. 520–21; italics added)

The parallels between Mises's case for a principled, categorical approach to social harmony and that of Locke, Spencer and Herbert is somewhat obscured by Mises's unfortunate insistence that all values are arbitrary. It should be stressed, however, that Mises's argument in no way depends upon this premise, and in fact would be strengthened without it. The fundamental premise is not that ultimate ends, unlike means, are arbitrary and not amenable to rational argument. The starting point for social philosophy, rather, is that people disagree with regard to both means and ends. Even if ultimate ends were totally arbitrary, as Mises asserts, there would be no

problem if everyone happened to agree on these ends. On the other hand, even if questions of means are in principle rationally determinable, insofar as we have not yet resolved which means are best and thus come to an agreement, we are faced with a moral problem of what to do in the meantime. In fact, in spite of Mises's stress on the arbitrariness of ends and the rationality of means, he admits that we often disagree about means (1966, p. 692; 1957, p. 174). He also points out that the distinction between ends and means is not always straightforward—that what are ends for some people may be means for others (1957, p. 37).

One must be careful to not let Mises's assertions about the arbitrariness of values cause one to miss his main point. When Mises attacks absolute values, he almost always has in mind the belief that such values are handed down from Providence (1922, p. 35) and are independent of society (1966, p. 720). Such "heteronomous doctrines" (1966, p. 883) are antithetical to Mises's methodological individualism: "The rejection of methodological individualism implies the assumption that the behavior of men is directed by some mysterious forces that defy any analysis and description" (1962, p. 82). Furthermore, when Mises asserts that all value judgments are personal (1957, pp. 14, 59), usually what he is attacking is the belief that one has the right to impose these absolute values on others. This may not be apparent to the reader because of an ambiguity in Mises's writings between "personal" in the sense of "arbitrary" or a "matter of taste" (like ice cream), and "personal" in the sense of "not to be imposed on others." Although Mises is not careful to distinguish these two senses of "personal," clearly it is only the latter with which he is concerned. This is illustrated by the following passage: "If a man assigns a higher value to the concerns of the collective than to his other concerns, and acts accordingly, that is his affair. So long as the collectivist philosophers proceed in this way, no objection can be raised. But they argue differently. They elevate their personal judgments of value to the dignity of an absolute standard of value" (1957, p. 59). As Mises makes clear a few pages later, he is not insisting that the collectivist admit that his beliefs are arbitrary; what he is attacking is coercion: "There is, of course, but one way to make one's own judgments of value supreme. One must beat into submission all those dissenting" (1957, pp. 60–61).

Finally, although I agree with Rothbard that Mises's sweeping statement that all values are arbitrary is itself arbitrary (Rothbard 1982, p. 212; see also Tabarrok 1990), it seems to me that a coherent and plausible case can be made for Mises's nonjustificationist stance with regard to social harmony. The categorical harmonist's argument

for rights presupposes a commitment to social harmony. Unlike many natural rights and natural law theorists, Mises believes that it is impossible to give any ultimate reason why one should be committed to peaceful cooperation. Instead, he treats this commitment as a hypothetical imperative: "Praxeology and economics do not say that men should peacefully cooperate within the frame of societal bonds; they merely say that men must act this way if they want to make their actions more successful than otherwise" (1966, p. 883). When face to face with the social nihilist, i.e., someone who believes that might is right, it is not clear what the social harmonist could say that would be relevant. This is not to say that one's commitment to social harmony is arbitrary. Mises *argues* that we can ignore those who have no regard for social harmony—e.g., such exceptional cases as Caligula—because of "their tendency to be self-destructive" (1933, p. 38). That is, we can give reasons for ignoring such cases. What we cannot do, however, is provide arguments that would convince the Caligulas of this world. The problem is that argument presupposes that conflict-free interaction is possible (Hoppe 1988a, p. 63; 1989, p. 132), whereas such interaction is precisely what the nihilist rejects. He may use words in ways that resemble, and are parasitic upon, argument, but he is not committed to resolving anything by argument. Argument for the nihilist is simply an expedient, an ammunition-savings measure. The most appropriate response to the nihilist (who has demonstrated by his actions that he really is a nihilist) is to reach for our clubs and hit him over the head. Given that he believes that might is right, he can hardly file a moral complaint against us for such actions.

The real intellectual challenge to the social harmonist comes not from the overt nihilist, but the righteous nihilist—the person who claims that he is committed to social harmony, but uses force against anyone who disagrees with him on the grounds that they are being irrational. It is the righteous nihilist (or "theocrat" [1966, p. 151; 1962, p. 107; 1949a, p. 43]) who is the target of Mises's charge of arbitrariness, just as he was the target of Locke, Spencer, and Herbert. And it is in this light, I believe, that we should read Mises's repeated attacks on absolute and immutable ethical principles. In fact, in this regard Mises often uses language that is reminiscent of that used by Herbert. For example, just as Mises sarcastically speaks of "those individuals to whom, by the mysterious decrees of some mysterious agency, the task of determining the collective will and directing the actions of the collective has been entrusted" (1962, p. 107), Herbert characterizes the socialist (and other users of force) as trying to persuade us "that there exists a mysterious

dispensation given from some unknown quarter in his own special favor" (Herbert 1978, p. 232).

Natural versus Conventional Property Rights

If Mises really is a categorical harmonist, then this should be reflected in his defense of private property. For the most part this is the case. Social cooperation under the division of labor, peace, and property are so closely tied together for Mises that he uses them interchangeably when talking about the nature of society and the goal of liberalism: "That Liberalism aims at the protection of property and that it rejects war are two expressions of one and the same principle" (1922, p. 59). "The basis and starting point of social cooperation lie in peacemaking, which consists in the mutual recognition of the 'state of property'" (1922, p. 467). "The program of liberalism, therefore, if condensed into a single word, would have to read: *property*, that is, private ownership of the means of production. . . . All the other demands of liberalism result from this fundamental demand" (1927, p. 19).

But what are we then to make of Mises's statement that private property "is a human device" and is "not sacred" (1966, p. 683)? Even more troublesome is his statement that if liberals "considered the abolition of the institution of private property to be in the general interest, they would advocate that it be abolished, no matter how prejudicial such a policy might be to the interests of property owners" (1927, p. 30).

The first statement is problematic only if we take it metaphorically to mean that property rights are arbitrary conventions. However, Mises is simply asserting, as the next sentence makes clear, that private property was not conferred on man by God or Nature, but is a human discovery which has a definite history. Although some natural rights theorists might disagree with this, Herbert Spencer would not be one of them. I believe the second statement (about his willingness to abolish property if it were in the general interest) should be taken with a rhetorical grain of salt. What Mises is stressing is that his defense of private property is not based on some special intuition, but upon the fact that private property is intrinsically linked with the very conditions for social harmony.

There is no question that Mises rejects the idea that private property is arbitrary. His major complaint against most moral philosophers was their conviction that "there was in the course of social events no such regularity and invariance of phenomena as had been found in the operation of human reasoning and in the sequence of natural phenomena. They did not search for the laws

of social cooperation because they thought that man could organize society as he pleased" (1966, p. 2). And he explicitly states that capitalism "is the only possible social system. One may undertake to modify one or another of its features as long as in doing so one does not affect the essence and foundation of the whole social order, viz., private property" (1927, p. 88).

The only question at issue is whether Mises's defense of property rights is a pragmatic defense of the status quo—i.e., a defense of currently existing titles regardless of how they were acquired. There are several passages that seem to suggest this: "The basis and starting point of social cooperation lie in peacemaking, which consists in the mutual recognition of the 'state of property.' Out of *de facto* having, maintained by force, arises the legal concept of ownership" (1922, p. 467). "Law is a *settlement*, and end to strife, and avoidance of strife" (1922, p. 34; italics added). "Possession is protected even though it is, as the jurists say, no title. Not only honest but dishonest possessors, even robbers and thieves, may claim protection for their possessions" (1922, p. 34).

If these passages are interpreted to mean that possession is the whole of the law, not nine-tenths, then one can argue that Mises does not provide a principled but only a pragmatic, *ad hoc* defense of property. As Rothbard points out, any ethic relying upon such an *ad hoc* defense of property rights, "pushed to its logical conclusion, must also defend every criminal in the property that he has managed to expropriate," and is thus "ethically nihilistic" (Rothbard 1982, p. 52). Such a doctrine would imply that if *A* steals *X* from *B*, then *A*, being in possession of *X*, has a right to *X*. But it would also imply that if *B* "steals" *X* back from *A*, then *B* has a right to *X*. In other words, whoever can retain possession of *X* has a right to it—i.e., might is right.

Given the incoherence of such a doctrine, however, we should first look for an alternative interpretation before attributing such a viewpoint to Mises. I believe that the key is to be found in a passage a few pages later where he notes that under "the domination of the principle of violence," which he contrasts with the principle of peace, there can be "no peace; at best there [can be] a truce" (1922, p. 58). Here it would seem he is explicitly rejecting the *ad hoc*, pragmatic doctrine of property as a mere "truce." The question, then, is what is the difference between a "settlement" (of the earlier passage) and a "truce"?

If we look at the context of Mises's statement that "even robbers and thieves, may claim protection for their possessions," we see that Mises is concerned to refute those who argue that since existing

property titles have “sprung illegally from arbitrary acquisition and violent robbery” in the distant past, they are not legitimate (1922, p. 34). Again it is illuminating to compare Mises’s argument with a similar passage from Spencer. When faced with a related argument—in this case the right of the poor to be maintained by the rich because of the past transgressions of the rich—Spencer does not deny that there were past transgressions, nor does he assert, in an *ad hoc* fashion, that such transgressions are irrelevant. Instead, he insists that the burden of proof is upon those who advocate the right to maintenance (Spencer 1981, p. 201). In particular, “when it can be shown that our poor are the children of the oppressed, and those who have to pay poor rates are the children of the oppressors, then the validity of the objection will be admitted; but that until this is shown to be the truth, or an approach to the truth, the objection may be disregarded” (1981, p. 192). The issue is one concerning on whom the burden of proof falls. Spencer’s (and I believe, Mises’s) position is not that existing property rights cannot be challenged, but that the burden of proof must fall on the challenger of *de facto* property rights. Only this position is praxeologically operational. Those who place the burden of proof on the *de facto* owner, and demand that he justify his right to use and dispose the object in question, implicitly assume that we can somehow take a disembodied stance, hovering above the physical world until all questions of rights have been satisfactorily decided.¹⁹

As we have seen, any coherent, operational ethical theory that is to apply to the world as it is, not as it is imagined to be in the dreams of the philosophers, must take into account two facts—scarcity, including scarcity of time, and diversity, including the diversity of opinions. In particular, it needs to recognize that people are never going to agree on how various resources ought to be used. Given that consensual joint control is impossible, the only peaceful alternative is divided control, i.e., private property rights. Furthermore, any coherent, operational ethical theory needs to recognize that people

¹⁹Mises’s assertion that the notion of justice “makes sense only when approving or disapproving concrete conduct from the point of view of the valid laws of the country” (1966, p. 721) might seem to imply that all rights, including property rights, are those defined by the legal system. Such a legal positivist interpretation, however, conflicts with what Mises says elsewhere. For example, when discussing the natural law, he is critical of its “arbitrary prepossessions” but praises it for rejecting “legal positivism” and substituting the “idea that every valid law of a country was open to critical examination by reason” (1957, p. 48). I believe Mises’s statements to the effect that there is “neither right nor wrong outside the social nexus” should be interpreted as attacks upon intuitionist critiques that are not grounded in the realities of society rather than appeals to the legal status quo.

are never going to agree on how resources ought to be (optimally) divided up, any more than they are going to agree on how they ought to be used. Since man is a physical being who needs to use resources to survive and who at the very least needs a place to stand, the only peaceful alternative is to make a presumption in favor of current property holdings. This does not mean that robbers have the right to their plunder. The concept of a "presumption" in favor of current property rights only makes sense if it is coupled with the right to have restored property that has been taken.

This theory of rights, combining a presumption in favor of the *de facto* owner with the principle of restitution, might be appropriately labeled a *concrete* theory of rights. I believe that it is equivalent, at least in most essentials, to the Lockean *abstract* theory of rights. In particular, the libertarian homesteading axiom can be directly derived. Any ethic, if it is to be praxeologically operational—if it is to recognize the facts of scarcity and diversity—must start with the existing property distribution. Furthermore, if it is to really qualify as an ethical principle, providing a basis for conflict-free interaction and not be equivalent, for all practical purposes, to might is right, it must also provide for a principle of restitution. The *de facto* owner's presumptive right can only be challenged by showing that a prior right is being restored. By chaining this argument backwards until we reach the first user, the homesteading principle is established—the first user of something cannot have his possession challenged since there is no prior right to be restored. We are far removed from the Lockean state of nature, and there is little doubt that the chain of transfers from there to our current set of property titles has been broken by a large number of illicit acts. This often gives the (false) impression that according to the Lockean view we do not have any grounds to stand on. By starting with a presumption in favor of the current, *de facto* owner, and shifting the burden of proof to the challenger, hypothetical but unprovable past acts of usurpation are clearly seen as irrelevant. Although the passage of time does not turn crimes into venerable institutions, the passage of time does make the burden of proof for the challenger more and more difficult.

Finally, in passing, it should be noted that the right of the first user can be said to be an eternal right. Although Mises rejects all theories of eternal rights, what he is mainly concerned with attacking is the view that rights were somehow self-evident to everyone from the beginning of time. Property rights, however, are eternal in a different sense—they are not conventional. At no point in time did, or can, someone establish property rights willy-nilly. I cannot take your property, for example, and then declare that we will from now

on observe property rights. If I am serious about property rights, then I must make restitution. Even if the concept of property rights has not previously occurred to either of us, once it does, in order for us to observe these rights, we must be willing to make restitution for (recognized) past wrongs. Otherwise, our professed belief in property rights cannot be taken seriously. It is in this sense that property rights can be said to be eternal—they extend backward indefinitely in time.

Conclusion

Mises's utilitarianism is the exception that proves (i.e., tests) the rule, in this case, Rothbard's rule that utilitarianism cannot provide a principled defense of laissez-faire liberalism. Of course, Mises, like almost all defenders of laissez faire, used utilitarian (i.e., nonmoral functionalist) arguments to defend the unhampered market. But he also used moral arguments. My main purpose throughout this paper has been to show that Mises's moral "utilitarianism," in spite of his repeated attacks on natural law and natural rights, owes more to the principled, categorical moral framework of Spencer and Herbert, than to the maximizing, comparative moral framework of Bentham and Mill. Mises equated natural law and natural rights with intuitionism, and for this reason rejected them, but he did not reject the categorical moral framework that underlies much of that tradition. On the contrary, it was the comparative moral framework of utilitarianism that he rejected. Furthermore, the essential premises for his moral defense of laissez faire is not the arbitrariness of all values, but the facts of scarcity (including scarcity of time) and diversity (including diversity of opinion concerning values *and means*)—two facts that play an essential role in his praxeological methodology. Any coherent moral theory concerning the conditions for social harmony, as well as any coherent theory of economics, must take these two facts into account. It is this insight, articulated by Locke, that Mises turns into a powerful moral argument against socialism and in favor of laissez faire.²⁰

²⁰Mises's arguments for laissez faire and against socialism can be usefully divided into three classes: (1) nonmoral functionalist arguments concerning the best policies for promoting prosperity; (2) the economic calculation argument that socialism leads to social chaos; and (3) moral arguments concerning the conditions for social harmony. There is an interesting parallel with St. Thomas Aquinas's three arguments for preferring private property to communal property: (1) communal property undermines the incentive to work; (2) communal property leads to social confusion; and (3) communal property undermines social peace (Aquinas 1959, p. 169 [*Summa Theologica* II-II 66 2]). In his book on the economics of the late-scholastics Alejandro A. Chafuen notes that Mises's defense of property is similar to that of the late-scholastics (1986, p. 155).

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Mises and Hayek Dehomogenized

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Pennsylvania: Grove City College Press, 1992.

An important contributing factor to the resurgence of Austrian economics in the 1970s was the appearance of a handful of articles which drew the attention of the economics profession to the distinctiveness of the tradition of economic theorizing founded by Carl Menger.¹ Arguably the most influential of these articles was written by the eminent Walras scholar, William Jaffé, and entitled "Menger, Jevons and Walras Dehomogenized."² In this article, Jaffé argued persuasively that the three founders of marginalism, whose contributions up to that point had tended to be conflated due to an exclusive focus on their contemporaneous discoveries of the marginal principle, each initiated a separate and distinct tradition of economic method and analysis. Taken in conjunction with the 1974 award to F. A. Hayek of the Nobel Prize in Economics and

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¹For example, Erich Streissler, "To What Extent Was the Austrian School Marginalist?," *History of Political Economy* 4 (Fall 1972): 426-41; William Jaffé, "Menger, Jevons and Walras De-Homogenized," *Economic Inquiry* 14 (December 1976): 511-24; and the articles in the Special Issue on Carl Menger and the Austrian School of Economics, *Atlantic Economic Journal* 6 (September 1978).

²Jaffé, "Menger, Jevons and Walras De-Homogenized."

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the scholarly conferences on Austrian economics held annually between 1974 and 1976, this article and the others mentioned above broadened and reinforced recognition of and interest in contemporary Austrian economics as an alternative to the prevailing neoclassical paradigm.

But the Mengerian tradition was developed in very different directions by his brilliant followers, Eugen von Böhm-Bawerk and Friedrich von Wieser, and by their own students and followers. Without tracing out this doctrinal development in any detail, suffice it to say that today the term "Austrian economics" is used to designate two very different paradigms. One derives from Wieser and may be termed the "Hayekian" paradigm, because it represents an elaboration and systematization of the views held by F. A. Hayek, a student of Wieser's at the University of Vienna. Although it is yet to be generally recognized by Austrians, Wieser's influence on Hayek was considerable and is especially revealed in the latter's early work on imputation theory, which sought to vindicate the Wieserian (as against the Böhm-Bawerkian-Misesian) position that the imputation problem must be solved within the context of an exchangeless economy subject to the control of a single will yet somehow able to calculate using (subjective) value as the "arithmetic form of utility."³

³See, especially, F. A. Hayek, "Some Remarks on the Problem of Imputation," in idem *Money, Capital, and Fluctuations: Early Essays*, Roy McCloughry, ed. (Chicago: University of Chicago Press, 1984), pp. 33–54. That there is no possibility of economic calculation and rational or purposeful allocation of resources within an economy based on division of labor where one will alone acts is, of course, the essence of Mises's critique of socialism. Perceiving the unbridgeable gulf between his own and Wieser's position on the possibility of directly imputing values to higher-order goods in the absence of monetary exchange, Mises, in his *Notes and Recollections* ([Spring Mills, Ill.: Libertarian Press, 1978], p. 36), wrote that "[Wieser's] imputation theory is untenable. His ideas on value calculation justify the conclusion that he could not be called a member of the Austrian School, but rather was a member of the Lausanne School." Also, Hayek, explicitly following Wieser, conceives the main problem of capital theory to be to explain how it is that the nonpermanent resources constituting the capital stock can yield a permanent net (physical) return (F. A. Hayek, *The Pure Theory of Capital* [Chicago: University of Chicago Press, 1952], pp. 54–55). This Wieser-Hayek method of describing the *quaesitum* of capital theory loads the dice in favor of explaining the interest return on capital in terms of productivity (rather than time-preference) considerations and, at the same time, diverts attention from what Böhm-Bawerk brilliantly perceived to be the fundamental question that must be satisfactorily answered by a correct theory of interest and was so answered by Mises's pure time-preference theory: What is the cause of the difference in value between goods which differ only in their temporal availability? In theorizing on capital, moreover, Hayek (*ibid.*, pp. 27, 156) makes significant use of the Wieserian device of a communist society subject to the control of an omniscient dictator, a device which reflects a paradigmatic lack of concern with problems of monetary appraisal and calculation. Finally, we have Hayek's revelation that his neutral-money doctrine represents a development, albeit "unconscious," of Wieser's remarks on the

The Hayekian paradigm stresses the fragmentation of knowledge and its dispersion among the multitude of individual consumers and producers as the primary problem of social and economic cooperation and views the market's price system as the means by which such dispersed knowledge is ferreted out and communicated to the relevant decision-makers in the production process.⁴

The other paradigm is the "Misesian" paradigm, so called because Ludwig von Mises was the first to systematically expound it. This paradigm represents a development of Böhm-Bawerk's thought and focuses on monetary calculation using actual market prices as the necessary precondition for the rational allocation of resources within an economic system featuring specialization and division of labor.⁵

Unfortunately, the majority of those who currently regard themselves as "Austrian economists" have failed to recognize the considerable differences between these two paradigms. And because Mises was the main influence on Hayek's early writings on business cycle theory and on socialist calculation, the most important manifestation of this failure is the tendency to attribute to Mises positions originated by Hayek or independently developed by those working within the Hayekian paradigm. This tendency is reinforced by what may be called the "Whig presumption," still inexplicably prevailing among many Austrians despite the publication of Thomas Kuhn's book three decades ago, that since Hayek "came after" Mises he must have incorporated in his own work all that was worthwhile in his

effects of "a one-sided supply of money" (Hayek, "On Neutral Money," in idem, *Money, Capital, and Fluctuations*, p. 160).

⁴Thus, for example, Wieser's critique of central planning rests on a proto-Hayekian view of the market as the means for solving knowledge problems. Writes Wieser (*Social Economics*, A. Ford Hinrichs, trans. [New York: Augustus M. Kelley, 1967], pp. 396–97): "The one will and command which, in war and for legal unity, is essential and indispensable as the connecting tie of the common forces, detracts in economic joint action from the efficacy of the agency. In the economy, though it has become social, work is always to be performed fractionally. . . . Part-performances of this sort will be executed far more effectively by thousands and millions of human beings, seeing with thousands and millions of eyes, exerting as many wills: they will be balanced, one against the other, far more accurately than if all these actions, like some complex mechanism, had to be guided and directed by some superior control. A central prompter of this sort could never be informed of countless possibilities, to be met with in every individual case, as regards the utmost utility to be derived from given circumstances or the best steps to be taken for future advancement and progress." I am indebted to Peter Boettke, of New York University, or calling my attention to this passage.

⁵On the crucial significance of monetary calculation in the Misesian paradigm see Joseph T. Salerno, "Ludwig von Mises as Social Rationalist," *Review of Austrian Economics* 4 (1990): 36–41. Also see idem, "Two Traditions in Modern Monetary Theory: John Law and A. R. J. Turgot," *Journal des Economistes et des Etudes Humaines* 2 (June/September 1991): 368–70.

predecessor's.⁶ The result is that attention has been deflected from the Misesian paradigm, and those seeking to deepen and extend it have found it increasingly difficult to gain recognition for their own efforts or to channel the interests and efforts of younger Austrian scholars into the same endeavor. There thus currently exists a pressing need, especially for Misesians, to undertake the task of a courageous and thoroughgoing doctrinal dehomogenization of Hayek and Mises.

Evidence of this need is presented in some of the contributions to this *Festschrift* honoring Hans Sennholz—ironically, a student of Mises's whose writings on most topics fall squarely within the Misesian paradigm. While this volume contains many informative, instructive, or inspiring papers by individuals who have been associated with Dr. Sennholz in various capacities or who have been profoundly influenced by his prodigious and insightful writings on a broad range of politico-economic subjects, I am mainly interested in a handful of contributions from academic Austrian economists. Rather than offering a critical analysis of these papers, I will restrict myself to demonstrating that, in each case, the author imputes to Mises implicit or explicit support for or authorship of one or more positions originated by Hayek or rooted in a Hayekian view of the market's pricing process.

Let me begin with Israel M. Kirzner's contribution on "Human Action, Freedom and Economic Science" (pp. 241–49), which deals with the evolution of his own understanding of the Misesian concept of human action from the publication of his first book in 1960⁷ to 1991, the year the essay under review was completed. In this essay, Kirzner explicitly repudiates the position he took in the concluding chapter of his 1960 book that the defining element of human action is "purposefulness" narrowly construed as expressed in economizing and choice and that the entire structure of Misesian economics, including its adumbration of the dynamic market process, can be logically deduced from insight into the "power of reason to guide purposeful behavior" (p. 244). Now, Kirzner informs us, he has come to realize that his earlier understanding of Mises's position is "inadequate," because it can only yield conclusions about "decisions made in given situations"

⁶This recrudescence of the "Whig presumption" among members and observers of the current Austrian school was recently brought to light in Murray N. Rothbard, *The Present State of Austrian Economics*, Working Paper from the Ludwig von Mises Institute, Auburn, Alabama (November 1992), pp. 4–5.

⁷Israel M. Kirzner, *The Economic Point of View: An Essay in the History of Economic Thought*, 2nd ed. (1960; Kansas City: Sheed and Ward, 1976).

and is thus incapable of analyzing "those systematic market processes which are so central to Misesian economics" (p. 244).

While Kirzner still ascribes a central role to the concept of purposefulness in his reinterpretation of Mises, it is a concept purged of explicit reference to economizing and choice and completely redefined in terms of alertness and discovery. Thus for Kirzner, "the purposefulness of human action . . . is the essential key to the discovery by agents that they are in fact *not* in the 'given situations' which they had hitherto assumed to be relevant," and it is the "purposefulness which defines and identifies conscious human action" that motivates "alertness to the dynamic world in which we live" (pp. 245, 247). These essential attributes of purposefulness are summed up elsewhere by Kirzner in the statement that "purposive human action involves a posture of alertness toward the discovery of as yet *unperceived* opportunities and their exploitation."⁸ To be sure, in proposing this definition, it is not Kirzner's intention to completely ignore the aspect of purposefulness that is expressed in human choice.⁹ However, he offers no argument establishing a logical link between these two aspects of purposefulness and merely asserts a predominating "propensity," inherent in human action, "to sniff out opportunities lurking around the corner," "to discover what is useful," "to be alert to opportunities," "to notice what may be useful," etc. By this procedure, Kirzner hopes to provide a praxeological foundation for the *empirical* tendency of the market process toward equilibrium that is alleged by Hayek.¹⁰ Thus Kirzner dismisses what he calls "any programmed pattern of allocative maximization" or "static decision making," i.e., choice, as a trivial expression of purposefulness that is unable to illuminate the equilibrating tendencies of the dynamic market process. In its stead he proposes "discovery," i.e., "man's entrepreneurial propensity to discover changes which can redound to his benefit," as the hallmark of purposive human action (p. 245).

It is important to reiterate at this point that Kirzner is not faulting Mises's conception of purposeful behavior but his own earlier failure to fully comprehend this conception, thereby imputing to Mises the origination of the discovery perspective which Kirzner has so elegantly elaborated in his later works. Thus when confronting the question of why Mises apparently endorsed Kirzner's earlier, mistaken interpretation of his position by writing a laudatory Foreword

⁸Israel M. Kirzner, *Perception, Opportunity, and Profit: Studies in the Theory of Entrepreneurship* (Chicago: University of Chicago Press, 1979), p. 109.

⁹*Ibid.*, pp. 28, 30–31.

¹⁰*Ibid.*, pp. 13–33.

to Kirzner's 1960 book, Kirzner responds that Mises did not "explicitly articulate" the insights yielded by this perspective and therefore may well have believed that what was implicit in his own position was also implicit in Kirzner's "superficial exposition" of that position. Or, alternatively and even less plausibly, Kirzner speculates that Mises himself may not have been consciously aware of these momentous implications of his own thought (p. 249, n. 1).

I would like to suggest however that the simplest and most plausible explanation for Mises's uncensorious Foreword is the correct one: Kirzner's concluding chapter gave a full and accurate explanation of what Mises knew to be his own "economic point of view," whose central element Mises himself repeatedly and explicitly characterized as purposive human action describable in terms of choice and the efficient allocation of scarce resources. Moreover, contrary to Kirzner's contention, Mises did indeed succeed in deducing from this restricted notion of purposeful behavior catallactic theorems relevant to the analysis of the dynamic market process. Preliminary to arguing this point, I will demonstrate that Kirzner's emphasis on discovery as the essence of purposiveness leaves him unable to logically account for the choice process and, ultimately, for the very existence of acting man.

For Mises, human action, whether isolated or involving monetary exchange, is always motivated by the eagerness of the actor to enhance his welfare and consists of choosing among alternative employments of resources whose necessarily future results are not known with certainty. Because the choice process logically implies uncertainty—choice and action would be obviously futile in a world where humans are predestined to endure a rigidly unchangeable sequence of future events known with perfect certainty—the prerequisite of any specific act of choice is the acquisition of knowledge, via direct experience or from other sources of information, about the events and prevailing circumstances of the recent past that may be relevant in formulating an "understanding" of the future conditions upon which the actions under consideration will impinge. For example, if the actor is choosing among alternative investments of resources for producing goods intended for sale on the market, then information about "current" prices, i.e., realized prices of the immediate past, in addition to qualitative knowledge concerning the most recent technical conditions of production and conditions underlying consumer demands, is an almost indispensable guide to forecasting future market conditions. It is only upon the basis of such knowledge and forecasts that the actor is able to appraise and estimate the future prices of the various products which enter into his calculations

of monetary profit. These calculations permit his ranking of the alternative investments under consideration, which then enables him to purposefully and efficiently allocate his resources at the moment of choice.

Thus, for Mises, the moment of choice coincides with the emergence of a value scale that is the *raison d'être* and consummation of the actor's previous "discovery" activities and that provides the framework for purposive behavior. Choice and action can only be conceived as occurring within such a "a given situation." Contrary to Kirzner's later interpretation of Mises, discovery cannot serve as the core of the central axiom in a praxeological system, precisely because there is no possibility of inferring from it the "given situation" prerequisite to the moment of choice. A being who is ever seeking to "discover changes that have occurred" in his situation can never *act* on those discoveries because he is incapable of creating the framework for choosing. In the newer Kirznerian interpretation, therefore, the Misesian *homo agens* has been transformed into *homo quaerens*, a perpetual and aimless seeker of new knowledge who is forever unable to turn it to account in improving his welfare; a shade who has become unstuck in (praxeological) time, having no existence in what Mises calls the "real present," that neverending sequence of "given situations" which is created by purposive entrepreneurial evaluation of past experience and forecasting of the future and in which all action is initiated and all human life is lived.¹¹

We have thus established that, according to Mises, "discovery" is logically implied in the very concept of choice and need not be posited as an independent facet of human purposiveness and, furthermore, that the propensity to discover new opportunities, when analyzed in isolation as the essential or predominant feature of purposiveness is incapable of generating any meaningful propositions about human action, not to mention the market process. Or, in other words, from the perspective of Misesian praxeology, entrepreneurial information gathering and forecasting are never autonomous and free-flowing activities directly expressing purposefulness, but are always rigidly governed by the exigencies of choosing under uncertainty. In my interpretation, therefore, it is a significant distortion of Mises's view to say with Kirzner that it is the discovery element in human action rather than "maximizing rationality" that "drives the market" (p. 247); for Mises, it is the fact

¹¹For Mises's conception of the "real present," see *Human Action: A Treatise on Economics*, 3rd ed. (Chicago: Henry Regnery, 1966), pp. 100–1. As Mises points out, "The present qua duration is the continuation of the conditions and opportunities given for action (ibid., p. 101). I have added the emphases in this quotation.

that the entrepreneur desires to efficiently allocate his resources in service of his goal of maximizing profit (and ultimately, utility) that drives both his quest for understanding of future market conditions and, when this quest culminates in the purposive choice of production processes, the dynamic market process.

But what of Kirzner's claim that a theorematic system derived from a concept of purposefulness lacking an independent discovery dimension is unable to elucidate "those dynamic processes through which the market absorbs and responds to exogenous changes" and which are central to Misesian economics (p. 245). In fact Misesian catallactics is exactly the spinning out of the implications of purposeful behavior engaged in by individuals who perceive the benefits of specialization and exchange described by the law of comparative advantage and whose productive activities are oriented by monetary calculation to satisfying anticipated consumer demands in the cheapest possible way. For Mises one of the most important functions of the market process is to provide the meaningful numerical data, the money prices, that are used in such economic calculations. These computations of monetary profit enable each producer to discern and purposefully choose that pattern of uses for his resources that he expects to maximize his satisfaction from participation in the exchange process. Because of the complexity of the technical interrelationships between the factors of production and the innumerable possibilities of their use and combination within a capital-using economy, without the ability to calculate, producers, no matter how much qualitative knowledge of the economic data they discovered or were endowed with, would never be able to use such knowledge in pursuit of their purposes and would abandon social cooperation under the division of labor as a means for enhancing their welfare.¹² Thus, severing choice from discovery, far from elucidating the nature and operation of the dynamic market process, yields the condition under which it ceases to operate.

Having linked up purposive individual behavior with the market process through the theory of monetary calculation, Mises then

¹²For recent discussions of Mises's contribution to the socialist calculation debate that characterize it as essentially an argument about calculation and not knowledge, see Salerno, "Ludwig von Mises as Social Rationalist," pp. 41-49; idem, "Postscript: Why a Socialist Economy Is 'Impossible'," in Ludwig von Mises, *Economic Calculation in the Socialist Commonwealth* (Auburn, Ala.: Praxeology Press, 1990), pp. 51-71; Murray N. Rothbard, "The End of Socialism and the Calculation Debate Revisited," *Review of Austrian Economics* 5 (2) (1991): 51-76; and idem, "The Present State of Austrian Economics," pp. 19-22. It seems that Richard Ebeling now also interprets Mises's argument along similar lines. See Richard M. Ebeling, "Introduction" in idem, *The Global Failure of Socialism* (Hillsdale, Mich.: Hillsdale College Press, 1992), pp. 6-8.

formulated his catallactic theory, based on Böhm-Bawerkian price theory and his own theory of the promoter-entrepreneur, to analyze the operation of this process. For purposes of arguing that Kirzner's view of the market process has much more in common with Hayek than Mises, allow me to briefly enumerate the most salient features of Mises's understanding of the dynamic market process as the outcome of calculable actions.

I focus first on the characteristics of the prices that are generated by the market process and serve as the data for economic calculation. These are realized prices; or, in other words, they are the actual outcome of the historical market process at each moment in time and are determined by the value scales of the marginal pairs in each market. They are, therefore, also market-clearing prices the establishment of which coincides with a momentary situation, what Mises calls the "plain state of rest" (PSR),¹³ in which no market participant, given his existing marginal-utility rankings of goods and money and knowledge of prevailing prices, can enhance his welfare by participating in further exchange. However, despite their character as market-clearing prices, these are also disequilibrium prices. Thus as a consequence of the unavoidable errors of entrepreneurial forecasting and price appraisalment under uncertainty, most goods are sold at prices that do not conform to their monetary costs of production, thereby generating realized profits and losses for producers. Nor does the law of one price for commodities and the associated but broader law of the absolute spatial equality of the purchasing power of money hold in the PSR, because market conditions are continually changing, while the information of each transactor

¹³According to Mises (*Human Action*, p. 762), "The notion of the plain state of rest as developed by the elementary theory of prices is a faithful description of what comes to pass in the market at every instant. Any deviation of a market price from the height at which supply and demand are equal is—in the unhampered market—self-liquidating." For further discussion of the PSR, see *ibid.*, pp. 244–45. Arthur Marget also clearly recognizes that all prices that actually emerge in the course of the historical market process are and must be market-clearing prices that create a temporary lull in the process. In Marget's words, "the prices which we must ultimately explain are the prices 'realized' at specific moments in clock time [and] the only demand and supply schedules which are directly relevant to the determination of these 'realized' prices are market demand and supply schedules prevailing at the moment the prices are 'realized'. . . ." (Arthur W. Marget, *The Theory of Prices: A Re-examination of the Central Problem of Monetary Theory*, 2 vols. [New York: Augustus M. Kelley, 1966], 2, p. 253). For an exposition of Marget's view of the pricing process and its relevance to monetary theory, see Joseph T. Salerno, "Ludwig von Mises's Monetary Theory in Light of Modern Monetary Thought," presented at the Austrian Scholars Conference, New York City, October 1992 (unpublished ms), pp. 46–50.

about current conditions is necessarily incomplete and arbitrage processes do not operate instantaneously.¹⁴

Second, for Mises, the market process is open-ended and entrepreneurial. It is open-ended because the continual exogenous changes in the economic data preclude it from ever reaching a state of long-run equilibrium or what Mises refers to as a "final state of rest" (FSR), in which all commodity prices and the purchasing power of money are perfectly arbitrated, speculative holding of commodity stocks is absent, and profits and losses have been completely eradicated.¹⁵ The FSR is an imaginary construct that enables the economist to isolate and describe the entire sequence of adjustment, including the time-consuming reorientation of the production structure, which results from a given change in the economic data. In FSR analysis, the economist begins with an initial FSR, introduces an alteration in the data, i.e., in tastes, technology, money supply, etc., and then traces out the steps by which the market adjusts to a new FSR, all the while rigidly maintaining a *ceteris paribus* assumption. From this analysis it may be inferred that the reallocation of resources from less profitable to more profitable production processes coincides with an improvement in the satisfaction of consumer wants.

Or the economist may employ FSR analysis to demonstrate that, if at any point in time, all further changes in the economic data were to suddenly cease, the adjustment processes currently operating in response to past changes would eventually culminate in an FSR and, if no further changes intervened, in a state of eternally repetitive robotical activity or "evenly rotating economy" (ERE) in which uncertainty, entrepreneurship, and the demand for a medium of exchange are eliminated and the very conditions of choice and action abolished. This latter mode of employing the analysis is effective in illustrating the point that at any instant in time all purposive behavior aimed at attaining a state of optimum satisfaction is tending toward establishing a state of nonaction. What prevents the emergence of such a state is the neverending flux in the means and ends of action. Thus, from the standpoint of Misesian catallactics, to declare that the market is "equilibrating" can never be taken to mean that the market process ever actually progresses toward a given long-run equilibrium in historical or calendar time. It can mean that

¹⁴For a Wicksteedian micro analysis of the market's tendency to rapidly establish and maintain interspatial equality in the purchasing power of money, see *ibid.*, pp. 41-45.

¹⁵Mises's discussion of the nature and uses of the FSR concept can be found in Mises, *Human Action*, pp. 245-46.

the reallocations of productive resources undertaken by entrepreneurs seeking to exploit anticipated profit opportunities—if and when such profits are realized—result in a relatively improved state of want satisfaction for consumers; or it can mean that the complex of autonomous yet coordinated choices and actions that constitute the market process, at any given moment in historical time, is aimed at establishing an optimum state of consumer satisfaction and would eventuate in such a state in the absence of further change in the data.

But despite its usefulness, FSR analysis was never intended by Mises to provide a grasp of the function of the entrepreneur or “promoter,” whose activities drive the open-ended market process actually unfolding in time. For Mises, the promoter concept goes beyond the category of the pure entrepreneur derived from the action axiom, and its construction embodies cognition of a fundamental datum of catallactic analysis: that some people are more adept than others at anticipating and adjusting to change.¹⁶ Within the context of the Misesian market process, promoter-entrepreneurs are those who seek to profit by actively promoting adjustment to change. They are not content to passively adjust their catallactic activities to readily foreseeable changes or changes that have already occurred in their circumstances; rather, they regard change itself as an opportunity to meliorate their own conditions and aggressively attempt to anticipate and exploit it. The real market process is thus entrepreneurial in the sense that it is driven by an identifiable, though ever-changing, class of individuals whose productive activities are guided by monetary calculations based upon purposeful and perpetual forecasting of an uncertain and changing future.¹⁷ As noted above, the prices used in such calculation are the appraised prices of the future, i.e., the prices anticipated to be realized at future moments of an open-ended market process that will never cease to be buffeted by changes in the economic data. It should be emphasized that these prices are *not* the same prices which emerge during the

¹⁶On the “promoter” concept, see *ibid.*, pp. 254–55, 303–11. As Mises (*ibid.*, p. 585) points out, “What distinguishes the successful entrepreneur and promoter from other people is precisely the fact that he does not let himself be guided by what was and is [i.e., by realized prices], but arranges his affairs on the ground of his opinion about the future. He sees the past and present as other people do, but he judges the future in a different way. . . . The impulse of his actions is that he appraises the factors of production and the future prices of the commodities which can be produced out of them in a different way from other people.”

¹⁷It was William H. Hutt (*The Keynesian Episode: A Reassessment* [Indianapolis: LibertyPress, 1979], p. 165) who felicitously described entrepreneurial activity as “dominated by perpetual forecasting.”

course of a *ceteris paribus* or "systematic" (as Kirzner terms it) market process smoothly progressing toward the FSR.

Third, and finally, Mises conceives the market process as coordinative, "the essence of coordination of all elements of supply and demand."¹⁸ This means that the structure of realized (disequilibrium) prices, which continually emerges in the course of the market process and whose elements are employed for monetary calculation, performs the indispensable function of clearing all markets and, in the process, coordinating the productive employments and combinations of all resources with one another and with the anticipated preferences of consumers. Such "price coordination," by insuring that scarce resources are secured by the entrepreneurs bidding the highest prices, also insures that at each instant Böhm-Bawerk's "Law of Costs" prevails, that is, that the constellation of resource prices that emerges on a market unhampered by legal restrictions *always* reflects the circumstance that existing resources are devoted to their most valuable uses as determined by entrepreneurial appraisements of future output prices.¹⁹ It should be noted that as a concept applicable to the real world of uncertainty and change, Misesian price coordination is consistent with the speculative withholding of labor and other resources from current production in anticipation of the later emergence or discovery of more valuable employments.²⁰ While such speculative activities may modify the shape of the momentary supply and demand curves and the valuations of the marginal pairs

¹⁸Ludwig von Mises, "The Position of Money among Economic Goods," in *Money, Method, and the Market Process: Essays in Honor of Ludwig von Mises*, Richard M. Ebeling, ed. (Norwell, Mass.: Kluwer Academic Publishers, 1990), p. 65.

¹⁹On Böhm-Bawerk's law of costs as an early formulation of the concept of price coordination, see Salerno, "Two Traditions in Modern Monetary Theory," p. 369. Böhm-Bawerk's erroneous characterization of his law of costs as "a law which has only approximate validity and teems with exceptions" resulted from his failure to realize that this law does not depend on the assumption of perfect knowledge and foresight. The law of costs no more requires that entrepreneurs have perfect knowledge of future market conditions than the law of marginal utility requires that consumers are able to perfectly predict their future value scales. Both laws require for their full applicability only that agents, whether allocating resources to achieve final consumption goals or the business goal of pecuniary profit, evaluate and rank the *anticipated* outcomes of the alternative actions under consideration. For Böhm-Bawerk's statement of the law, see Eugen von Böhm-Bawerk, *Capital and Interest*, vol. 2, *Positive Theory of Capital*, George D. Huncke, trans. (Spring Mills, Penn.: Libertarian Press, 1959), pp. 248–56. Böhm-Bawerk's error occurs on pp. 255–56. A more detailed presentation and defense of the law of costs can be found in idem, "The Ultimate Standard of Value," in *Shorter Classics of Eugen von Böhm-Bawerk* (Spring Mills, Penn.: Libertarian Press, 1962), pp. 351–70.

²⁰On this point see, Joseph T. Salerno, "Commentary: The Concept of Coordination in Austrian Macroeconomics," in Richard M. Ebeling, ed., *Austrian Economics: Perspectives on the Past and Prospects for the Future* (Hillsdale, Mich.: Hillsdale College Press, 1991), pp. 330–40.

in the affected markets, they do not in any way alter the coordinative quality of the market process.²¹

From the Misesian perspective, price coordination is thus the very essence of the market and a necessary attribute of its real existence. As such it is an *ex post* concept. In the absence of price coordination, e.g., in a regime of all-around price controls, the allocation of scarce resources within the social system of want satisfaction becomes purposeless and chaotic. The concept of equilibration, on the other hand, is an *ex ante* concept expressing recognition that entrepreneurs responding to the lure of expected monetary profits seek to anticipate and remove the continually emerging maladjustments between means and ends and that their success in doing so would culminate in a state of optimum satisfaction, i.e., nonaction. Equilibration therefore presupposes price coordination in the same way that, in a nonsocial process of individual want satisfaction, purposeful allocation of resources presupposes the existence of a unitary value scale by means of which resources can be meaningfully evaluated and ranked.²²

Let me now contrast this interpretation of Mises's view of the market process as deduced from the axiom of purposeful behavior with the Kirznerian interpretation that ascribes the axiomatic position in Mises's praxeological system to the proposition that individuals have a propensity to discover changes that have already occurred in their given situations. In the latter interpretation, Mises does not view the market as an open-ended process, as a complex entwining of mutually-influencing historical adjustment processes in various states of completion, a process which is constantly shifting direction in response to new changes in the data and never actually temporally approaches a state of final rest and nonaction. Rather, the Kirznerian interpretation emphasizes the market as a "systematic" process, one that really progresses toward equilibrium by effecting an increasing coordination of the plans of market participants. The ultimate goal of this process, the perfect coordination of individual plans, is an attribute of the final equilibrium state. But such "plan coordination" is worlds apart from the concept of price coordination adumbrated

²¹For an analysis of speculation which demonstrates that, whether successful or not, it does not impede the functioning of the coordinative market process, see Murray N. Rothbard, *Man, Economy, and State: A Treatise on Economic Principles*, 2 vols. (Los Angeles: Nash Publishing, 1970), 1, pp. 112–18.

²²This understanding of equilibration as a strictly *ex ante* concept accords with the "purely logical concept of equilibration" superbly expounded and defended by George Selgin. See G. A. Selgin, "Praxeology and Understanding: An Analysis of the Controversy in Austrian Economics," *Review of Austrian Economics* 2 (1988): 33–43.

above. The latter concept, as I have argued, refers to a realized coordination of all the disparate and contingent individual buying and selling plans underlying the market demand and supply curves that actually exist at any given moment in a changing and uncertain world. Plan coordination, on the other hand, describes an imaginary situation in which automatons endlessly repeat a logically consistent pattern of actions, a situation that is akin to the perfect adaptation of the elements of a completely robotized factory to one another.

In fact, Kirzner's discovery perspective does not originate in Mises's concept of human action but in Hayek's conception of the market as a means for disseminating the knowledge which systematically guides decentralized and initially ignorant decision-makers toward a full, *ex ante* coordination of their various production and consumption plans.²³ But since *ex ante* plan coordination can only be achieved in long-run equilibrium—is a condition defining such equilibrium—as both Hayek and Kirzner recognize, Kirzner is forced to shift his analytical focus from the real-world, open-ended market process to a hypothetical market process which is generated by initial ignorance among market participants of the full range of exchange opportunities afforded by the prevailing and *fixed* configuration of the economic data and which must therefore eventually terminate in an FSR.

With the possibility of exogenous change and genuine uncertainty thus banished from its purview, Kirzner's analysis of the market process has no use for the concept of the dynamic promoter-entrepreneur who is perpetually forecasting and appraising the future in quest of anticipated profit opportunities. The market process is now characterized as driven toward its fixed and final goal of perfect-plan coordination by discoverer-entrepreneurs alert to "changes that have occurred in their very market situations," i.e., to contemporaneously emerging discrepancies between prices of the same good available at different locations or in different forms (virtual products, i.e., resources and actual products). In these quasi-static conditions, production loses its temporal dimension and may be conceived of as a matter of pure arbitrage, i.e., of simultaneously buying and selling the same good in spatially diffuse markets. It is only under these circumstances, where producers may be characterized as arbitrageurs, that the Hayekian proposition that information about prices of the immediate past

²³Hayek (*Pure Theory of Capital*, p. 23) referred to this state of affairs as "a state of complete compatibility of *ex ante* plans." Adopting the preferred terminology of current Hayekians, I refer to it alternatively as "*ex ante* coordination of plans."

substitutes for detailed qualitative knowledge of past and future market conditions in guiding the production process holds true. As producer-arbitrageurs act to exploit newly-discovered discrepancies between prevailing input and output prices, ignorance of mutually beneficial exchange opportunities among market participants measurably diminishes, the buying and selling plans of individuals are progressively coordinated (in the *ex ante* sense), and prices are systematically driven toward their final equilibrium values.

Once we drop the assumption of an absence of exogenous change in analyzing the market process, Kirzner's characterizations of the entrepreneur as an alert discoverer of existing opportunities, of the market process as the means for plan coordination, and of realized prices as a surrogate for qualitative knowledge about the economic data all fall to the ground. And this we indeed must do in interpreting Mises, because he does not employ such an assumption for analyzing the function of the entrepreneur or deducing conclusions about the dynamic market process. As I pointed out above, for Mises, FSR analysis, which utilizes this assumption, is primarily useful for demonstrating that the consequences of a change in the economic data are not restricted to the initial adjustment of the market price but also involve longer-run adjustments in resource allocation and the production structure.

Hayek, on the other hand, even in his earliest writings on business-cycle theory, in which he was most heavily under Mises's influence, envisaged the economy as actually departing from and rapidly returning toward a "static state" under impact of changes in the data. Thus, in *Monetary Theory and the Trade Cycle*, for instance, Hayek wrote that "For so long, at least, as disturbing monetary influences are not operating, we have to assume that the price which entrepreneurs expect to result from a change in demand or from a change in the conditions of production will more or less coincide with the equilibrium price. For the entrepreneur . . . will generally be in a position to estimate the price that will rule after the changes have taken place [i.e., in the new FSR]."²⁴

While in later writings Hayek emphasized that the state of equilibrium and *ex ante* plan coordination is "an admittedly fictitious construction" never to be observed in the real world, he still insisted that the efficiency of the economic process is to be gauged by its observed proximity to such a state. Accordingly, in the *Pure Theory*

²⁴F. A. Hayek, *Monetary Theory and the Trade Cycle*, N. Kaldor and H. M. Croome, trans. (New York: Augustus M. Kelley, 1966), p. 29.

of *Capital*, he argued that the “justification” of the concept of equilibrium “is not that it allows us to explain why real conditions should ever in any degree approximate towards a state of equilibrium, but that observation shows that they do to some extent so approximate, and that the functioning of the existing economic system will depend on the degree to which it approaches such a condition.”²⁵ Affirming the “tendency” of market prices to conform to their equilibrium levels, Hayek clearly indicates that he considers the historical market to usually operate in close proximity to the equilibrium state. Thus he defines “tendency” in the following terms: “A given phenomenon may tend to [approximate towards] a certain magnitude if in a great number of cases it may be expected to be fairly near that magnitude, even if there is no reason to expect that it will ever actually reach it, however long the time allowed for the adjustment.”²⁶

Indeed, as Hayek points out, in order for prices to fulfill their knowledge-disseminating and plan-coordinating functions, the economy must subsist in a state of what I will call “proximal equilibrium,” wherein realized prices are always fairly accurate indicators of future prices. Writes Hayek:

successful economic action [or the fulfillment of the expectations which prompted it] depends largely on the approximately correct predication of future prices. These predictions will be based on present prices and their trends. . . . Indeed the function of prices is precisely to communicate, as rapidly as possible, signals of changes of which the individual cannot know but to which his plans must be adjusted. This system works because on the whole current prices are fairly reliable indications of what future prices will probably be.²⁷

Kirzner evidently rejects the Hayekian concept of proximal equilibrium as a realistic description of the operation of the market economy, arguing that “the market is in a continual state of flux and is never in or near a state of equilibrium.” He then goes on to argue that “the [endogenous] layer of change, consisting of systematic equilibrating tendencies (which never do manage to become fully completed before being disrupted by new exogenous change) is responsible for the degree of allocative efficiency and of growth potential that market

²⁵ Hayek, *Pure Theory of Capital*, pp. 27–28.

²⁶ *Ibid.*, p. 27, n. 2.

²⁷ F. A. Hayek, *Denationalization of Money—The Argument Refined: An Analysis of the Theory and Practice of Concurrent Currencies*, 2nd ed. (London: Institute of Economic Affairs, 1978), p. 82.

economies display."²⁸ But, if this is the case, Kirzner must logically conclude, which he does not, that market economies are not very efficient at all, because he has already argued that the market process never proceeds very far toward the ideally efficient state of perfect plan coordination.²⁹ This point aside, Kirzner's theory of the discoverer-entrepreneur, whose activities systematically drive market prices toward their equilibrium configuration, can be viewed as an attempt to liberate Hayek's notion of catallactic efficiency as the *ex ante* coordination of decentralized plans from its dependence upon the vague and untenable assumption of proximal equilibrium as the normal state of the historical market economy. However, Kirzner's attempt itself implicitly invokes the ideas of quiescent calendar periods which separate successive exogenous shocks and during which equilibrating endogenous changes are given scope to work themselves out to some extent.

But there is no more basis in Mises's work for Kirzner's idea of real-time equilibration than there is for Hayekian proximal equilibrium. As Mises emphasized, it is impossible to determine and meaningless to suggest that the real economy is closer to the FSR, and therefore manifests a superior coordination of plans and greater allocative efficiency, at one instant of time than it was at a previous instant. For Mises, each moment that passes introduces fresh exogenous changes into the system which impinge upon and reorient the ongoing market process toward a new FSR. As a result, very little can be established about the progress of any one of the host of individual adjustment processes that compose the market process. In fact the very idea of a single, compartmentalized adjustment process is no more than a useful analytical fiction which permits the economist to make sense of the overwhelmingly complex phenomena of the unitary market process. In Mises's words, "The various adjustment processes are in reality not isolated. Synchronously an indefinite number of them take their course, their paths intersect, and they mutually influence one another. To disentangle this intricate tissue and to observe the chain of actions and reactions set into motion by a definite change of the data is a difficult task for the historian's understanding and the results are mostly meager and questionable."³⁰

²⁸Israel M. Kirzner, *The Meaning of the Market Process: Essays in the Development of Modern Austrian Economics* (New York: Routledge, 1992), pp. 38–39.

²⁹However, if Kirzner's standards for efficiency are relatively undemanding and are met by even small movements of the market process toward his ideal of perfect plan coordination, then this criticism loses its force. I am indebted to David Gordon for enlightening me on this point.

³⁰Mises, *Human Action*, p. 653.

In the alternative interpretation of Mises's view of the market process that I have been expounding, the notion of allocative efficiency has nothing to do with the Hayekian criterion of plan coordination. Rather, it derives from an analysis of principles of purposeful behavior. Thus, from the *ex ante* standpoint, the market economy is perfectly efficient, because entrepreneurial decisions based upon monetary calculation always result in the appraisal and allocation of resources in strict accordance with anticipated consumer preferences, in the same manner in which the choices of an individual actor produce a pattern of resource use reflecting his value ranking of expected satisfactions. Thus the Böhm-Bawerkian law of costs, according to which the money price of each and every resource always corresponds to the lowest appraised of the employments for which its available quantity just suffices, i.e., its expected marginal revenue product, is the perfect catallactic equivalent of the law of marginal utility that governs autistic exchange. Far from being trivial, this concept of *ex ante* efficiency is indispensable for distinguishing the unhampered market economy from other conceivable methods of organizing social cooperation under a division of labor. Thus a completely centrally-planned industrial economy is impossible of realization because, in the absence of actual exchange of productive factors and genuine factor prices, the planners are unable to "cost" and therefore purposefully or efficiently allocate the given resources under their control in accordance with even their own known scale of ends valuation.

The criterion of social welfare that is implicit in Misesian catallactics is therefore "Böhm-Bawerk efficiency," which emphasizes the role of monetary calculation in enabling individuals to rationally evaluate and allocate the means at their disposal when pursuing their goals through social action, i.e., action that makes use of voluntary exchange and the social division of labor to realize its aims. Whereas Pareto efficiency and its Hayek-Kirzner plan coordination variant represent unrealizable standards—because based on perfect information and foresight—for evaluating the social *outcomes* of the choice process, Böhm-Bawerk efficiency invokes an ideal but attainable standard, i.e., the efficient *ex ante* allocation of resources by an individual choosing under uncertainty, and indicates the day-to-day coordinated functioning of the economy that results when the institutional *preconditions* of monetary calculation and, therefore, of rational social action are fulfilled. Judged by this criterion, the erroneous forecasts and malinvestments that sometimes characterize entrepreneurial choices are not proof against the efficiency of the real-world market; the market is efficient

because it enables individuals to calculate and therefore to make meaningfully choices to reap the overwhelming benefits described by the law of comparative advantage and not because it yields absolute or approximate certitude about the outcomes of these choices (which is, in any event, also denied to autarkic choosers). In sum, the unhampered market is *socially* efficient because it provides the incentive for social action by establishing a tight producer-consumer nexus that gives full sway to consumer choice in determining the allocation of resources.³¹ On the other hand, any coercive intervention into the market, which necessarily distorts or annuls its intricate calculational nexus coordinating consumer preferences and entrepreneurial choices, *ipso facto* generates a less efficient allocation of resources, i.e., one that does not completely and exclusively reflect the anticipated preferences of the participants in the social division of labor, and lowers social welfare. We may thus conclude that every act of intervention unambiguously lowers social welfare.³²

Regarding *ex post* efficiency, the market economy is once again on all fours with the autarkic economy, with entrepreneurial errors and inefficiencies in production the inevitable product of uncertainty and change. However the market economy does embody a process which operates to minimize such errors and inefficiencies. This is what Mises calls the "selective process," which is continuously and actually operating in calendar time via monetary profits and losses to weed out

³¹Mises, of course, vigorously upheld "consumer sovereignty" as the operating principle of the unhampered market economy, while demonstrating the coordinative property of the market's price structure and its indispensability to economic calculation and rational social action. However, curiously, he never attempted to derive a formal criterion of social welfare from these elements.

³²Murray N. Rothbard (*Toward a Reconstruction of Utility and Welfare Economics* [Burlingame, Calif.: Center for Libertarian Studies, 1977]) has ably demonstrated on purely scientific grounds that government intervention always fails to increase social welfare. In advancing to our more radical conclusion, we are able to completely discount any gains, in terms of direct utility or exchangeable goods, that accrue to the interveners and their beneficiaries, while remaining safely within the bounds of strict *Wertfreiheit*. The concept of Böhm-Bawerk efficiency is only concerned with the utility that derives from actions that take place completely within the social nexus, that is, the utility of "productive" consumers who earn income—and only to the extent that they earn this income—through voluntary exchange. Since it is the prospective or *ex ante* utility to be derived from acts of consumption that provides the rationale for individuals to participate in the social division of labor, it is their preferences and demands that must serve as the sole and ultimate standard of socially efficient resource use. Thus, for example, the redistribution of income to "nonproductive" consumers may be represented as a net siphoning off of resources from society that reduces the utility of at least some of its members and weakens their incentives for social action. The market demands of the nonproductive recipients of these resources then can be treated as falsifying monetary calculation and fostering a socially inefficient reallocation of productive resources.

from the market the relatively unastute and inefficient entrepreneurs while transferring the power to choose the best uses and technical combinations of productive resources to the more farsighted and technically proficient entrepreneurs.³³

In the Kirznerian interpretation there is no clear and meaningful distinction drawn between *ex ante* and *ex post* efficiency because the entrepreneur as *homo quaerens* never confronts the moment of choice, which would involve him in the purposeful allocation of resources or "Robbinsian economizing." Nor, for the same reason, can the historical market process in this interpretation possess a means of systematically eliminating less successful entrepreneurs and shifting control over productive processes to the more successful. Never burdened with the necessity of *choosing*, discoverer-entrepreneurs need never place any resources at risk of loss in *deciding* to seize a profit opportunity. In criticizing the term "decision-making" which had come into vogue along with other technocratic jargon in the 1950s, Mises pointed out that the term is "designed to divert attention from the fact that what matters is not simply to make a choice but to make the best possible choice. This means: to proceed in such a way that no less urgently desired end should be satisfied if its satisfaction prevents the attainment of a more urgently desired end."³⁴ Given the obvious importance that Mises attaches to purposeful choice in his praxeology and catallactics, it is difficult to fathom that he would have acquiesced in an interpretation of his view of the market process that assigns the central role to a nonchoosing entrepreneur.

Perhaps one of the more unfortunate consequences of the homogenization of Mises's and Hayek's thought is manifested in the common tendency of current Austrian economists to formulate their entire research program in terms of a dictum uttered by Hayek, while uncritically attributing support for such a program to Mises. The dictum to which I refer is Hayek's oft-quoted remark that "it is probably no exaggeration to say that every important advance in economic theory during the last hundred years was a further step in the consistent application of subjectivism."³⁵ For Mises, however, the goal of theoretical research in economics was not to simply "extend subjectivism," but to elucidate the crucial link between the subjective realm of individual purpose and valuation and the social pricing

³³On the selective process, see Mises, *Human Action*, pp. 311–15.

³⁴Ludwig von Mises, *The Ultimate Foundations of Economic Science: An Essay on Method*, 2nd ed. (Kansas City: Sheed Andrews and McMeel, 1978), p. 69.

³⁵F. A. Hayek, *The Counter-Revolution of Science: Studies on the Abuse of Reason*, 2nd ed. (Indianapolis: LibertyPress, 1979), p. 52.

process that provides the objective data for economic calculation. According to Mises, such an endeavor must begin with “that brilliant achievement of the classical economists . . . essentially a theory of calculated action” and then broaden it into a “a system dealing with all human choices, a general theory of action.”³⁶ Elsewhere Mises wrote that “supply and demand are only the links in a chain of phenomena, one end of which has . . . visible manifestation in the market, while the other is anchored deep in the human mind.”³⁷ A further indication that Mises perceived the task of modern economics to be that of explicating the connection between individual purpose and the objective catallactic foundations of society is Mises’s letter to Hayek in which he relates that he was initially undecided whether to entitle his *magnum opus* *Human Action* or *Social Cooperation*.

Richard M. Ebeling’s contribution to the volume “Variations on the Demand for Money Theme: Ludwig von Mises and Some Twentieth-Century Views” (pp. 127–38) exemplifies this confusion of research programs. Ebeling gives a very good account of the essential differences between Mises’s cash-balance approach to the demand for money, which derives from Carl Menger, and the Cambridge cash-balance approach as formulated in the writings of A. C. Pigou and drawn from the “oral tradition” which had been initiated by Alfred Marshall. Ebeling then proceeds to analyze the neo-Keynesian and monetarist macroeconomic approaches from the perspective of the methodologically individualistic Misesian approach, criticizing the propensity of both monetarists and Keynesians to argue in terms of the stability or instability of the aggregate demand for money. Unfortunately, in his critique, Ebeling throws out the demand-for-money baby with the stability bathwater, arguing that “from Mises’s perspective, it is inappropriate to speak about *the* demand for money and *its* stability” and that “to speak of the community’s ‘aggregate demand for money’ is not only methodologically unsound, but analytically incomplete” (pp. 135, 137).

Contrary to Ebeling’s assertion, however, Mises did indeed hold that individual demands for cash balances could and should be aggregated into an overall market demand schedule for money. Thus, while he warned that investigation into the demand for money could not “begin with the demand for money of the community,” he fully accepted the legitimacy of aggregating the individual demands into a social demand, declaring that “[t]he demand for money of the

³⁶Mises, *Human Action*, p. 231.

³⁷Ludwig von Mises, *The Theory of Money and Credit*, H. E. Batson, trans., 2nd ed. (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, 1971), p. 131.

economic community is nothing but the sum of the demands for money of the individual economic agents composing it.”³⁸ While such a seemingly innocuous aggregate of homogeneous quantities may very well violate some unwritten canon of the Hayekian “subjectivist” paradigm, Mises clearly recognized that without reference to *the* demand for and supply of money it would be impossible to carry out the core of his own research program: integrating value and monetary theory to permit the explanation of the unified structure of money prices whose existence is the *sine qua non* for economic calculation and the purposeful allocation of resources within the framework of an economy based upon the division of labor.

In support of his anti-aggregation interpretation, Ebeling adduces Mises’s insights that: (1) the purchasing power of money is not a single price but an array of the alternative quantities of the various goods which the monetary unit commands in exchange and (2) changes in the supply of money never affect the elements of this purchasing-power array simultaneously and equiproportionally and therefore invariably result in permanent redistributions of real income and wealth (p. 136). But, as Mises clearly recognized, these important insights establishing the nonneutrality of money are not relevant to the question of whether or not money-demand schedules may be properly aggregated across individuals; rather, they speak to the issue of the shape of the aggregate demand curve for money, leading to the conclusion that such curves can never be rectangularly hyperbolic.³⁹

Although reluctance to employ the concept of a social demand for money cannot properly be attributed to Mises, it can be detected in Hayek’s early works on business cycle theory. Thus, in *Monetary Theory and the Trade Cycle*, Hayek criticizes Menger and Mises for “including in the theory of the value of money *all* influences of money on prices.”⁴⁰ In effect, Hayek is reproaching Mises in particular for attempting to provide an integrated analysis of variations in the supply of money in terms of both their systematic effects on relative prices and their effects on the height of overall prices, rather than just concentrating on the former type of analysis which Hayek considers the “far more important task” of monetary theory.⁴¹ In *Prices and Production*, Hayek goes even further to encourage the realization by monetary theorists of “the superfluity of the concept of a general value of money, conceived as the reverse of some price level.” He goes

³⁸Ibid., pp. 131–32.

³⁹On this point, see Salerno, “Mises’s Monetary Theory,” pp. 19–33.

⁴⁰Hayek, *Monetary Theory and the Trade Cycle*, p. 117, n.

⁴¹Ibid.

on to write that the type of monetary theory whose development he looks forward to “will be no longer a theory of the value of money in general, but a theory of the influence of money on the different ratios of exchange between goods of all kinds.”⁴² Lest it be thought that Hayek is here objecting only to the concept of a statistical price level, it should be noted that his critique of Menger and Mises was advanced despite his explicit recognition that their notion of the general value of money “. . . has nothing to do with any measurable value, in the sense of some price level.”⁴³ By challenging the very notion of the general purchasing power of money, Hayek, of course, is implying the uselessness of the concept of an aggregate demand for money.⁴⁴

In contrast to the Wieser-Hayek position,⁴⁵ however, Mises held that the social appraisal of productive factors via entrepreneurial competition in resource markets, which is the very basis of economic calculation and purposive action, can only proceed in monetary terms.⁴⁶ Thus, in the course of estimating the expected marginal revenue products of the various inputs into his planned production processes and determining what prices to bid for them, the entrepreneur cannot help but estimate the absolute height of prices, i.e., the general purchasing power of money, because the exchange ratios between the various present goods and between present and future goods, i.e., Hayek’s all-important “relative prices,” are and must be embedded in the structure of money prices. Or, to put it another way, money’s nonneutral effects on the economy operate only through the medium of *money* prices.

These considerations tend to be lost sight of when focusing on Hayekian proximal equilibrium because, outside of an uncertain and changing world, there is no need for a monetary appraisal process to continually revolutionize and recreate the price structure; in proximal equilibrium, money plays the role of a shadowy *numeraire*, and efficient action depends only on entrepreneurs knowing the currently prevailing configuration of relative prices, which serves as a good, if

⁴²F. A. Hayek, *Prices and Production*, 2nd ed. (New York: Augustus M. Kelley, 1967), p. 29.

⁴³Hayek, *Monetary Theory and the Trade Cycle*, p. 117, n.

⁴⁴As Hayek (“On Neutral Money,” p. 161) concludes, “. . . the theoretical concept of neutral money, which relates to the influence of money upon the price relationships [simultaneous and intertemporal] determined by real factors, cannot bear any relation at all to the concept of some ‘price level’ [even if this concept is introduced merely implicitly in the form of a ‘demand for money’ related to a definite price level].”

⁴⁵As set forth in Hayek, “Some Remarks on the Problem of Imputation.”

⁴⁶See Mises, *Human Action*, pp. 331–38, for an explanation of the distinction between imputation and appraisal as these processes relate to the valuing of higher-order goods and of the relevance of this distinction for economic calculation.

not perfect, indicator of their likely future configuration. For Hayek, it is only when the money spending stream expands or shrinks that it has a nonneutral impact on the economy by causing reversible changes in the ruling barter rates of exchange and jarring the economy temporarily out of its proximal equilibrium. For Mises, on the other hand, it is only the existence of a real and tangible medium of exchange, with a market and, hence, a driving force all its own, that permits the operation of market processes at all. From Mises's standpoint, then, it is not the inescapable fact of money's inconsistency with an imaginary state approximating equilibrium but monetary intervention misdirecting the dynamic appraisal process that falsifies entrepreneurial calculations, undermines efficient resource allocation, and discoordinates the economy.

Sanford Ikeda's contribution, entitled "The Dynamics of Government Intervention: Theory and Implications" (pp. 201–12), is an interesting and original effort to formulate "a more systematic theory of what can be called the 'interventionist process'" that takes Mises's critique of interventionism as its point of departure (p. 202). What Ikeda seeks is to integrate the Misesian critique with public choice theory as a means of explaining the observed "ebb and flow of government growth," featuring prolonged periods of progressive deregulation alternating with periods of increasing interventionism, with neither the deregulatory phase nor the interventionist phase ever culminating in complete laissez-faire or thoroughgoing socialism, respectively (pp. 203–4).

In analyzing the "Misesian interventionist dynamic" which drives the process, however, Ikeda resorts to the Kirznerian discovery view of entrepreneurship, wherein the entrepreneur "serves a social function by [unintentionally] solving the knowledge problem" (pp. 204–5). By discovering and arbitraging discrepancies between simultaneously existing prices of the same or virtually the same goods, the entrepreneur repairs the gaps in knowledge of decentralized market participants and better coordinates their individual buying and selling plans. As I argued above, however, this view is at odds with Mises's theory of entrepreneurship, which focuses on the entrepreneur's function of *calculating* the most valuable uses of currently available inputs on the basis of *anticipated* output prices.

Ikeda also uses the Hayekian concept of "unintended consequences" to describe the outcome of single acts of intervention, and he characterizes the interventionist process as an "unintended process" (p. 205). From the Misesian perspective, however, the motivation for the various acts of intervention is precisely those immediate benefits that are intended by its proponents. And while Mises admits

that there may be “unforeseen” long-run consequences of any intervention, he attributes them not to an inevitable and irremediable condition associated with the Hayekian “knowledge problem,” but to antisocial and deliberately obscurantist ideologies that blind the masses to the conclusions of economic theory.

Moreover, Mises’s analysis of the interventionist process does not preclude the possibility that the proponents of an intervention recognize and intend its generally unforeseen consequences. Thus unions support minimum wage laws precisely because these laws price low-skilled workers out of the labor market and increase the demand for skilled union workers, while bureaucrats manning municipal rent-control boards may welcome the growing apartment shortage resulting from rent control because it increases their power, prestige, and the value of the favors they can bestow. Indeed, it is precisely the goal of many radical environmentalists to cripple capital formation and productivity and to bring about a decline of real income and population via environmental regulations. The very crises which regularly recur as the interventionist process proceeds also may be desired by those who are ideologically committed to the extension of political control over the economy.

Finally, I contend that Ikeda is simply incorrect when he asserts that “the reasoning underlying [Mises’s] critiques of both socialism and interventionism [is] the same—the existence of the knowledge problem makes the consequences of government intervention nasty and unexpected” (p. 208). First, as Mises emphasizes time and again throughout his writings, “economic calculation,” and not knowledge, is the “essential and unique problem of socialism.”⁴⁷ Thus, according to Mises, even if the central planning board was endowed with full and perfect knowledge of the relevant economic data, without recourse to monetary calculation using genuine market prices, it would not be able to determine the optimal among the infinitude of possible uses and technical combinations of the available factors of production.⁴⁸ Second, as I have just pointed out, from the Misesian perspective, the consequences of an intervention are not necessarily “unexpected” to its active promoters and beneficiaries and need not continue to be so to the masses it victimizes.

In his essay on “Mises on Free Banking and Fractional Reserves” (pp. 517–33), Lawrence H. White interprets Mises’s advocacy of free banking based on fractional gold reserves as a program for economiz-

⁴⁷Ibid., p. 703.

⁴⁸For a review of Mises’s argument on this point, see Salerno, “Postscript: Why a Socialist Economy Is Impossible,” pp. 52–54.

ing on the resource costs of supplying the medium of exchange while insuring that the issuance of fiduciary media is regulated in accordance with the desideratum of a neutral money, i.e., a money that does not impinge upon or distort the underlying real processes of the economy. It was Adam Smith, the acknowledged father of free banking, who introduced into monetary theory the proposition that a pure specie money involved a waste of scarce resources, while it was Hayek who originated the concept of, if not the term, "neutral money." According to Hayek in his most mature writings, the "nearest practical approximation" to such an admittedly "fictitious" ideal is a monetary system in which "increased demand for liquidity" is met by increases in the money supply aimed at maintaining stability of an index of raw materials prices that serve as a proxy for the average prices of the original factors of production, land and labor.⁴⁹ Assuming no increase in the stocks of the original factors, the practical attainment of Hayek's monetary ideal would result in "constancy of the money stream,"⁵⁰ which, not coincidentally, also happens to be the desired goal of modern free bankers.⁵¹

In his paper, White characterizes Mises as the prototype of modern free bankers, who opposed any ban on competing private banks issuing fiduciary media redeemable in gold on demand on the grounds that "... such a ban (1) would make the economy more vulnerable to money demand shocks, and (2) would needlessly increase the cost of supplying the economy with media of exchange" (p. 528). As White notes, this interpretation of Mises's rationale for free banking clashes sharply with Murray Rothbard's argument that Mises favored free banking as a preferred means of suppressing the issuance of fiduciary media, because it circumvents the dangers associated with ceding virtual control over the banking system to government, a result that

⁴⁹Hayek, *Denationalization of Money*, pp. 84.

⁵⁰*Ibid.*, p. 77.

⁵¹For the free banking argument in favor of maintaining "monetary equilibrium," defined in Hayekian terms as a constant aggregate spending flow, see George A. Selgin, *The Theory of Free Banking: Money Supply under Competitive Note Issue* (Totowa, N.J.: Rowman & Littlefield, 1988), pp. 52-69. I should note that nowhere in his essay does White invoke the Hayekian concept of "neutral money." In fact, in another essay, White expresses mild skepticism about whether a free banking system is fully compatible with any macroeconomic norm including Selginian monetary equilibrium, although he seems to count it as a merit of the system's operation that it comes relatively closer to obeying this norm in practice than the central banking alternative. See Lawrence H. White, "Commentary: Norms for Monetary Policy," in Ebeling, *Austrian Economics*, p. 477. Nonetheless, as I shall argue below in the text, the goal of "avoiding monetary demand shocks," which White imputes to Mises as a reason for supporting free banking and which White himself is obviously sympathetic to, is tantamount to stabilization of the money-spending stream.

Mises believed might be entailed by an outright legal prohibition of fractional reserves.

In fact, White's interpretation of Mises's views on fractional reserves and free banking is based on his unwarranted, if unintentional, homogenization of Mises with Smith on the question of the criteria of an ideal monetary system. White falls into error because he overlooks important passages in the very works of Mises that he cites, and because he ignores significant developments in Mises's theory of money that occurred between the publication of the first German edition of *The Theory of Money and Credit* in 1912 and the publication of *Nationalökonomie* (the German language forerunner of *Human Action*) in 1940. In his 1940 work, Mises tells us, his "monetary theory achieve[d] completion" with the merger of "the theory of indirect exchange with that of direct exchange into a coherent system of human action."⁵² These developments resulted in an important modification of Mises's earlier assessment of the relative benefits and costs of fiduciary media that is not acknowledged by White.

As White correctly points out (pp. 520–22), in *The Theory of Money and Credit*, Mises identifies three significant benefits of the issuance of fiduciary media. The first benefit involves the prevention of "convulsions" to economic activity that would have occurred in the absence of an expansion of the money supply caused by the creation of fiduciary media as a result of "an enormous extension of the demand for money" and the consequent increase in its purchasing power that was brought about by the historical extension of the money economy. The second benefit is the familiar Smithian one of reducing the "cost of the monetary apparatus." And the final benefit of fiduciary media is that their issuance sufficiently enhanced the profitability of the credit activities of the banking system early in its history to permit its survival and growth. The only disadvantage of fiduciary media that Mises recognized in this book, according to White, is a relatively minor one: the risk of default by the issuing bank due to mismanagement or bank runs. Thus White concludes that Mises "viewed fractional-reserve banking as a natural and desirable development in a free society" (p. 522).

But White's conclusion is mistaken, attributable to his failure to fully come to terms with one of Mises's most famous contributions to economic theory: his demonstration of the causal link between fiduciary media and the business cycle. White (pp. 524–25) evidently holds that according to Mises business cycles are generated by the

⁵²Mises, *Notes and Recollections*, p. 112.

overexpansion of fiduciary media by central banks unrestrained by competitive market forces. However, Mises's chapter on the business cycle, following directly upon the chapter enumerating the benefits of fiduciary media which White cites in support of his own interpretation,⁵³ makes it pellucidly clear that the necessary and sufficient cause of the cycle is the unsustainable divergence between the "loan" and "natural" rates of interest effected by the creation of fiduciary media. For Mises, then, cyclical discoordination of the economy is indeed a disadvantage to be counted against fiduciary media *per se*. Accordingly, it is only *after* fully discussing both the advantages and disadvantages of fiduciary media, that Mises, in a section comprising the concluding five pages of the book—which is not referred to by White—addresses the "basic questions of future currency policy."⁵⁴ Here, Mises reprints the conclusion of the first German edition (the English edition is a translation of the second German edition published in 1924), in which he emphatically urged the suppression of all further creation of fiduciary media, if not the outright banning of fractional-reserve banking. Contrary to White's assertion, Mises was evidently convinced that the disadvantages of issuing fiduciary media, now including their cycle-generating property, far outweighed their earlier enumerated advantages.

Concludes Mises:

[Fiduciary media] should logically be subjected to the same principles that have been established with regard to money proper; the same attempts should be made in their case as well to eliminate as far as possible human influence on the exchange ratio between money and other economic goods. The possibility of causing temporary fluctuations in the exchange ratios between goods of higher and of lower orders by the issue of fiduciary media, and the pernicious consequences connected with a divergence between the natural and money rates of interest, are circumstances leading to the same conclusion. Now it is obvious that the only way of eliminating human influence on the credit system is to suppress all further issue of fiduciary media. The basic conception of Peel's Act ought to be restated and more completely implemented than it was in the England of his time by including the issue of credit in the form of bank balances within the legislative prohibition.

⁵³Mises's discussion of the advantages of fiduciary media occurs on pages 298–99 and 323, while his business cycle theory is presented on pages 339–66 (Mises, *Theory of Money and Credit*).

⁵⁴*Ibid.*, p. 406.

*It would be a mistake to assume that the modern organization of exchange is bound to continue to exist. It carries within itself the germ of its own destruction; the development of fiduciary media must necessarily lead to its breakdown. . . . It will be a task for the future to erect safeguards against the inflationary misuse of the monetary system by the government and against the extension of the circulation of fiduciary media by the banks.*⁵⁵

It is hardly to be concluded from the passage I have emphasized in the foregoing quotation that Mises looked with equanimity, let alone favor, upon the further creation of fiduciary media by banks, whether “free” or not.

White (p. 520) cites a part of a paragraph from a later, 1928 work of Mises's,⁵⁶ in which Mises reiterates the point that a suppression of the issue of fiduciary media would have given rise to historical situations in which the emergence of an excess demand for money resulted in an increase in the purchasing power of money that was temporarily disadvantageous to the economy. However, White does not cite the last sentence of this same paragraph, which identifies an important benefit that would have followed from the prohibition of further emission of fiduciary media: “the economy surely would not then have experienced the stormy upswings followed by dramatic reversals of the upswings into crises and declines.”⁵⁷

Mises also makes it clear later in the same work that the benefits of fiduciary media fall far short of their costs in terms of cyclical discoordination of economic activity. He therefore calls for the implementation of a revised Currency school program in the following terms:

The most important prerequisite of any cyclical policy, no matter how modest its goal may be, is to renounce every attempt to reduce the interest rate, by means of banking policy, below the rate which develops on the market. That means a return to the theory of the Currency school, which sought to suppress all future expansion of circulation credit and thus all further creation of fiduciary media. . . . [I]t means the introduction of a new program based on the old Currency school theory, but expanded in the light of the present state of knowledge to include fiduciary media issued in the form of bank deposits.⁵⁸

⁵⁵Ibid., p. 407–09.

⁵⁶The English translation is Ludwig von Mises, “Monetary Stabilization and Cyclical Policy,” in idem, *On the Manipulation of Money and Credit*, Bettina Bien Greaves, trans. (Dobbs Ferry, N. Y.: Free Market Books, 1978), p. 145.

⁵⁷Ibid.

⁵⁸Ibid., pp. 167–68.

Far from rejecting the Currency school program, as White would have us believe, it is clear Mises desired to reformulate it on a sounder theoretical basis in order to strengthen its practical application. Thus, contrary to White, Mises supported a free banking regime precisely because it would eventually result in "extreme restraint in the issue of fiduciary media." Free bankers would learn such restraint from their experiences of the crises and bank runs that would inevitably occur during the historical course of development of fiduciary media. Once such lessons were absorbed by the more astute banking entrepreneurs, policies of extreme caution and restraint would be enforced on the entire banking system as less responsible banks persisting in the further creation of fiduciary media would be immediately confronted by the twin threats of adverse interbank clearings and of loss of confidence by a once or twice chastened and now more sophisticated bank clientele.⁵⁹ At this point the program of the Currency school would be fully and properly implemented, as further extension of "circulation credit" by the banks would be checked and any additional accumulation of bank assets would reflect an increase in commodity credit based on time deposits and equity investments of voluntarily saved funds.

Unlike our modern free bankers, Mises emphatically did not foresee the free banking system evolving toward a minuscule reserve ratio of gold to demand liabilities and the progressive transformation of gold into a practically demonetized interbank "clearing asset."⁶⁰ For Mises, rather, evolution was all in the opposite direction, with initial entrepreneurial ignorance precipitating an early splurge in the creation of fiduciary media and the resulting cyclical fluctuations leading slowly back to a system of marginal 100 percent reserves while painfully renewing awareness among the public that bank notes and deposits are not money *per se* but merely claims to and substitutes for money, i.e., gold.

In his earlier writings, then, Mises did perceive there to be definite advantages associated with the issue of fiduciary media, but

⁵⁹Ibid., pp. 138–40.

⁶⁰Lawrence H. White and George A. Selgin, "The Evolution of a Free Banking System," in Lawrence H. White, *Competition and Currency: Essays on Free Banking and Money* (New York: New York University Press, 1989), p. 235. At least one prominent member of the modern free banking school, Richard H. Timberlake (*Gold, Greenbacks, and the Constitution* [Berryville, Va.: George Edward Durell Foundation, 1991]) has taken the leap and now forthrightly advocates free banking on a nonspecie standard, although White himself continues to firmly insist upon gold as the proper monetary standard for a free banking regime. For a critique of Timberlake's plan, see Murray N. Rothbard, "Aurophobia: or, Free Banking on What Standard?" *Review of Austrian Economics* 6, no. 1 (1992): 97–108.

he was willing to forego such advantages for the greater advantage of maintaining the integrity of monetary calculation and preventing disruptions of the price-and-interest-rate coordination of the economy. By the time he came to write *Human Action*, however, his views on entrepreneurship, monetary calculation, and money had evolved to the point where he was able to recognize that the benefits he had once attributed to the creation of fiduciary media were largely illusory. In particular, the later Mises abandoned his earlier belief that an increase in the purchasing power of money is somehow disadvantageous for the market economy.

Regarding a world in which there occurs a persistent “goods-induced” rise in the purchasing power of money resulting from secular growth in the supplies of commodities and services in conjunction with a rigidly fixed nominal money supply, Mises argued in *Human Action* that such a state of affairs would not disrupt the moment-to-moment price coordinating function of the market or upset the monetary calculations that lead entrepreneurs to efficiently allocate productive resources in service of anticipated consumer preferences.

As Mises wrote:

Entrepreneurs and investors . . . do not heed the general movement of all prices. What matters for them is the existence of discrepancies between the prices of the complementary factors of production and the anticipated prices of the product. No businessman embarks upon a definite production project because he believes that *the prices*, i.e., the prices of all goods and services, will rise. He engages himself if he believes that he can profit from a difference between the prices of goods of various orders. In a world with a secular tendency toward falling prices, such opportunities for earning profits will appear in the same way in which they appear in a world with a secular trend toward rising prices. . . .

A secular tendency toward a rise in the monetary unit’s purchasing power . . . would certainly not influence substantially the course of economic affairs. It would not remove the urge of people to improve their material well being as far as possible by an appropriate arrangement of production. It would not deprive the economic system of the factors making for material improvement, namely, the striving of enterprising promoters after profit and the readiness of the public to buy those commodities which are apt to provide them the greatest satisfaction at the lowest costs.⁶¹

⁶¹Mises, *Human Action*, pp. 469–70.

Nor does the later Mises share with Hayek and the free bankers a dread of "monetary demand shocks," i.e., a "money-induced" increase in the purchasing power of money caused by a shrinkage of the money-spending stream due to hoarding. In particular, Mises denies that an increase in the demand for money at the expense of spending on consumer goods while the money supply remains unchanged will impede the process of transforming the additional real savings thus generated into an accumulation of new capital goods. Monetary calculation, taking into account the relative decline in prices of lower-order and consumer products and of the nonspecific factors of production, will faithfully reflect the increase in the availability of capital goods, and the prospect of higher profits will induce entrepreneurs to employ them in the expansion of their operations. As Mises concludes, "the main thing is that the capital goods resulting from additional savings are not destroyed by coincident monetary changes. . . . Whenever an individual devotes a sum of money to saving instead of spending it for consumption, the process of saving agrees perfectly with the process of capital accumulation and investment. It does not matter whether the individual saver does or does not increase his cash holding."⁶² For the Misesian, then, the coordinative and calculative market process can and will respond with perfect (*ex ante*) efficiency to any combination of anticipated changes in the set of consumer preferences, including changes in "liquidity" preferences.⁶³

This leaves us, finally, only with the advantage of fiduciary media in reducing the cost of supplying a medium of exchange. Although, as White notes, Mises was inclined to heavily weight this alleged advantage in his earlier writings, in *Human Action*, Mises does not allude to it; however, he does refer to "the expensiveness of gold production" as "the minor evil" when compared to the inflationary potential of paper fiat and credit money.⁶⁴

Of course, in *Human Action*, Mises still adhered to his previous view concerning the overwhelming disadvantage of the creation of fiduciary media associated with its potential for falsifying interest rates and monetary calculation, introducing inefficiency into the

⁶²Ibid., pp. 521–22.

⁶³For a demonstration of this, see Salerno, "Commentary: The Concept of Coordination in Austrian Macroeconomics," pp. 335–40.

⁶⁴Mises, *Human Action*, p. 422. In fact, when free banks invoke option clauses, post-dated notes, and other devices permitting the contractual suspension of specie payments, their notes and deposits are effectively transformed into a credit money, whose value is determined independently of the value of the original money commodity. For a discussion of Mises's neglected concept of credit money that touches upon this point, see Salerno, "Mises's Monetary Theory," pp. 8–11.

intertemporal allocation of resources, and precipitating the business cycle. This later assessment of the massive imbalance in favor of the disadvantages of fiduciary media may finally have led Mises to overcome his earlier fears of the expansion of political interference with banking that he foresaw as a possible ramification of the ultra-hardcore neo-Currency school program legally debarring all further additions to the outstanding circulation of fiduciary media, including demand deposits as well as notes. Thus, in his 1952 essay on "Monetary Reconstruction," which was included as Part Four in the second English edition of *Theory of Money and Credit*, Mises proposed just such a program as the basis for "the United States return to a sound currency."⁶⁵

I conclude, then, that White's attempt to portray Mises's views on fractional reserves and free banking as prototypical of the modern free banking school, whose members draw their analytical orientation from equilibrium-based Hayekian monetary theory, is untenable. To the extent that Mises advocated the freedom of banks to issue fiduciary media, he did so only because his analysis led him to the conclusion that this policy would result in a money supply strictly regulated according to the Currency principle. Mises's desideratum was not a neutral money, or even a practical approximation thereof, but to completely eliminate the distortive influences of fiduciary media on monetary calculation and the dynamic market process.

As I indicated at the outset, my purpose in writing this review essay has been specifically to illustrate and rebut the common tendency that I believe exists among fellow Austrian economists to conflate the views of Mises and Hayek. Rigid adherence to this purpose has caused the tone of the review to be decidedly negative. However, this should not be construed to mean that I disagree with all or even most of each of the essays under review. Had I reviewed these papers with a broader purpose in mind, the extent of the common ground between myself and the papers' authors, based on the "Mengerian overlap" between the Misesian and Hayekian paradigms, would have been quite evident. Moreover, I regard the contributions by Kirzner and White to this volume to be, each in its own respect, excellent summaries of these authors' pioneering efforts elsewhere to systematize and extend the Hayekian paradigm. In the case of Kirzner, it can be argued that his formidable body of work

⁶⁵Mises, *Theory of Money and Credit*, pp. 448–52.

largely defines this paradigm as it currently stands. And the endeavor by White and the modern free banking school to give this paradigm a contemporary macroeconomic expression rests on the Kirznerian conception of the market process. Ikeda's essay, his attributions to Mises notwithstanding, is a promising initial step in the direction of adumbrating a Hayekian theory of interventionism, and Ebeling's essay, for the most part, does capture the uniqueness and fruitfulness of the Misesian approach to the demand for money. Having said this, I still insist that the homogenization of the views of two brilliant but very different thinkers serves no purpose today but to significantly impede the quest for knowledge and truth among those working within the Mengerian tradition.

Mises and Hayek on Calculation and Knowledge

Leland B. Yeager

Calculation versus Knowledge

Several Austrian economists have recently introduced an emphatic distinction between calculation problems and knowledge problems besetting socialism. F. A. Hayek, they suggest, has shoved aside or perverted the analysis that Ludwig von Mises got straight in the first place. Especially now that experience in Eastern Europe bears out the arguments of Mises and Hayek, it is important to face the issue of the supposed tension between their positions.

"While Mises saw calculation as *the* problem of socialism," says Jeffrey Herbener (1991, p. 43), "Hayek views it as a knowledge problem." "Mises demonstrated that even with *perfect* information, the central planners in socialism cannot rationally calculate how to combine resources to render efficient production."

According to Joseph Salerno, "Mises unswervingly identified the unique and insoluble problem of socialism as the impossibility of calculation—not, as in the case of F. A. Hayek, as an absence of an efficient mechanism for conveying knowledge to the planners" (Postscript 1990, p. 59, in a section entitled "Mises vs. the Hayekians"). The "Hayekian position criticizing the relative inefficiency of non-market mechanisms for discovery, communication, and use of knowledge in the allocation of productive resources" is "categorically different" from the Misesian critique (Ibid., p. 64).

"For Hayek, the major problem for the socialist planning board is its lack of *knowledge*," says Murray Rothbard. Hayek's "argument for the free economy and against statism rests on an argument from ignorance." For Mises, however, the central problem is not

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“knowledge.” Even if the planners had perfect knowledge of consumers’ value priorities, of resources, and of technologies, “they *still* would not be able to calculate, for lack of a price system of the means of production. The problem is not knowledge, then, but calculability.” The “role of the *appraising entrepreneur*, driven by the quest for profits and the avoidance of losses, . . . cannot be fulfilled by the socialist planning board, for lack of a market in the means of production. Without such a market, there are no genuine money prices and therefore no means for the entrepreneur to calculate and appraise in cardinal monetary terms” (Rothbard 1991 in a section on “Fallacies of Hayek and Kirzner,” pp. 65–68).

An Untenable Distinction

I question the supposed distinction between calculation and knowledge problems. Mises’s own writings, writings of several other interpreters, and my own long acquaintance with the ideas of both Mises and Hayek warrant this question. Beyond citing actual words, I appeal to a heuristic principle of textual interpretation. A writer should be accorded the presumption—defeasible, to be sure—that his arguments cohere in their main lines and are not downright preposterous.

Hayek studied under Mises, though only informally. He once worked for him in a temporary Austrian government office and later was a member of Mises’s private seminar. He testifies to the great impact that Mises’s *Socialism* had on his own thinking (Foreword to Mises 1981). Hayek’s essays on socialist calculation and on the use of knowledge in society (several of them collected in his books of 1935 and 1949) develop and elaborate on insights that were at least implicit in Mises’s formulations.

Most briefly, for Mises “[t]he problem of socialist economic calculation is precisely this: that in the absence of market prices for the factors of production, a computation of profit or loss is not feasible” (Mises 1963, p. 705).

But what is the problem that genuine prices help solve? In large part, on my reading of both Mises and Hayek, it is lack of the information (as well as of the incentives) that prices would convey. I cannot believe Mises was merely saying that *if* the socialist planners possessed in some remarkable way all the information normally conveyed by genuine market prices, they still would be stymied by inability to perform *calculations* in the narrow arithmetical sense, an inability that advances in supercomputers might conceivably overcome. Such a reading of Mises’s arguments would caricature and trivialize them.

Economic Calculation

Let us review what economic calculation means and what functions prices perform. (To remind readers briefly of familiar points, I omit elaborations and qualifications that might be necessary to forestall objections; see Yeager and Tuerck 1966, chap. 2.)

Ultimately, additional units of any product cost foregoing other products or benefits that might have been chosen instead. Technology and the scarcity of resources pose the need to choose among alternative patterns of production as rival and practically unlimited desires compete for those resources. The other side of the same coin is choosing how to allocate scarce resources among different lines of production.

How might a definite plot of city land be used most advantageously—as a wheat field, a parking lot, a site for a swimming pool or hotel or office or apartment building, or what? By the logic of the price system, this resource goes under the control of whoever will pay the most. In bidding for its use, business firms estimate how much it can contribute, however indirectly, to producing goods and services that consumers want and will pay for. How much value it can contribute depends not only on physical facts of production but also on the selling price of each of the possible final products, and this price depends in turn partly on opportunities to produce the product in other ways. Wheat grown on cheaper land elsewhere would keep anyone who wanted to use city land to grow wheat from affording to bid highest for it. Not only natural resources but also capital, labor, and entrepreneurial ability thus move into lines of production where they contribute most to satisfying consumer needs and wants, satisfactions being measured by what consumers will pay for them.

Another example concerns public transportation in a particular city. (Compare Mises's example of building a railroad; 1990, pp. 24–25). Should it be supplied by buses burning gasoline, by electric streetcars, in some different way, or not at all? The economically efficient answer depends on more than technology and the physical availability of inputs. It depends also on substitutabilities and complementarities among inputs, on alternative uses of those inputs, and on consumers' subjective appraisals of various amounts of the various outputs of those alternative uses, as well as on appraisals of various amounts of various kinds of public and private transportation. The economically efficient answer even to the relatively simply question of local transportation depends, in short, on unimaginably wide ranges of information conveyed, in abbreviated form, by prices.

Ideally, in a competitive economy, the price of each product measures not only how consumers appraise it at the margin but also what the total is of the prices of the additional resources necessary to supply an additional unit of it. These prices, in turn, measure what those resources contribute at the margin to values of output in their various uses (as ultimately appraised by consumers) and so measure the values other outputs sacrificed by not using the resources for them instead. Prices therefore tell the consumer how much worth of other things must be forgone to supply him with each particular product. With necessary alternatives brought to his attention in this way, each consumer ideally leaves no opportunity unexploited to increase his expected total satisfaction by diverting any dollar from one purchase to another. In this sense consumers choose the pattern of production and resource-use that they prefer. Ideally, their bidding sees to it that no unit of a resource goes to satisfy a less intense effective demand to the denial of a more intense one.

Mises asks whether central planners, in the absence of and replacing a genuine market, could achieve such a result. This result goes beyond physical meshing of activities as portrayed by a self-consistent input-output table. Even mere physical consistency is itself almost impossible to achieve in the absence of genuine markets and prices, as Soviet experience illustrates (tractors idle for lack of spare parts, food rotting for lack of transport, and so forth). But correct economic calculation is a still more demanding task.

This distinction is close to the surface throughout Mises's discussions of economic calculation. It is evident in his distinction between "technical rationality" and "economic rationality" and in his remark that "technical calculation" is not enough to achieve "general and technological expediency" (1920/1990, p. 48). (Georg Halm says more about economic versus mere technical considerations in Hayek 1935, pp. 173, 187. Compare Hoff 1981, p. 295: "The question . . . is not whether factories can be built and efficiently conducted, but whether the factors of production could have been put to a more advantageous use by employing them elsewhere.")

Economic calculation takes physical relations into account, and far more besides. It takes into account the available quantities of various resources and possibilities of expanding them, the technology of input-output relations, and the physical complementarities and substitutabilities of various resources in various lines of production. But it also takes into account the subjectively perceived unpleasantnesses and amenities of different kinds of work, changes in the perceived disutilities of work and in the utilities of goods and services as their amounts increase, and complementarities

and substitutabilities of various goods and services perceived by consumers. Ideally, the result of successful economic calculation—which, to repeat, takes all sorts of subjective as well as physical considerations into account—is a state of affairs in which no further rearrangement of patterns of production and resource use could achieve an increase of value to consumers from any particular good at the mere cost of a lesser sacrifice of value from some other good. (A fuller discussion would introduce the concept of Pareto optimality at this point and explain why some distributional principle is also necessary to narrow a multiplicity of optima down to one. The leading distributional principle in a free-market economy, much modified, is that persons receive the values that the services of themselves and their property command on the market.)

What Mises Meant

Mises's central message, as it comes across to me, is an explanation of why a central planning authority could not accomplish its task and why it must be accomplished, if at all, on a decentralized basis. Mises explains the indispensable role of genuine prices established on genuine markets where traders exchange privately owned goods and services, including capital goods and other productive resources.

Was Mises conceding that information might conceivably somehow be made available to a central planning board in complete and utter detail, including the quantities and supply functions of all productive resources at all locations, all production functions in actual or even potential use, and all utility functions of all persons? Was he supposing, furthermore, that all the mathematical forms and all the parameters of all these functions are precisely known, so that these quantities and functions already imply the marginal productivities of all factors, the marginal technical rates of substitution among all factors and all products, and the marginal utilities of and marginal subjective rates of substitution between all goods and services for all productive units and all persons at each of all conceivable quantitatively specific patterns of production and resource allocation? Was Mises conceding that the planners might conceivably assemble all of this unimaginably detailed information? Was he balking only at the next step, denying that they could use all of it to calculate a pattern of production and resource allocation that would in some sense be optimal? Was Mises conceding everything about the centralized availability of information and then balking only at the possibility of dumping it all into a computer and performing a vast exercise in programming? Does his whole argument boil down to a contention about arithmetic?

No, of course not. Mises would have thought it preposterous that the planners could even arrive at the threshold of the massive exercise in arithmetic. He was referring to *economic* calculation. The whole sweep of his writings about socialism shows that he was concerned to illuminate the immensity of the problem of achieving an economically rational pattern of production and resource allocation, a problem that market processes do tend to solve. He understood why central planners could not adequately replace them.

Statics or Dynamics?

A subsidiary question concerns whether Mises saw the problem of economic calculation as besetting only a dynamic world, one in which the functions of entrepreneurship must be performed (or botched) somehow or other, or as a problem that, although still more complicated in a dynamic world, would be hugely complicated enough even in a static world. Mises did like to emphasize that changes of all sorts are continually occurring and that the prices to be taken into consideration are not merely "current" prices (which are data of very recent economic history) but also future prices, as best they can be conjectured by entrepreneurial insight. He understood the role of speculation in the broadest sense, including the function undertaken by capitalists and entrepreneurs who speculate not only on prices but also on innovations in markets, products, and production methods and who, instead of merely playing games, are staking their own careers and fortunes. He knew that business firms, far from just being given (as they typically are just postulated in the textbooks), are continually appearing, disappearing, merging, and splitting; these reorganizations are essential features of a dynamic economy.

On the second suggested interpretation, Mises perceived the calculation problem *even* for a static world, a problem that initial discussion in a static context would shed light on. Apparent support for each interpretation occurs in writings of Mises himself and of commentators such as Rothbard and Salerno.

A passage in *Socialism* suggests how to resolve or dissolve the issue:

[U]nder stationary conditions the problem of economic calculation does not really arise. . . . all the factors of production are already used in such a way as, under the given conditions, to provide the maximum of the things which are demanded by consumers. That is to say, under stationary conditions there no longer exists a problem for economic calculation to solve. The essential function of economic calculation has *by hypothesis* already been performed. There is no need for an

apparatus of calculation. . . . the problem of economic calculation is of economic dynamics: it is no problem of economic statics. (1922/1981, p. 120 ; compare Mises 1920/1990, p. 25)

Mises evidently means this: In a static economy, *by definition*, everything rotates around in the same old ruts. No need or scope exists for recalculating those ruts; breaking out of them would violate the assumption of a static state. But a static state does presuppose that economic calculation has already been performed. (It would have had to take account of the vast changes entailed by the very shift from capitalism to socialism.) Even from a background of unchanging “wants, resources, and technology,” calculation is necessary to arrive at the pattern of production and resource allocation that thereafter, by the very definition of “static economy,” need not and cannot be recalculated.

In short, a dynamic world immensely complicates the task of economic calculation that would be hugely complicated even in—meaning even to arrive at—a static state.

Mises’s Words Supporting My Interpretation

Many passages in Mises’s writings recognize the knowledge aspect of the calculation problem. Already in 1920 (1920/1990, pp. 17–18) he wrote that “administrative control over economic goods . . . entails a kind of intellectual division of labor, which would not be possible without some system of calculating production and without economy.” Well, intellectual labor involves knowledge, and division of labor means leaving at least some knowledge, and action on it, decentralized. It is noteworthy that Hayek draws explicit attention to the original German version of this passage (in a talk of 1936 reprinted in Hayek 1949, p. 50 and footnote).

Again in 1920 Mises mentioned the task of gaining a “complete picture” of economic complexities. Technical calculation is not enough to

guide us in those judgments which are demanded by the economic complex as a whole. Only because of the fact that technical considerations can be based on profitability can we overcome the difficulty arising from the complexity of the relations between the mighty system of present-day production on the one hand and demand and the efficiency of enterprises and economic units on the other; and can we gain the complete picture of the situation in its totality, which rational economic activity requires. (1920/1990, pp. 48–49)

An intellectual grasp of the whole would be possible in a small household economy, Mises recognizes, but not in a large and complex social economy. Deciding how "to place the means at the service of the end . . . can only be done with some kind of economic calculation. The human mind cannot orientate itself properly among the bewildering mass of intermediate products and potentialities of production without such aid. It would simply stand perplexed before the problems of management and location" (1920/1990, p. 19). As these words suggest, "economic calculation" means something more than an arithmetical exercise, however massive.

Human Action tells us that "knowledge provided by the natural sciences," "the mere information conveyed by technology," is insufficient for "the economic problem: to employ the available means in such a way that no want more urgently felt should remain unsatisfied because the means for its attainment were employed—wasted—for the attainment of a want less urgently felt. . . . What acting man wants to know is how he must employ the available means for the best possible—the most economic—removal of felt uneasiness" (1963, pp. 206–7). Again, Mises indicates that knowledge of wants, resources, and technology must be available to decisionmakers.

Another passage in *Human Action* (1963, p. 696, partly quoted in Salerno 1990, pp. 45–46) seems at first to resist my interpretation. Mises supposes that the director of the socialist economy has already made up his mind about ultimate ends or priorities. Somehow, miraculously, everyone agrees. The director has complete and perfect information about technology and available manpower and material resources. Many experts and specialists stand ready to answer all his questions correctly. "Their voluminous reports accumulate in huge piles on his desk." Now he must choose among an infinite variety of projects in such a way that no more urgent want remains unsatisfied because the necessary means have been diverted to satisfying less urgent wants. Yet despite the vast knowledge available to him, he is unequal to the task.

It might seem, then, that the director's frustration traces to a calculation problem, not a knowledge problem. Yet does the distinction hold? The director cannot even reach the threshold of a comprehensive calculation because he cannot assimilate, all together, all the information that is available to him, in a restricted sense of the word, "in huge piles on his desk." Nor could any committee acting as a single body comprehensively assimilate it all.

If the information is to be used, it must be used in *decentralized* decisions, with prices conveying information to each decisionmaker about parts of the economy beyond his immediate purview. This, it

seems to me, explains Mises's repeated insistence on genuine market prices, including prices of capital and intermediate goods. He repeatedly returned to thinking of *decentralized* decisionmaking and of the indispensable functions (including the informative function) of prices in that context. Except in a most abstract way, he could not keep on conceiving—nor can I—of a central planner or planning board having obtained all the necessary information and having *assimilated* it into a form ready for feeding into a computer for a vast programming exercise.

Nevertheless, if all relevant knowledge *could* be gathered and assimilated and all other preparations made and if the vast comprehensive calculation *could* be performed, then the immense list of results spewed from the computer would not only prescribe all input and output quantities in detail but also indicate shadow prices of all the inputs and outputs. (A modest acquaintance with linear programming makes this point about shadow prices clear.) It would not be necessary to know the prices in advance (and the calculated prices, unlike the calculated quantities, would be of mere academic interest to the planners).

One might object that the shadow prices emerging from such a calculation would not be identical with genuine prices determined in genuine markets (nor would the associated quantities be identical with market results). This is true, but three possible replies are worth noting. First, the vast information fed into the computer might in principle include psychological data on the persons who would otherwise have been entrepreneurs and other participants in genuine markets. This data would bear on how they would have behaved in response to the opportunities and incentives confronting them in real markets. (On the other hand, it is really only a fiction convenient for economic theorists that people have preexisting and fully developed preference functions or "indifference maps" even before experience in actual markets activates them.) Second, socialists presumably do not desire results identical to those of a market economy anyway. Third, the very objection points to some of the advantages of keeping decisionmaking and the use of knowledge decentralized. It shows further recognition that the problem facing socialism would not be one of mere arithmetic.

The necessary preparations for the vast central calculation, let alone the calculation itself, could *not* be accomplished; they are, to use Mises's word, "impossible." It seems perverse, then, to interpret Mises as nevertheless conceding the possibility of all those preparations and of balking only at the possibility of the calculation itself. He was denying the possibility of *economic* calculation, not merely of

arithmetical calculation. (Parenthetically, even if we imagine successful mobilization of the data and accomplishment of the arithmetical exercise, vast problems would remain of implementing the results and monitoring everyone's obedience to instructions. Even if the information-conveying function of genuine market prices could somehow be replaced, the incentive function would remain to be somehow performed.)

I submit, then, that even Mises's passage most amenable to the Herbener-Salerno-Rothbard interpretation does not bear out that interpretation on closer examination.

Still, one might ask, if the knowledge aspect was always implicit in his formulation, why didn't Mises make it fully explicit? But how can one know what facts and logical implications, though obvious and as good as explicit to oneself, have escaped other thinkers? One can hardly foresee all of others' misconceptions before they become evident in debate. As Hayek says,

Mises's arguments were not always easily apprehended. Sometimes personal contact and discussion were required to understand them fully. Though written in a pellucid and deceptively simple prose, they tacitly presuppose an understanding of economic processes—an understanding not shared by all his readers. . . . When one reads Mises's opponents, one gains the impression that they did not really see why [economic] calculation was necessary. . . . As a result [of the discussion], Mises became increasingly aware that what separated him from his critics was his wholly different intellectual approach to social and economic problems, rather than mere differences of interpretation of particular facts. (1922/1981, p. xxii)

Even so, Mises did make himself clear to quite a few readers, as I shall illustrate.

Support from Readers

Perhaps testimony from my own past self is permissible.¹ I have long had an enthusiastic interest in Mises's arguments about socialist calculation and in the ensuing debates. I first happened onto his *Omnipotent Government* and *Bureaucracy* in 1946 or 1947. I eagerly awaited *Human Action* in 1949 (having already had access to its not readily available German precursor for a couple of hours). I gave a paper on the calculation debate at a faculty seminar at Texas A & M

¹I thank—or blame—Roger Garrison for persuading me to shift this personal testimony from the end to the beginning of this section.

College (now University) in November 1949. For some time, before finally choosing a different topic, I considered writing my Columbia Ph.D. dissertation on a related problem of socialism. During several years of teaching a course in general-equilibrium theory at the University of Virginia, I used Mises's argument and the whole socialist-calculation debate to illuminate general interdependence and the various tasks to be accomplished somehow or other in any economic system. The conventional wisdom about Oskar Lange's having refuted Mises's argument never deceived me.

And I never understood that argument to be about calculation in the narrow arithmetical sense. I always understood Mises to be referring to the informational and other functions of prices that do get performed in a genuine market economy and that could not be performed or adequately replaced in a socialist economy. I always understood Hayek to be elaborating on ideas that were clearly implicit if not always totally explicit in Mises's work; I never dreamed that the issue might arise of a clash between their positions.

Hayek has long recognized Mises's concern with the use of knowledge—"of all the relevant facts." Mises, he says, provided

the detailed demonstration that an economic use of the available resources was only possible if . . . pricing was applied not only to the final product but also to all the intermediate products and factors of production, and that no other process was conceivable which would take in the same way account of all the relevant facts as did the pricing process of the competitive market. (Hayek 1935, p. 33)

Georg Halm stated Mises's argument as follows: The socialist authority would know various things, "*but it would not know how scarce capital was. For the scarcity of means of production must always be related to the demand for them, whose fluctuations give rise to variations in the value of the good in question*" (1935, pp. 162–63, also quoted in Rothbard 1991, p. 62).

Oskar Lange, whom Mises's arguments prodded to invent a sketch of "market socialism," interpreted Mises as having traced the impossibility of rational socialist planning largely to inaccessibility of necessary "data." Lange countered that "The administrators of a socialist economy will have exactly the same knowledge, or lack of knowledge, of the production functions as the capitalist entrepreneurs have" (1938, pp. 60–61).

Lange thought he had refuted Mises by showing that an artificial market would render calculation possible, says Jacek Kochanowicz (introduction to Mises 1990, pp. xi–xii). Presumably following Mises

on what calculation meant, then, Lange did not interpret it as merely accomplishing a task in arithmetic.

Incidentally, Lange (1938, p. 61) accused Mises of confusing two senses of the term "prices," "the exchange ratios of commodities on a market" and the wider sense of "terms on which alternatives are offered." Not so: Mises did not need the distinction. He did not believe it possible to obtain meaningful prices of either kind except through genuine market processes.

Solomon Fabricant recognizes the role of knowledge in Mises's argument. "[I]n a free society, as was pointed out above all by Mises and Hayek, individuals have the authority and the incentives to use the particular knowledge which they—and only them—possess to adapt most economically to the incessant changes that go on in a dynamic world. This stock of knowledge includes detailed information that no central authority could ever hope to gather, digest and apply in formulating its plans and making its decisions" (1976, pp. 30–31; one footnote is not quoted here).

Trygve Hoff mentions knowledge in interpreting Mises's argument: Without prices for the means of production, "the central authority will lack the necessary data to determine how and in what combination the various means of production can be put to the optimum use. . . . Without prices for means of production the central authority will have no data for determining whether the contribution and the sacrifice are greater or smaller than the result" (Hoff 1938/1981, pp. 202–3; further remarks about "data" occur on pp. 223 and 288).

Karen Vaughn attributes to Mises the "vehement assertion that the information necessary for economic calculation could be obtained only through market-determined prices." In 1935, Hayek "expanded upon Mises's original contention that economic calculation is impossible without market prices to provide relevant information." "Following Hayek and Mises, Hoff notes that . . . [a] central planning board necessarily lacks . . . vital market information" indicated by prices (Vaughn, introduction to Hoff 1938/1981, pp. xi, xvi, xxx).

Don Lavoie, writing before Rothbard, Salerno, and Herbener had tried to distinguish between the positions of Mises and Hayek, repeatedly says that they were expounding the same position. Hayek elaborated on some of Mises's points, especially ones about knowledge and on the necessity of genuine rivalrous markets for capital goods and other factors of production so that the factor prices established there could convey essential information. Contrary to the standard account of the socialist-calculation debate, Mises and Hayek did not shift their ground. They did change their emphasis to respond to

suggestions for market socialism after the socialists, or some of them, had shifted *their* ground.

It would be tedious to quote all the passages in which Lavoie recognizes the essential identity of Mises's and Hayek's positions. I refer the reader, in particular, to pages 15 n., 21, 24, 26, chapter 3 (entitled "Mises's Challenge: the Informational Function of Rivalry"), pages 87, 89, 91–92, 102, 114–15, 123, 145, 160–61, 173 n., 177–78, and 180. Consider, however, these two passages: "The entrepreneurial market process . . . generates the continuously changing structure of knowledge about the more effective ways of combining the factors of production. This knowledge is created in decentralized form and dispersed through the price system to coordinate the market's diverse and independent decisionmakers. There is no way, Mises claimed, in which this knowledge can be generated without rivalry" (Lavoie 1985, p. 24). Hayek's improvements of Mises's argument "should be understood as essentially an elaboration of the meaning that Mises originally attached to his own words" (Lavoie 1985, p. 26).

Lavoie makes a useful distinction between economic *calculation*, the problem that Mises addressed, and mere *computation*, the arithmetical aspect (1985, pp. 91, 119, 122, 128, 133, 144, 160, 168 n., 182, and *passim*).

Yuri Maltsev hails Mises's demonstration of 1922 that

Socialist planning . . . is *logically impossible* because the system cannot provide the knowledge required to determine which production projects are desirable and feasible and which are not. Only the market, with what Mises called its "intellectual division of labor," can generate that knowledge and put it in a usable form. (Foreword to Boettke 1990, pp. xii–xiii)

Peter Boettke repeatedly notices the role of knowledge in Mises's argument; for example:

Implicit in Mises's logical chain of reasoning is the recognition that no one mind or group of minds could possess the necessary knowledge to plan the economic system. . . . Mises states this knowledge problem in his original challenge. . . . [A]s Mises notes, market exchange and production within a monetary economy provide for the discovery and dissemination of the knowledge necessary [for coordinating computations]. (Boettke 1990, p. 23, and compare pp. 24, 26, 28, 123, 170–71, 195)

Joseph Persky (1991, p. 229) reads Mises as "emphasiz[ing] that a collectivist state would have great difficulty in gathering and

acting on relevant information; therefore, under socialism, even well-intentioned bureaucrats would lack a meaningful system of values on which to calculate.”

Robert L. Heilbroner, who had long expressed sympathy for socialism, has recently acknowledged that Mises was right all along. The few economists who early predicted disaster from central planning were led, Heilbroner says, by “Ludwig von Mises and Friedrich Hayek. . . . Their diagnosis was based on the inability of a planned system to generate the *information* needed to bring into being, or to maintain in being, a properly interlocking economic system. This information is automatically generated by a market mechanism that every day ‘informs’ its individual participants whether their activities are wanted by other participants or not, but no substitute for this information network, or for the motivation to put the information to work, exists in a system in which a cumbersome bureaucracy tries to play the role of a competitive marketplace” (Heilbroner 1991, p. 114, emphasis in original).

Perhaps surprisingly, Murray Rothbard also lends support to my interpretation. “The fact that in a changeless world of perfect knowledge and general equilibrium a Social Planning Board could ‘solve’ equations of prices and production was for Mises a worse than useless demonstration. Clearly, as Hayek would later develop at length, if complete knowledge of economic reality is assumed to be ‘given’ to all, including a Planning Board, there is no problem of calculation or, indeed, any economic problem at all, whatever the economic system. The Mises demonstration of the impossibility of economic calculation under socialism and of the superiority of private markets in the means of production applied only to the real world of uncertainty, continuing change, and scattered knowledge” (Rothbard 1976, p. 68).

Rothbard cites Mises’s refutation of Oskar Lange’s idea (1938) that a socialist planning board could arrive at correct prices, even of capital goods, through trial and error. He mentions “signals,” clearly implying they convey information: “the process of trial and error works on the market because the emergence of profit and loss conveys vital signals to the entrepreneur, whereas such apprehensions of genuine profit and loss could not be made in the absence of a real market for the factors of production” (Rothbard 1976, p. 71).

Admittedly, Rothbard seems to have changed his mind later. Yet as recently as in his 1991 article (p. 52, emphasis supplied here), he paraphrases Mises as asking the following about the socialist planners:

How would they *know* what products to order their eager slaves to produce, at what stage of production, how much of the product at each stage, what techniques or raw materials to use in that production and how much of each, and where specifically to locate all this production? How would they *know* their costs, or what process of production is or is not efficient?"

Rothbard continues recognizing the knowledge aspect of the problem:

Mises points out that while the government may be able to know what ends it is trying to achieve, and what goods are most urgently needed, it will have no way of knowing the other crucial element required for rational economic calculation: valuation of the various means of production, which the capitalist market can achieve by the determination of money prices for all products and their factors. (1991, p. 63)

Even a perfectly knowledgeable person, says Salerno (1990, Postscript, p. 53) "would be unable to even achieve a full intellectual 'survey' of the [planning] problem in all its complexity." But doesn't this mean: unable to pull together all the scattered relevant knowledge? Salerno notes, approvingly, that Mises recognized the necessity of an "intellectual division of labor" (Ibid., p. 54). This is another allusion to the impossibility of centralizing all the scattered relevant knowledge.

Even if the planners had various other knowledge, the central planners would be unable "to ever know or guess the 'opportunity cost' of any social production process" (Ibid., p. 55).

Conclusion

Just what was Mises's position? Salerno briefly but correctly restates it: "without private ownership of the means of production, and catallactic competition for them, there cannot exist economic calculation and rational allocation of resources under conditions of the social division of labor. In short, socialist economy and society are impossible" (Ibid., p. 66). This formulation leaves room to be amplified. It does *not* focus merely on immense arithmetic difficulties at the stage of calculation in the strictest sense of the term, conceding that the planners might accomplish their task right up to that stage. I challenge readers who insist on distinguishing between calculation and knowledge problems to find passages in which Mises can reasonably be interpreted as making that distinction and expressing concern only with calculation but not with knowledge.

To deny that Hayek was elaborating on what Mises said about economic calculation and to maintain that Hayek was saying something distinct and even incompatible is to truncate and misrepresent what Mises did say. To cut away all aspects of his message on which Hayek elaborated is to trivialize his message, quite inaccurately, into a proposition about arithmetical exercises.

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Reply to Leland B. Yeager on “Mises and Hayek on Calculation and Knowledge”

Joseph T. Salerno

In this article on “Mises and Hayek on Calculation and Knowledge,” Leland Yeager argues against the view recently propounded by Murray Rothbard, Jeffrey Herbener, and myself that calculation and knowledge constitute separate and distinct problems of economic organization and that Ludwig von Mises attributed the impossibility of socialism exclusively to its inability to solve the former problem. In rebuttal, Yeager alleges that calculation, as this term is used by Salerno, Rothbard, and Herbener (henceforward, SRH) refers narrowly to a trivial arithmetic operation and that it is, therefore, preposterous and a violation of a putative principle of hermeneutics, i.e., “a heuristic principle of textual interpretation,” to identify, as SRH do, calculation in this sense as the crux of Mises’s critique of socialist central planning.

Yeager seeks to buttress his hermeneutical case by arguing that if the knowledge problem is solved, i.e., if the central planners are miraculously endowed with knowledge of all previously discovered production functions currently used or potentially useful, in addition to exhaustive and minutely detailed information regarding the quantities, qualities, and locations of existing resources and the global set of consumer value scales (comprehensively defined to include leisure and time preferences as well as preferences for the various types of labor), then all that remains to be done to effect a rational or “Pareto optimal” allocation of resources is to address a relatively tractable problem in linear programming that can be

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solved using a supercomputer. Yeager thus claims to be logically confirmed in his conclusion that, in dismissing the knowledge problem from consideration, SRH are construing the calculation problem in a limited and trifling sense that "trivializes and caricatures" Mises's critique of socialism.

There is not much to say about Yeager's main allegation, except that it is wholly beside the point, because it rests on a gross misinterpretation of the meaning explicitly attached to the term "calculation problem" by SRH. It is true that as SRH use the term "economic calculation" it encompasses and culminates in arithmetic computations undertaken to identify the most valuable employments of scarce resources in an economy characterized by specialization and division of labor, e.g., the profit calculations of entrepreneurs operating in a market economy. However, it does not follow that, for SRH, *the* calculation problem as Mises conceived it refers narrowly to the mathematical techniques employed for manipulating the given quantitative data; it refers, instead, to the origination and meaningfulness of the data themselves. It is, in short, a problem of "appraisement" and not of "arithmetic."

As SRH have repeatedly emphasized, the Misesian demonstration of the logical impossibility of socialism is not predicated on the central planners' incapacity to perform tasks that can conceivably be carried out by individual human minds (e.g., discovery of factual and technical knowledge, mathematical computations, managerial monitoring, and prevention of labor shirking, etc.). Rather, it is concerned with the lack of a genuinely competitive and social market process in which each and every kind of scarce resource receives an objective and quantitative price appraisement in terms of a common denominator reflecting its relative importance in serving (anticipated) consumer preferences. This social appraisement process of the market transforms the substantially qualitative knowledge about economic conditions acquired individually and independently by competing entrepreneurs, including their estimates of the incommensurable subjective valuations of individual consumers for the whole array of final goods, into an integrated system of objective exchange ratios for the myriads of original and intermediate factors of production. It is the elements of this coordinated structure of monetary price appraisements for resources in conjunction with appraised future prices of consumer goods which serve as the data in the entrepreneurial profit computations that must underlie a rational allocation of resources.

That appraisement and not arithmetic constitutes the essence of the calculation problem is clearly indicated in numerous passages from the works of Salerno and Rothbard cited by Yeager.

Unfortunately, Yeager ignores these key passages. For example, in one of my articles (Salerno 1990a, pp. 54–56) quoted by Yeager, I identify the crucial bearing of entrepreneurial competition in resource markets on the problem of economic calculation:

In this competitive process, each and every type of productive service is objectively appraised in monetary terms according to its ultimate contribution to the production of consumer goods. There thus comes into being the market's monetary price structure, a genuinely "social" phenomenon in which every unit of exchangeable goods and services is assigned a socially significant cardinal number and which has its roots in the minds of every single member of society yet must forever transcend the contribution of the individual human mind.

Since the social price structure is continually being destroyed and recreated at every moment of time by the competitive appraisal process operating in the face of ceaseless change of the economic data, there is always available to entrepreneurs the means of estimating the costs and revenues and calculating the profitability of any thinkable process of production.

Once private property in the nonhuman means of production is abolished, however, as it is under socialism, the appraisal process must grind to a halt. . . . In the absence of competitive bidding for productive resources by entrepreneurs, there is no possibility of assigning economic meaning to the amalgam of potential physical productivities embodied in each of the myriad of natural resources and capital goods in the hands of the socialist central planners. . . .

A society without monetary calculation, that is, a socialist society, is therefore quite literally a society without an economy.

Later in the same work (Salerno 1990a, pp. 62–63), I portray the Misesian case against market socialism in similar terms:

From the Misesian point of view . . . the shortcomings of the prices of market socialism do not stem from the fact that such prices are supposed to be treated as "parametric" by the managers. . . . The problem is precisely that such prices are *not* genuinely parametric from the point of view of all members of the social body. The prices which emerge on the free market are meaningful for economic calculation because and to the extent that they are determined by a social appraisal process, which, though it is the inevitable outcome of the mental operations of all consumers and producers, yet enters as an unalterable fact in the buying and selling plans of every individual actor.

It is obvious from the foregoing passages that I conceive appraisal as neither knowledge nor arithmetic, but as something new

under the sun, introduced into the world only when the institutional prerequisites of a market economy are fulfilled. The social process of appraising thus transcends the purely individual operations of knowing and computing at the same time that it complements them in creating the indispensable conditions for rational choosing by entrepreneurs and resource owners cooperating in the division of labor. In fact, in another work cited by Yeager, I specifically refer to Mises's distinction between "cardinal numbers and their arithmetic properties [which] are 'eternal and immutable categories of the human mind'" and "economic calculation [which] is 'only a category inherent in acting under special conditions'" (Salerno 1990b, p. 45).

In explicating what I take to be Mises's view, then, I clearly do not contend that the advent of socialism suddenly and mysteriously renders men unable to perform arithmetic operations. Rather, it is and always has been my contention that socialism abolishes the *quantitative appraisal* of means without which man's computational skills and his knowledge of particular facts and general technical rules would be completely useless in guiding production within the framework of the social division of labor. As I conclude in the latter article "It is because socialism lacks the means to calculate, therefore, that Mises emphatically denies that men 'are free to adopt socialism without abandoning economy in the means of production'. . . . In fact Mises conceived *the* social advantage of the price system to be that it made practicable human society itself by providing the cardinal numbers for computing the costs and benefits of purposive action undertaken within the social division of labor" (Salerno 1990b, p. 48).

I also indicate that Mises's concept of "the intellectual division of labor" refers to the necessity of the existence of independent intellects and wills—of capitalist-entrepreneurs, laborers, landowners, and consumers—for the quantitative appraisal of the means of social action (Salerno 1990b, pp. 41–42). In contrast, Yeager construes Mises's concept as an embryonic version of Hayek's "division of knowledge." Thus, Yeager (p. 97) draws the wrong conclusion from his important insight that "intellectual labor involves knowledge, and division of labor means leaving at least some knowledge, and action on it, decentralized." A price system is not required because useful knowledge is dispersed, as Yeager infers from this insight; rather, knowledge must be decentralized (among competing entrepreneurial forecasters and appraisers) in order for a system of prices to come into being which meaningfully indicates the relative scarcities of useful resources. Or, to put it more starkly, dispersed knowledge is not a bane but a boon to the human race; without it, there would be no scope for the intellectual division of labor, and social cooperation

under division of labor would, consequently, prove impossible. Thus, a world exactly like our own but ruled by a perfectly beneficent and "empathic" overlord, who, in Star Trekian fashion, could, fully and instantaneously, mentally assimilate his subjects' subjective valuations and knowledge, would be unable to develop a sophisticated structure of capital and production for lack of a means of appraisal.

Rothbard, also, in his articles referred to by Yeager, is pellucidly clear that the calculation problem identified by Mises goes far beyond a piddling arithmetic problem. As well, it involves far more than the difficulty of acquiring qualitative information about previously prevailing market conditions. As Rothbard (1991, p. 66) writes:

The problem is not knowledge . . . but calculability. [T]he *knowledge* conveyed by present—or immediate "past"—prices is consumer valuations, technologies, supplies, etc. of the immediate or recent past. But what acting man is interested in, in committing resources into production and sale, is *future* prices, and the present committing of resources is accomplished by the entrepreneur, whose function is to *appraise*—to anticipate—future prices, and to allocate resources accordingly. It is precisely this central and vital role of the *appraising entrepreneur*, driven by the quest for profits and the avoidance of losses, that cannot be fulfilled by the socialist planning board, for lack of a market in the means of production. Without such a market, there are no genuine money prices and therefore no means for the entrepreneur to calculate and appraise in cardinal monetary terms.

In a second article quoted from by Yeager, Rothbard (1992, p. 20) nicely epitomizes the SRH interpretation of economic calculation: "the prices provided by the market, especially the prices of means of production, are a *social* process, available to all participants, by which the entrepreneur is able to appraise and estimate future costs and prices. In the market economy, *qualitative* knowledge can be transmuted, by the free price system, into rational economic calculation of *quantitative* prices and costs, thus enabling entrepreneurial action on the market."

Given the weighty textual evidence I have adduced above to counter his claim that SRH construe the calculation problem as one of arithmetic, Yeager appears to be transgressing against his own hermeneutical principle of refraining from attributing preposterous and incoherent positions to one's opponents without having fully and sympathetically engaged their arguments. Nevertheless, I do not believe that it would be fair or accurate to ascribe Yeager's palpable

misreading of SRH's position to unrestrained eagerness to seize a polemical advantage or to shoddy scholarship. Rather, I believe that the source of Yeager's erroneous characterization of our position lies in his static view of the function of prices and economic calculation. This view is revealed in the logical argument he advances to deny any but the most trivial distinction between knowledge and calculation, an argument intended to bolster his textually unsupported claim that SRH equate calculation and arithmetic.

In the section on "Economic Calculation," which precedes and introduces his own rendering of "What Mises Meant," Yeager (pp. 92-95) delineates his view of the functions performed by prices. Proceeding in a Hayekian vein, Yeager characterizes market prices as a substitute for the perfect knowledge that is assumed by neoclassical theorists to be possessed by all market participants. However, as I have argued elsewhere (Salerno 1993, pp. 126-29), for prices to perform such a knowledge-disseminating function, it is necessary for the economy to already subsist in a quasi-static state or what I have dubbed "proximal equilibrium" (PE), wherein genuine uncertainty and the need for entrepreneurial appraisal are absent and current prices are an approximately correct guide to future prices. Indeed, this is the view taken by Hayek (1978, p. 82) himself, who writes that "the function of prices is precisely to communicate, as rapidly as possible, signals of changes of which the individual cannot know but to which his plans must be adjusted. This system works because on the whole current prices are fairly reliable indications of what future prices will probably be." Elsewhere, Hayek (1940, pp. 27-28) argues that "real conditions . . . do to some extent so approximate [towards a state of equilibrium], and . . . the functioning of the existing economic system will depend on the degree to which it approaches such a condition."

Yeager does not shrink from the PE implications of the Hayekian description of the function of prices. Indeed, he embraces them wholeheartedly, arguing that economic calculation employing knowledge-laden prices functions "ideally" to maintain the economic system in competitive long-run equilibrium characterized by a Pareto-optimal allocation of resources. Yeager's argument is encapsulated in the following four statements extracted from his section on "Economic Calculation" (Yeager, pp. 92-95):

"Ideally, in a competitive economy, the price of each product measures not only how consumers appraise it at the margin but also what the total is of the prices of the additional resources necessary to supply an additional unit of it [i.e., $P_i=MC_i$]."

"Each consumer *ideally* leaves no opportunity unexploited to increase his expected total satisfaction by diverting any dollar from one purchase to another [i.e., $MU_1/P_1 = MU_2/P_2 = \dots = MU_n/P_n$, implying perfect arbitrage of individual commodity prices and the overall purchasing power of money]."

"*Ideally*, [consumers'] bidding sees to it that no unit of a resource goes to satisfy a less intense effective demand to the denial of a more intense one [i.e., $P^F_j = MVP_j$]."

"*Ideally*, the result of successful economic calculation . . . is a state of affairs in which no further rearrangement of patterns of production and resource use could achieve an increase of value to consumers from any particular good at the mere cost of a lesser sacrifice of value from some other good [i.e., $P_i = AC_i$]. (A fuller discussion would introduce the concept of Pareto optimality at this point.)"¹

Yeager's repetition of the term "ideally" in this context, which I have emphasized, is apparently intended to connote that the outcome of the "real" economic process only approximates the "ideal" of Pareto optimality.² Yeager goes on to impute this static conception of the function of economic calculation to Mises, despite his recognition that "Mises did like to emphasize that changes of all sorts are continually occurring and that the prices to be taken into consideration are not merely 'current' prices (which are the data of very recent economic history) but also future prices, as they best can be understood by entrepreneurial conjecture" (Yeager, p. 96). After this

¹The meaning of the symbols in my interpolations in this citation are as follows:

- / P = price of product
- MC = marginal cost
- MU = marginal utility
- P^F = price of factor of production
- MVP = marginal value product
- AC = average cost
- i = ith product where $i = 1, \dots, n$ and n = total number of products
- j = jth factor where $j = 1, \dots, m$ and m = total number of factors

²For a fuller treatment of the function of the price system, Yeager refers the reader to a discussion in another one of his works. There, Yeager (1966, pp. 13-30) cites the usual static neoclassical reasons involving externalities and monopoly for the failure of the market to achieve the ideal allocation of resources, but he tends to downplay their practical significance. However, he does not even hint at the dynamic considerations that prevent actual, moment-to-moment market prices from ever coming close to fulfilling their PE role as "signals of opportunity cost," which are supposed to accurately guide market participants to a Pareto-optimal pattern of resource use.

grudging admission, however, Yeager (p. 97) proceeds to relegate such dynamic considerations, in the fashion of classical economics, to the status of "frictions" or "disturbing causes" that "immensely complicate" but do not alter the main task of economic calculation, which is to point the way to the ideal resource allocation of the static state.

We can now explain why Yeager refuses to distinguish between calculation and knowledge and why he misses the significance of the distinction drawn by SRH. With the economy always in PE and current prices therefore conveying to producers virtually complete knowledge about relevant economic conditions in the present and the future, the only function that remains for entrepreneurs is to robotically compute revenue and cost functions and allocate resources so as to equate MR and MC. Since the acquisition and use of knowledge is thus presented as the essence of economic calculation, should the central planners somehow or other get hold of the same knowledge in the absence of a price system, the entrepreneurial computation problem could be easily solved by the methods of linear programming, which would yield the identical (Pareto-optimal) allocation of resources. This is the implication of Hayek's statement that the price system "brings about the solution which (it is just conceptually possible) might have been arrived at by one single mind possessing all the information which is in fact dispersed among all the people involved in the process" (Hayek 1972, p. 86).

For Yeager, Hayek, and equilibrium theorists of all stripes, then, an appraisalment process is not necessary because, in the words of general equilibrium (GE) theorist J. R. Hicks (quoted in Walsh and Gram 1980, pp. 241, 179),

the price mechanism is something that is inherent. It did not have to be . . . brought in from outside. . . . It has been made apparent [by linear programming theorists], not only that a price system is inherent in the problem of maximizing production from given resources but also that something like a price system is inherent in any problem of maximizing production against restraints. The imputation of prices (or "scarcities") to the factors of production is nothing else but a measurement of the intensities of the restraints; such intensities are always implicit—the special property of a competitive [price] system is that it brings them out and makes them visible. . . . If we take the famous definition, given so many years ago by Lord Robbins—the relationship between ends and scarce means that have alternative uses—economics, in that sense, is well covered by linear theory.

This reasoning, of course, also underlies the position taken by neoclassically-trained market socialists such as Oskar Lange. In a posthumously published reflection on his contribution to the socialist calculation debate, Lange (1974, p. 137) wrote:

The market process with its cumbersome *tatonnements* appears old-fashioned. Indeed, it may be considered as a computing device of the pre-electronic era.

The market mechanism and trial and error procedure proposed in my [original] essay really played the role of a computing device for solving a system of simultaneous equations. The solution was found by a process of iteration which was assumed to be convergent. . . .

The same process can be implemented by an electronic analogue machine which simulates the iteration process implied in the *tatonnements* of the market mechanism. Such an electronic analogue (servo-mechanism) simulates the working of the market. This statement, however, may be reversed: the market simulates the electronic analogue computer. In other words, the market may be considered as a computer *sui generis* which serves to solve a system of simultaneous equations.

Thus market-oriented PC theorists, such as Hayek and Yeager, and neoclassical/socialist GE theorists are brothers under the skin. The former, who according to Yeager include Mises, ultimately do not gainsay the claim of the latter that the price system is "in" the data and that the market performs essentially the same function as an equation-solving computer. All of Hayek's subtle argumentation in his classic triad of articles on knowledge (Hayek 1972a; Hayek 1972b; Hayek 1972c) amounts only to the denial that all the relevant data could ever be assembled in one place and, to use Yeager's term, "assimilated" by one mind preparatory to being fed into the computer.³ Thus is Yeager (p. 99) led to conclude, in agreement with Hicks

³In his article on "Economics and Knowledge," Hayek (1972a, pp. 41–42 n. 6) sought, among other objectives, to "dynamize" the concept of equilibrium and give it empirical applicability by dissolving the link between equilibrium conceived as a coinciding of subjective expectations held by diverse individuals and the concept of the "stationary state" based on the constancy of the underlying objective data. It is now generally known that Hayek's article was intended in part as a critique of Mises, whose praxeological approach to economic theory included a (strictly subsidiary) role for the mental construct of a stationary state or "evenly rotating economy." This is of great doctrinal significance in light of the fact that Hicks's attempted dynamic recasting of GE theory in *Value and Capital*, which, Hicks (1968, p. vi) has revealed, was largely based on ideas "conceived at the London School of Economics during the years 1930–35," was prompted by precisely the same considerations. In fact, Hicks (1968, p. 117) specifically criticized "the method of the Austrians" for its "concentration on the case of a Stationary State." Moreover both Hicks (1968, pp. 119–21) and Hayek (1972a,

and Lange, that "if all relevant knowledge *could* be gathered and assimilated and all other preparations made and if the vast comprehensive calculation *could* be performed, then the immense list of results spewed from the computer would not only prescribe all input and output quantities in detail but also indicate shadow prices of all inputs and outputs."

It is because of his PE mindset, then, that Yeager is unable to perceive what is to SRH the very pith of Mises's calculation argument: first, that the market creates a social appraisal process which is *not* implicit in the informational parameters of the equation system and which depends crucially on an intellectual division of labor featuring the qualitative *understanding* of competing entrepreneurs; and, second, that this process is indispensable for converting the multidimensional knowledge of the economic data, regardless of who possesses this knowledge or where it is located, into a unitary structure of meaningful resource and product prices.

That Yeager's attempt to portray Mises as a PE theorist is untenable and that SRH's view of Mises as a dynamic appraisal theorist is indeed the correct one is compellingly evinced by Mises's definitive response in *Human Action* to the proposed mathematical solution to socialist calculation. Here Mises (1966, pp. 710–15) makes it crystal clear that the static prices mathematically imputed from perfect knowledge of the economic data would not lead to a dynamically efficient allocation of resources. The latter can only be achieved by the entrepreneurially appraised prices that are generated by the historical market process.

In arriving at this conclusion Mises first considers a situation in which the central planner is endowed with perfect knowledge of the existing economic data. Mises points out, however, that such data would include a stock of intermediate or capital goods, which, in a world of unrelenting change and uncertainty and of consequent entrepreneurial error, is necessarily maladapted to the primary data of wants, technology, and "original" resources, i.e., permanent and/or nonreproducible labor and land. Nonetheless, the existing inventories of nonpermanent, reproducible items that constitute this disequilibrium capital stock are cast as "parameters" in the system of simultaneous equations. Solving this system would therefore yield a static or Pareto-optimal allocation of resources and a related shadow

p. 41 n. 6) credit Alfred Marshall with pointing the way to the proper use of the equilibrium technique. Thus Hayekian PE and modern GE theory have common roots. For an illuminating discussion of the seminal influence of Hayek's work on Hicks's initial endeavors in GE theory, see E. Roy Weintraub (1991, pp. 30–31).

price system. But this static solution cannot possibly elucidate the series of steps that must be initiated today to progressively and efficiently transform the structure of capital goods through a sequence of further disequilibrium states towards its (presently unknown) equilibrium configuration.

Indeed, thirty years after Mises elaborated this argument, dissident GE theorists were just beginning to catch a glimpse of its significance. Thus, as Vivian Walsh and Harvey Gram (1980, pp. 182–83) frankly and perceptively noted at the time:

The intended interpretation of neoclassical allocation theory depends fundamentally on the meaning attached to the parameters that enter into its structural relationships. . . . In a model of neoclassical allocation theory it is of no importance to distinguish inputs on the basis of the process by which they came into being. . . . Indeed, the *only* historical fact that has any bearing on the analysis is that a given quantity of resources has come into existence and is now available at a point in time to be used in ways that may or may not have been anticipated when these resources were produced. . . . Thus the categories land, labor, and "capital" are only descriptive; they have *no analytical significance* in static allocation models. . . . [N]eoclassical theory does not deny the reproducibility of the means of production. It simply takes no account of this reproducibility in its analysis of prices and quantities. . . . Thus, the flow of services of a diesel engine may enter as a factor input into certain technical processes, but it is immaterial to the theory's treatment of production that the engine itself is the result of a previous investment of resources as opposed to a free gift of nature dropping, as it were, from Heaven!⁴

⁴Hicks's earlier theory of the "Traverse" was an abortive attempt by a GE theorist to come to terms with, or escape from, a similar insight. Wrote Hicks (1972, pp. 183–84): "[I]n the real world changes in technology are incessant; there is no time for an economy to get into equilibrium (if it was able to do so) with respect to January's technology, before that of February is upon it. It follows that at any actual moment, the existing capital cannot be that which is appropriate to the existing technology. . . . Every actual situation differs from an equilibrium situation by reason of the inappropriateness of its capital stock." Despite this recognition, however, Hicks apparently found it would be "very inconvenient" to abandon GE theory in order to "analyze the transition from one out-of-equilibrium position to another, so Hicks's Traverse is a traverse from one growth equilibrium to another" (Collard 1993, p. 343). Needless to say, Hicks's theory of the adjustment path, worked out on the assumption of a "fixprice" policy and a change in technology that does not influence relative prices, is unable to illuminate how monetary calculation guides entrepreneurs in choosing the most valuable uses (from the point of view of their current ~~circumstances~~ future market conditions) for the perennially inappropriate capital stock. For a polite but devastating critique of Hicks, see Lachmann (1977).

Now, Mises's calculation argument focuses on a situation characterized by the absence of competitive appraisalment of current resource prices based on entrepreneurial forecasting of the successive changes in the data that occur during the extended transition to the final equilibrium. In these circumstances, there is absolutely no possibility of determining whether and to what extent current productive services should be devoted to, e.g., maintaining existing railroad diesel engines, initiating a highway expansion project, constructing a new truck assembly factory, converting military cargo planes to civilian uses, etc. The shadow prices generated by the Lange-Hicks-Yeager linear programming "solution" are therefore incapable of providing the guiding light of economic calculation. And it is this alone which can save human actors from blindly toppling over into the abyss of irrationality and arrant wastefulness when choosing among social (i.e., nonautarkic) production processes.

Let us even grant further, as Mises (1966, pp. 713–14) does, that the central planner is miraculously inspired with an exact image of the final equilibrium state that is perfectly adjusted to the primary data of the problem. Without recourse to a social appraisalment process, the planner would still be unable to calculate a transition plan that economically utilizes the services of the current capital stock. Of course, dynamic appraisalment is even more important in the real world. Here, exogenous changes in the data continually deflect the economy from any temporal progression toward a given equilibrium. Thus, all entrepreneurial actions and innovations are guided by anticipated future prices reflecting, according to Mises (1966, p. 711), "only the first steps of a transformation" of market conditions in the direction of equilibrium.

It is instructive to consider the series of rhetorical questions posed by Yeager (p. 96) midway into his article. These are designed to drive home his point that Mises could not possibly have been contending about arithmetic. But once it is finally understood that Mises's arguments about calculation referred neither to arithmetic nor to knowledge but to appraisalment, it also becomes quite clear that these questions do not merit the answer Yeager seeks to elicit. Representative of Yeager's queries are: "Was Mises conceding that the planners might conceivably assemble all of this unimaginably detailed information [about the economic data]? Was he balking only at the next step, denying that they could use all of it to calculate a pattern of production and resource allocation that would in some sense be optimal?" To these questions I reply with a resounding "Yes, indeed!" Mises did concede, for the sake of argument only, that

planners possessed perfect information.⁵ But he emphatically denied that this information would be of any use to them in efficiently allocating resources.

I conclude with Mises's own words (which are difficult to explain away without invoking some problematic hermeneutical principle⁶):

"It was a serious mistake to believe that the state of equilibrium could be computed, by means of mathematical operations, on the basis of the knowledge of conditions in a nonequilibrium state. It was no less erroneous to believe that such knowledge of the conditions under a hypothetical state of equilibrium could be of any use for acting man in his search for the best possible solution of the problems with which he is faced in his daily choices and activities" (Mises 1966, pp. 714–15).

⁵It should be emphasized that Mises did recognize a separate and "practical" knowledge problem confronting socialism. But he hastened to make it clear that it was not this problem that rendered a socialist economy a logical impossibility. Thus Mises (1966, p. 715) concluded his chapter in *Human Action* on the "The Impossibility of Economic Calculation under Socialism" with the following sentence: "There is therefore no need to stress the point that the fabulous number of equations which one would have to solve each day anew for a practical utilization of the [mathematical] method would make the whole idea absurd *even if it really were a reasonable substitute for the market's economic calculation*" [my emphases]. Mises then refers the reader in a footnote to Hayek's knowledge-based critique of the mathematical solution in the volume on *Collectivist Economic Planning* (Hayek 1975, pp. 207–14).

⁶Yeager (pp. 100–5) devotes over one-third of the text of his article to supporting his interpretation of Mises's calculation argument with appeals to similar interpretations advanced by other notable Hayekians on the contemporary scene as well as to his own past intellectual experience in coming to terms with Mises's writings. But it is precisely this now conventional explication of Mises's calculation argument—which rapidly became entrenched among Hayekians after the work of Don Lavoie—that SRH take issue with, because they believe it represents a palpable conflation of Hayek's and Mises's thought. Thus, it is difficult to see what these appeals add to Yeager's case beyond an argument from authority. For a critique of the unwarranted "homogenization" of Mises and Hayek by some contemporary Austrian economists, see Salerno (1993).

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Calculation and the Question of Arithmetic

Jeffrey M. Herbener

The view that Ludwig von Mises had more in mind in his calculation critique of socialism than the Hayekian knowledge problem has recently been attacked by Leland Yeager.¹ This article addresses Yeager's central claim that,

I cannot believe Mises was merely saying that *if* the socialist planners possessed in some remarkable way all the information normally conveyed by genuine market prices, they still would be stymied by inability to perform *calculations* in the narrow arithmetical sense, an inability that advances in supercomputers might conceivably overcome.²

Yeager then asserts that Joseph Salerno, Murray Rothbard, and I (SRH) claim that this is what Mises meant. If Yeager means by this assertion that we believe that this is Mises's entire calculation argument, then Salerno is correct in responding that,

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¹Leland Yeager, "Mises and Hayek on Calculation and Knowledge," *Review of Austrian Economics* 7, no. 2 (1994): 93–109. Also, Israel Kirzner asserts that the Mises and Hayek contributions to the calculation debate, "are simply ways of expounding the same basic, Austrian insight, viz., that only market processes are able to harness the *discovery* potential of entrepreneurial competition." Italics in the original, see Israel Kirzner, "Book Review of *Hayek, Coordination and Evolution*," *Southern Economic Journal* 61, no. 4 (April 1995): 1244. If Kirzner is correct, it would seem that Mises and Hayek were both Kirznerians and the entire calculation debate was a debate about Kirzner's concept of entrepreneurship. On his concept of entrepreneurial discovery, see Israel Kirzner, *Competition and Entrepreneurship* (Chicago: University of Chicago Press, 1973) and *Discovery and the Capitalist Process* (Chicago: University of Chicago Press, 1985).

²Yeager, "Mises and Hayek," p. 94. Italics in the original.

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"it is wholly beside the point, because it rests on a gross misinterpretation of the meaning explicitly attached to the term 'calculation problem' by SRH."³ In response to Yeager, Salerno says,

it does not follow that, for SRH, *the* calculation problem as Mises conceived it refers narrowly to the mathematical techniques employed for manipulating the given quantitative data; it refers, instead, to the origination and meaningfulness of the data themselves. It is, in short, a problem of "appraisal" and not of "arithmetic."⁴

From this beginning point, he proceeds to cogently rebut Yeager's claim by demonstrating that entrepreneurial appraisal is not subsumed under market information.

Yet Yeager seems to imply something else in his claim that by its nature goes untouched by Salerno's rebuttal. Yeager seems to imply that the arithmetic facet of Mises's calculation argument is trivial. This claim is not only false but is odd coming from a student of Mises's work; for Mises made several true and non-trivial arguments based solely on arithmetic or mathematics and statistics, more generally: the impossibility of interpersonal utility comparisons (lack of a unit of subjective value), the impossibility of economic calculation (inability of comparing heterogeneous units of factors of production), the impossibility of mathematical equations in economic theorizing (lack of constants in human action), and the impossibility of statistical analysis in economic theory (lack of a probability density function for the data of human action).⁵ Acceptance of these *merely* arithmetic, mathematic, and statistical points destroys several major branches of orthodox economic theory: utility and welfare, socialist, mathematical, macroeconomics, and econometrics. Together these constitute a significant portion of what passes for economic thought today.

While it is true that Mises's calculation argument is not *merely* arithmetic; it is also true that it is not *merely* appraisal. Mises argued that economic calculation is a problem of both

³Joseph Salerno, "Reply to Leland B. Yeager on 'Mises and Hayek on Calculation and Knowledge,'" *Review of Austrian Economics* 7, no. 2 (1994): 112.

⁴*Ibid.* Italics in the original.

⁵Mises discusses each of these points in *Human Action: A Treatise on Economics* (Chicago: Henry Regnery, [1949] 1966).

arithmetic and appraisal.⁶ More precisely, Mises's calculation argument has two dimensions: the impossibility of central planners performing the arithmetic of profit and loss computation in pure socialism which, in turn, makes it impossible for them to engage in entrepreneurial appraisals necessary to give meaning to profit and loss, and, thus, rationally allocate factors of production.⁷ Although information enters into the latter, it cannot enter into the former.⁸

The arithmetic facet of Mises's argument deals with the existence, or lack thereof, of a format in which information can be put and appraisals can be made. A format is necessary because the "raw data" required to answer relevant economic questions posed by the operation of a social process of exchange and division of labor are denominated in incommensurate units. Unless these units can be converted into a common standard, they cannot be compared; unless they can be compared the economic questions cannot be answered. As Mises said of one socialist scheme of economic calculation, "Calculation in kind is to be substituted for calculation in terms of money. This method is worthless. One cannot add or subtract numbers of different kinds (heterogeneous quantities)."⁹ The impossibility of comparing the number of apples to the number of oranges is an arithmetic problem; and a

⁶I am not asserting that Salerno fails to understand or appreciate the arithmetic facet of Mises's concept of calculation. He mentions it twice in his "Reply to Yeager," (pp. 112 and 120) and it is this point that Yeager himself notices in Salerno's work. My contention is only that proper recognition of this facet of Mises's argument also defeats the Yeager position.

⁷By the phrase, "impossibility of performing the arithmetic of profit and loss computation," we do not have in mind what Yeager seems to accuse us of meaning. As Salerno says, "the Misesian demonstration of the logical impossibility of socialism is not predicated on the central planners' incapacity to perform tasks that can conceivably be carried out by individual human minds," including adding and subtracting. See Salerno, "Reply to Yeager," p. 112. The arithmetic problem of calculation is not the inability to add common units together, it is the absence of such units. No "advances in supercomputers" can overcome the impossibility of adding together apples and oranges.

⁸These two steps correspond to the two conditions Mises claimed were necessary for calculation to take place: voluntary exchange of all goods including factors of higher order and the use in these exchanges of money. The first is necessary to bring higher-order capital goods under the orbit of the entrepreneurial "intellectual division of labor"; the second is necessary because without it, "It would not be possible to reduce all exchange-relationships to a common denominator." See Ludwig von Mises, *Economic Calculation in the Socialist Commonwealth* (Auburn, Ala.: Ludwig von Mises Institute, [1920] 1990), pp. 17-18.

⁹Ludwig von Mises, *Human Action*, p. 703.

fundamental, not trivial, problem of arithmetic. Without its solution, no arithmetic operations can be conducted at all.

The profit and loss calculation solves the arithmetic problem inherent in answering both economic questions posed by the operation of a social process of exchange and division of labor: what consumer goods should be produced and which combination of factors of production should be used to produce each consumer good. The arithmetic problem of the first question is the incommensurability of the subjective values of different individuals who participate in the social process of exchange and division of labor. There are two dimensions to the impossibility of making interpersonal comparisons of utility: no unit can be defined for preferences since they are subjective and even if units of subjective value existed for each person, they would not be comparable from one person to another.¹⁰

The solution to the problem of the incommensurability of the subjective values of individuals and the answer to the question of what consumer goods should be produced to satisfy them lies in the possibility of market prices denominated in money. Consumers demonstrate their preferences for some goods relative to others by purchasing and refusing to purchase. Since all preferences are demonstrated using the same standard, viz. money, the effects of action based on these preferences, viz. money prices, are commensurate, and, therefore, formatted for meaningful economic calculation.

Entrepreneurs then impute market value to each factor of production according to its marginal value product via their demand for the factors. Factors prices are then determined by the intensity of entrepreneurial demand relative to the opportunity cost placed on them by their owners. These prices make the different units of the factors commensurate and therefore, permit entrepreneurs to efficiently allocate factors across the production of consumer goods.¹¹

As a student of Mises's work, Yeager is surely familiar with his account of the relationship between the subjective values of

¹⁰As Mises said, "In an exchange economy the objective exchange value of commodities enters as the unit of economic calculation. This . . . renders it possible to base the calculation upon the valuations of all participants in trade. The subjective use value of each is not immediately comparable as a purely subjective phenomenon with the subjective use value of other men. It only becomes so in exchange value, which arises out of the interplay of the subjective valuations of all who take part in exchange." Mises, *Economic Calculation*, p. 12.

¹¹*Ibid.*, p. 23.

consumers and market prices as well as the impossibility of interpersonal utility comparisons. Even for those economists, few in number and among whom one should not expect to find Yeager, who disagree with the latter claim, it would seem strange for them to characterize the problem of interpersonal utility comparisons as anything but an arithmetic problem. You can only add or subtract items of like units. This fact is both arithmetic and non-trivial. An entire branch of economics (welfare economics) crashed to the ground on this point and another branch (utility economics) was completely revamped because of it.¹² The arithmetic dimension of Mises's calculation argument is based on the same arithmetic truth that makes interpersonal utility comparisons impossible; and recognition of this fact helps clarify and strengthen instead of, "caricature and trivialize," Mises's argument as Yeager claims.¹³

Mises understood that the question of what consumer goods should be produced can be answered by the central planners and therefore, is not a barrier to the establishment of a centrally-planned economy.¹⁴ The planners can do this by simply substituting their preferences for the unknowable and incomparable preferences of consumers. They produce, or attempt to produce, the goods they themselves value. This solution, however, is arbitrary with reference to the preferences of consumers. These, the central planners cannot know and even if they did they could not make the relevant comparisons to determine what subset of valuable goods should be produced to the exclusion of other goods consumers find valuable. Central planners with perfect information of consumer preferences still could not calculate what to produce to satisfy such preferences because they are ordinal rankings and therefore, cannot be compared. Even if central planners had perfect information of the subjective values of each individual denominated in units, they could not perform economic calculation because it is impossible to compare any items that are denominated in dissimilar units. Only if the central planners knew how to

¹²The old welfare economics and utility economics were based on the concept of cardinal utility which embodied two arithmetic mistakes: units of subjective value are possible and such units are interpersonally comparable. See Murray N. Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," in *On Freedom and Free Enterprise*, Mary Sennholz, ed. (Princeton: Van Nostrand, 1956), pp. 224-62.

¹³Yeager, "Mises and Hayek," p. 94.

¹⁴Mises, *Human Action*, pp. 695-98.

convert the subjective units of each individual into a common standard would they be able to perform this part of economic calculation.

The central arithmetic facet of Mises's calculation critique is the incommensurability of the different factors of production that could be combined in different ways to produce each consumer good. Hours of labor cannot be compared to acres of land nor can these units be compared to units of each capital good. As Mises, discussing his example of central planners contemplating building a railroad, wrote in 1920, "Where one cannot express hours of labor, iron, coal, all kinds of building material, machines and other things necessary for the construction and upkeep of the railroad in a common unit it is not possible to make calculations at all. The drawing up of bills on an economic basis is only possible where all the goods concerned can be referred back to money."¹⁵ Nearly thirty years later, he wrote,

The director wants to build a house. Now, there are many methods that can be resorted to. . . . Which method should the director choose? He cannot reduce to a common denominator the items of various materials and various kinds of labor to be expended. Therefore he cannot compare them. . . . In short, he cannot, in comparing costs to be expended and gains to be earned, resort to any arithmetical operation.¹⁶

Concerning the pricing process of the market by which economic calculation solves the problem of incommensurability, Mises concluded that socialism cannot reduce the value of the means of production to "the uniform expression of a money price." In a market economy, "all prices can be referred back to a common expression in terms of money."¹⁷

If there were no arithmetic facet of this "common expression in terms of money," (contrary to Mises's explicit statement that there is) then the problem of economic calculation would not exist since the planners could discover the value of each factor in each use by withdrawing it.

Mises summed up the problem of calculation in socialism by saying, "In the main, socialist production might only appear

¹⁵Mises, *Economic Calculation*, p. 25.

¹⁶Mises, *Human Action*, p. 698.

¹⁷Mises, *Economic Calculation*, pp. 23-24.

rationally realizable, if it provided an objectively recognizable unit of value, which would permit of economic calculation in an economy where neither money nor exchange were present.”¹⁸ If this problem has no *merely* arithmetic facet, then why did socialists struggle to employ the labor theory of value to solve it? Mises finished the quote above by saying, “And only labor can conceivably be considered as such.” But, why not perform economic calculation in all factors of production at once claiming each of them to have intrinsic value and thereby dispense with the search for a “socially necessary” amount of labor, i.e., a common unit of labor in which all factors can be rendered? The existence of cardinal units is not sufficient for economic calculation to be performed. One cannot add together factors denominated in incomparable cardinal units, nor compare the efficiencies stated in cardinal numbers, e.g., the average product of labor with the average product of capital, of different factors of production. The task of economic calculation requires, in addition to cardinal units, a method by which the different units can be transformed into a common cardinal unit.¹⁹ If it is not necessary to have a common objective unit in which all factors can be meaningfully compared, then a large part of the debate about the labor theory of value was so much spilled ink.

Yeager’s contention about the arithmetic facet of Mises’s argument makes it neither erroneous nor trivial. To the contrary, it is both correct and devastating to naive socialists who believe that the economic problem of factor usage can be solved by central planners in the absence of profit and loss calculation based on monetary prices, i.e., in pure socialism, including those who think the problem could be solved by “advances in super-computers.”

It is only to defeat those socialists who wish to enter the debate on economic theory that Mises moves to more complex dimensions of his calculation argument.²⁰ To the assertion that socialism can overcome the incommensurability of different factors by having central planners set monetary prices for all goods and factors, Mises responds that the problem is calculation of objective value,

¹⁸*Ibid.*, p. 33.

¹⁹These two issues, the existence of cardinal units and the existence of a common denominator into which the various cardinal units can be put, are analogous to the two dimensions of the impossibility of making interpersonal comparisons of utility discussed above.

²⁰Mises moves to some of these steps, in a different order than that presented here, when addressing a list of suggestions for socialist economic calculation in *Human Action*, pp. 703ff.

not objective units *per se*. Such a procedure would not solve the allocation problem since it leads to a "solution" that is arbitrary even from the viewpoint of the central planners, let alone that of consumers. The problem of factor usage cannot be solved by having the central planners assign a monetary wage to be multiplied by labor hours, and so on for each factor, so that the monetary costs of different combinations of factors capable of producing a given consumer good can be compared and the least cost method selected. Such cost calculations have no relationship to the preferences placed on the consumer goods and therefore, are useless for economic calculation. Only the market process can connect the value of factors to the value of consumer goods in a meaningful way.

Mises demonstrates this point by allowing that a socialist state could have a medium of exchange, limited in its scope to trading in some consumer goods. But, as he said,

where the means of production are state controlled . . . because no production good will ever become the object of exchange, it will be impossible to determine its money value. Money could never fill in a socialist state the role it fills in a competitive society in determining the value of production goods. Calculation in terms of money will here be impossible.²¹

To the assertion that the central planners can overcome the arbitrary nature of prices set by their own decree by having the managers of state-operated production facilities act as if they were entrepreneurs engaged in trade, Mises argues that one cannot "play" market.²² For entrepreneurial competition to perform the function of factor evaluation, the possibility of bearing the opportunity costs of different factor allocations must be real. Only with private property can entrepreneurs and capitalists risk their own wealth in the process of social production and therefore be in a position to make accurate appraisals of factor values.^{23, 24} To argue that play acting could mimic the results of

²¹Mises, *Economic Calculation*, p. 6.

²²Mises, *Human Action*, pp. 707-9.

²³Mises, *Economic Calculation*, p. 28.

²⁴One particular target Mises aimed at was the "market socialism" of Oskar Lange in his, "On the Economic Theory of Socialism," reprinted in *On the Economic Theory of Socialism*, vol. 2, Benjamin Lippincott, ed. (Minneapolis: University of Minnesota Press, 1938), pp. 57-129. Yeager, in using the debate between Mises and Lange as the text for criticizing the SRH view, reveals the source of his lack of appreciation for the arithmetic facet of Mises's calculation argument. See Yeager, "Mises and Hayek," pp. 103ff. Mises had no need to mention the arithmetic

the market was to confuse the functions of management with those of entrepreneurship.

One cannot *play* speculation and investment. The speculators and investors expose their own wealth, their own destiny. This fact makes them responsible to the consumers. . . . If one relieves them of this responsibility one deprives them of their very character. They are no longer businessmen, but just the group of men to whom the director has handed over his main task, the supreme direction of the conduct of affairs. Then they—and not the nominal director—become the true directors and have to face the same problem the nominal director could not solve: the problem of economic calculation.²⁵

To the assertion that the central planners can overcome the “game-playing” nature of market socialism by using the pre-existing market set of prices, i.e., those prices existing in the capitalist system just prior to socialization, Mises argues that the transition from capitalism to socialism is too fundamental for the old prices to bridge the gap and that pricing must be “dynamic” since underlying economic phenomena are constantly changing. By destroying the differences in wealth in the existing market economy when expropriating private property, socialism disconnects the prices that correspond to those inequalities with the different conditions now prevailing for which calculations must be made. Moreover, any changes in conditions that underlie the economic allocation of factors makes the existing set of prices obsolete, and all the more so the greater the extent of such changes.²⁶

problem in response to Lange; market socialism overcomes that problem by employing money—the common denominator necessarily absent in a pure socialist system—and money prices. Mises was, thus, required to move to more complex dimensions of his calculation argument and criticize market socialism for its inability to perform entrepreneurial appraisals based on money prices which are not established in market exchanges of private property.

Because Rothbard fails to mention the arithmetic facet of calculation but does mention information in discussing the debate between Mises and Lange, Yeager attempts to construe Rothbard as once holding the Yeager position and then shifting to the SRH view. See Yeager, “Mises and Hayek,” p. 106. But Rothbard had no more reason to mention the arithmetic facet of calculation in this context than did Mises. Moreover, neither Mises, nor Salerno, nor Rothbard, nor I claim that the central planners do not face an information problem. The SRH claim is that Mises’s calculation argument has more to it than the information problem. Yeager’s claim that it does not is not proven by noting that Mises and SRH recognize information as a problem.

²⁵Ibid., p. 709. Italics in the original.

²⁶Mises, *Economic Calculation*, pp. 25–26.

Furthermore, as Salerno pointed out, Mises understood that answering the economic questions of what and how to produce requires entrepreneurs to correctly project appraisals of goods and factors into the future.²⁷ Since the data are continually changing, static modeling cannot be substituted for entrepreneurs to perform economic calculation. Comparative statics serves no better since it cannot determine how human action moves the solution from one point to another.²⁸

Moreover, general equilibrium is irrelevant to the actual problem that economic calculation must solve and that can be done so only by entrepreneurial activity. Neither the actual prices, both present and future, nor the preferences necessary for factor allocations to be made have any relationship to those of equilibrium. As Mises said, "what impels a man toward change and innovation is not the vision of equilibrium prices, but the anticipation of the height of the prices of a limited number of articles as they will prevail on the market on the date at which he plans to sell."²⁹

General equilibrium equations are formed by knowing the constants of those equations, under the assumption that no further change in the data is permissible. Without the assumption of no further changes, no constants exist and no equations can be formed. Yet, the economic system cannot achieve, or move toward, the equilibrium without changes from the existing set of data. The equations are, thus, useless for the task of allocating factors of production toward their general equilibrium uses. As Mises said, "What acting man needs to know is not the state of affairs under equilibrium, but information about the most appropriate method of transforming, by successive steps, [the total supply of produced factors allocated as they are today] into [the total supply of produced factors allocated as they need to be in equilibrium]. With regard to this task the equations are useless."³⁰

Even if the central planners had full knowledge of the state of general equilibrium and could see how to move production from original factors to the final equilibrium state, this would not suffice to circumvent the problem that only economic calculation can solve. The existing state of production does not correspond to any state of this perfect-knowledge production process. Existing

²⁷Salerno, "Reply to Yeager," pp. 120–23.

²⁸Mises, *Human Action*, pp. 710–11.

²⁹*Ibid.*, p. 711.

³⁰*Ibid.*, pp. 712–13.

capital goods embody past allocation errors relative to their perfect knowledge uses. Since these capital goods can neither be freely transferred into other uses nor transferred efficiently without taking account of their existing characteristics, central planners with perfect knowledge would still need to resort to economic calculation to properly allocate them. Mises concludes his discussion of economic calculation at this step where no recourse is made to the arithmetic facet of the argument when viewed in its entirety.³¹

Instead of realizing the logical construction of Mises's argument—beginning with its arithmetic facet and then in turn allowing, for the sake of argument, that the central planners can overcome progressively more difficult aspects of the calculation problem—Yeager implies that SRH assume that Mises was conceding that the central planners could solve these problems. Yeager says,

The necessary preparations for the vast central calculation, let alone the calculation itself, could *not* be accomplished; they are, to use Mises's word, "impossible." It seems perverse, then, to interpret Mises as nevertheless conceding the possibility of all those preparations and of balking only at the possibility of the calculation itself.³²

But Mises did not concede that a "preparation" or "information" problem could be solved by the central planners in the actual operation of socialism. He conceded the solution to these problems, *for the sake of argument*, for the very purpose of demonstrating that his calculation argument proved the impossibility of economic calculation, *even if these problems were solved*. The fact that he chose this method of argumentation is proof that his calculation argument has more to it than just the lack of information available to central planners.

In fact, Mises "concedes" much more than the solution to the "information" problem, in the final step of his argument. If Yeager has this perfect-information scenario in mind in his quote at the beginning of this article, then he misstates Mises's hypothetical conditions (under which there is no arithmetic facet of the argument). Mises is not, here, assuming that the central planner has

³¹Ibid., pp. 713–14.

³²Yeager, "Mises and Hayek," p. 101. Italics in the original. Also, see his other statements on Mises's concessions, pp. 97–98.

perfect information and *therefore*, can perform economic calculation, as Yeager implies in his quote. Mises is assuming that the central planner has “miraculously” solved the problems of economic calculation—not just information but calculation itself—and could therefore construct a perfect production structure over time, starting without any capital goods, to achieve some final equilibrium state. Even if the central planners had perfect information and the ability to calculate with that information, however, they still could not calculate how to effectively operate any actual existing economy they are attempting to control.

If Yeager means what he seems to say—that Mises could not have meant that a central planner with perfect information about preferences and factor conditions could not perform the arithmetic operations necessary to calculate—then he is wrong; for this is precisely the first step of Mises’s argument demonstrating the impossibility of economic calculation in the socialist commonwealth.³³

On the importance of the arithmetic aspect of the economic calculation, Mises said,

every action can make use of ordinal numbers. For the application of cardinal numbers and for the arithmetical computation based on them special conditions are required. These conditions emerged in the historical evolution of the contractual society. Thus the way was opened for computation and calculation in the planning of future action and in establishing the effects achieved by past action. Cardinal numbers and their use in arithmetical operations are also eternal and immutable categories of the human mind. But their applicability to premeditation and the recording of action depends on certain conditions which were not given in the early state of human affairs, which appeared only later, and which could possibly disappear again . . .

Modern civilization is above all characterized by the fact that it has elaborated a method which makes the use of arithmetic possible in a broad field of activities. This is what people have in mind when attributing to it the—not very expedient and often misleading—epithet of rationality.³⁴

³³Mises explicitly made these assumptions in the development of his calculation argument. In addition to the statements already quoted, see Mises, *Human Action*, p. 696.

³⁴*Ibid.*, p. 199.

Socialism: A Property or Knowledge Problem?

Hans-Hermann Hoppe

In a series of recent articles in *The Review of Austrian Economics*, Joseph Salerno began to de-homogenize the often conflated economic and social theories of Ludwig von Mises and Friedrich A. Hayek. In particular, he has shown that their views on socialism are distinctly different, and he has argued in effect that Mises's original argument in the so-called socialist calculation debate was correct all along and was also the final word, whereas Hayek's distinct contribution to the debate was fallacious from the outset, and merely added confusion. The following note will provide additional support to Salerno's thesis.

Mises's well-known calculation argument states this: If there is no private property in land and other production factors, then there can also be no market prices for them. Hence, economic calculation, i.e., the comparison, in light of current prices, of anticipated revenue, and expected cost expressed in terms of a common medium of exchange—money—(thus permitting *cardinal* accounting operations), is literally impossible. Therefore, socialism's fatal error is the absence of private property in land and production factors, and, by implication, the absence of economic calculation.

For Hayek, socialism's problem is not a lack of property but a lack of knowledge. His distinctly own thesis is altogether different from Mises's.¹ For Hayek, the ultimate flaw of socialism is the fact that knowledge, in particular "the knowledge of the

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¹See in particular the widely acclaimed 1945 article on "The Use of Knowledge in Society," reprinted in F. A. Hayek, *Individualism and Economic Order* (Chicago: University of Chicago Press, 1948).

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particular circumstances of time and place," exists only in a widely dispersed form as the personal possession of various individuals; hence, it is *practically* impossible to assemble and process all the actually existing knowledge within the mind of a single socialist central planner. Hayek's solution is not private property, but the decentralization of the use of knowledge.

Yet this is surely an absurd thesis. First, if the centralized use of knowledge is the problem, then it is difficult to explain why there are families, clubs, and firms, or why they do not face the very same problems as socialism. Families and firms also involve central planning. The family head and the owner of the firm also make plans which bind the use other people can make of their private knowledge, yet families and firms are not known to share the problems of socialism. For Mises, this observation poses no difficulty: under socialism private property is *absent*, whereas individual families and private firms are *based* on the very *institution* of private property. But for Hayek the smooth operation of families and firms is puzzling, because his idea of a fully decentralized society is one in which each person makes his own decisions based on his own unique knowledge of the circumstances, unconstrained by any central plan or supraindividual (social) norm (such as the institution of private property).

Second, if the *desideratum* is merely the decentralized use of knowledge in society, then it is difficult to explain why the problems of socialism are fundamentally different from those encountered by any other form of social organization. *Every* human organization, composed as it is of distinct individuals, constantly and unavoidably makes use of decentralized knowledge. In socialism, decentralized knowledge is utilized no less than in private firms or households. As in a firm, a central plan exists under socialism; and within the constraints of this plan, the socialist workers and the firm's employees utilize their own decentralized knowledge of circumstances of time and place to implement and execute the plan. For Mises, all of this is completely beside the point. But within Hayek's analytical framework, no difference between socialism and a private corporation exists. Hence, there can also be no more wrong with the former than with the latter.

Clearly, Hayek's thesis regarding the central problem of socialism is nonsensical. What categorically distinguishes socialism from firms and families is *not* the existence of centralized knowledge or the lack of the use of decentralized knowledge, but rather the absence of private property, and hence, of prices. In

fact, in occasional references to Mises and his original calculation argument, Hayek at times appears to realize this, too. But his attempt to integrate his very own thesis with Mises's and thereby provide a new and higher theoretical synthesis fails.

The Hayekian synthesis consists of the following propositional conjunction: "Fundamentally, in a system in which the knowledge of the relevant facts is dispersed among many people, prices can act to coordinate the separate actions of different people" and "the price system" can serve as "a mechanism for communicating information."² While the second part of this proposition strikes one as vaguely Misesian, it is anything but clear how it is logically related to the first, except through Hayek's elusive association of "prices" with "information" and "knowledge." However, this association is more of a semantic trick than rigorous argumentation. On the one hand, it is harmless to speak of prices as conveying information. They inform about past exchange ratios. But it is a non-sequitur to conclude that socialism's central problem is a lack of *knowledge*. This would only follow if prices actually *were* information. However, this is not the case. Prices convey knowledge, but they *are* the exchange ratios of various goods, which result from the voluntary interactions of distinct individuals *based on the institution of private property*. Without the institution of private property, the information conveyed by prices simply does not exist. Private property is the necessary condition—*die Bedingung der Möglichkeit*—of the knowledge communicated through prices. But then it is correct only to conclude, as Mises does, that it is the absence of the institution of private property which constitutes socialism's problem. To claim that the problem is a lack of knowledge, as Hayek does, is to confuse cause and effect, or premise and consequence.

On the other hand, Hayek's identification of "prices" and "knowledge" involves a deceptive equivocation. Not only does Hayek fail to distinguish between what one might call institutional knowledge—information that requires for its existence an institution (such as the knowledge of prices requires private property)—and *raw or extra-institutional knowledge*—like this is an oak tree, I like peanuts, or birds can fly. Moreover, Hayek also fails to notice that the knowledge of prices is not at all the same sort of knowledge whose existence he believes to be responsible for the "practical impossibility" of socialism and central

²Ibid., pp. 85–86.

planning. What makes central planning impossible, according to Hayek, is the fact that part of human knowledge exists only as essentially *private* information:

practically every individual has some advantage over all others because he possesses unique information of which beneficial use might be made, but of which use can be made only if the decisions depending on it are left to him or are made with his active cooperation.³

While it is certainly true that such knowledge exists, and while it is also true that uniquely private knowledge can of course never be centralized (without information losses), it is just as certainly *not* true that the knowledge of *prices* falls into this category of uniquely *private* information. To be sure, prices are "prices paid at specific times and places," but this does not make them private information in the Hayekian sense. To the contrary, the information conveyed by *prices* is *public* information, because prices—*qua* objective exchange ratios—are *real* events. It may be *difficult* to know all of the prices paid at a specified date and location, just as it may be difficult to know every person's physical location at any given time. Yet it is hardly *impossible* to know either one, and with current computer technology it is probably easy. In any case, while I may never know everything that you know, and *vice versa*, it is no more problematic to assume that both of us can simultaneously possess the same *price* information than that we can both simultaneously know the same baseball results. Hence, the knowledge conveyed by *prices* actually *can be centralized*. But if price information is public information and thus can be centralized, then, according to Hayek's thesis that socialism's problem stems from the inefficiency of trying to centralize genuinely uncentralizable private knowledge, it would follow that the absence of prices, and hence of private property, has *nothing to do* with the plight of socialism. Otherwise, if one insists with Mises that the absence of private property and prices *does* have something to do with the plight of socialism. Hayek's contribution to the socialism debate must be thrown out as false, confusing, and irrelevant.

Hayek's misconception of the nature of socialism is symptomatic of a fundamental flaw in his thinking, pervading not only

³Ibid., p. 80.

his economics but in particular also his political philosophy: his ultra-subjectivism. Hayek, as noted and quoted *ad nauseam* by his numerous followers, was convinced that "it is probably no exaggeration to say that every important advance in economic theory during the last hundred years was a further step in the consistent application of subjectivism."⁴ While this may well be true, it does not logically follow that every further advance toward subjectivism must also lead to an advance in economic theory. However, Hayek seems to have drawn this conclusion and has thus become a prime example illustrating its falsehood.

Mises, and in his steps even more clearly Murray N. Rothbard, conceives of economics as the science of human *action*. Action has two inseparable aspects: a subjective aspect (action is rational, intelligible action) and an objective aspect (acting is always acting with real things and physical stuff). Accordingly, Mises's and Rothbard's economics and political philosophy is never anything but robust, and their categories and theories invariably possess real, operational meaning: private property, division of labor based on private property, production, direct and indirect exchange, and also compulsory interference with private property and production and exchange such as taxation, counterfeiting, legislation, and regulation.

In distinct contrast, Hayek—and misled by him to different degrees also Israel Kirzner and Ludwig Lachmann—views economics as some sort of science of human *knowledge*. Accordingly, Hayek's categories and theories refer to purely subjective phenomena and are invariably elusive or even illusory. He is not concerned about acting with things, but about knowledge and ignorance, the division, dispersion, and diffusion of knowledge, alertness, discovery, learning, and the coordination and divergence of plans and expectations. The external—physical—world and real—material—events have almost completely disappeared from his view. Hayek's categories refer to *mental* states of affairs and relationships, completely detached from and compatible with any real physical state of affairs and events.

Most notable and disturbing is the ultra-subjectivist turn in Hayek's political philosophy. According to a long-standing tradition of political philosophy shared by Mises and Rothbard, freedom is defined as the freedom to privately own—and control—real property, and coercion is the initiation of physical

⁴*The Counterrevolution of Science* (New York: Free Press, 1955), p. 31.

damage—harm—upon the private property of others. In distinct contrast, Hayek defines freedom as “a state in which each can use his own *knowledge* and for his own *purposes*,”⁵ and coercion means “such control of the environment or circumstances of a person by another that, in order to avoid greater evil, he is forced to act not according to a coherent *plan* of his own but to serve the *ends* of another,”⁶ or alternatively, “coercion occurs when one man’s actions are made to serve another man’s will, not for his own but for the other’s *purpose*”⁷ (all emphases are mine). Clearly, Hayek’s definition contains nothing regarding scarce goods and real tangible property, and he provides no *physical* criterion or indicator whatsoever for the existence or non-existence of either state of affairs. Rather, coercion and freedom refer to specific configurations of subjective wills, plans, thoughts, or expectations. As *mental* predicates, Hayek’s definitions of freedom and coercion are compatible with every *real*, physical state of affairs. They possess no power to make any real distinctions.⁸

It is beyond the scope of this note to offer a detailed critique and refutation of Hayek’s ultra-subjectivism. However, beside the fundamental question whether a science of knowledge as envisioned by Hayek is even possible, i.e., whether there can be any other science of knowledge apart from logic and epistemology on the one hand and the history of ideas on the other,⁹ two conclusions are painfully clear. Even if Hayek’s science of knowledge is possible, it appears at best irrelevant because it is praxeologically—operationally—meaningless. At worst it is intellectually pernicious in promoting relativism.

As for the real world of acting with physical property, of production and exchange, of money and markets, profits and losses, capital accumulation and bankruptcies, there can be no lasting doubt about the existence of *laws* and the ceaseless operation of a *tendency* toward general equilibrium—action-coordination. Likewise, there can be no doubt about the existence of laws and the constant operation of dis-equilibrating tendencies within

⁵*Law, Legislation, and Liberty*, Vol. 1 (Chicago: University of Chicago Press, 1973), pp. 55–56.

⁶*Constitution of Liberty* (Chicago: University of Chicago Press, 1960), pp. 20–21.

⁷*Ibid.*, p. 133.

⁸See also Hans-Hermann Hoppe, “Hayek on Government and Social Evolution,” *Review of Austrian Economics* 7, no. 1 (1994): esp. 70f.

⁹For some serious doubts on this see Hans-Hermann Hoppe, *Kritik der kausalwissenschaftlichen Sozialforschung* (Opladen: Westdeutscher Verlag, 1983).

the world of actual taxation, counterfeiting, legislation, and regulation. Indeed, it would be extremely costly—prohibitive—to not recognize such laws and tendencies and to adopt relativistic views. In contrast, in surreptitiously shifting attention from the tangible world of action and property to the ethereal world of knowledge, ideas, plans and expectations, relativistic views become attractive (and cheap). There are no apparent regularities and tendencies in Hayek's knowledge world. In fact, it is difficult to even imagine what "law" and "equilibrium" could possibly mean in the context of purely subjective phenomena. Instead there exists seemingly nothing but constant kaleidoscopic change.

It is hardly surprising, then, that Hayek and his followers could proclaim such relativistic slogans as that we cannot do anything to improve our condition except rely on spontaneous evolution, that our future is completely unknowable, or that we cannot but participate in an endless and open-ended stream of conversation. As far as the realm of purely subjective phenomena is concerned, and as addressed to a purely spiritual—disembodied—being, this may well be good advice. Actually possessing physical—bodily—existence, however, why would anyone even care to know it? As applied to the world of bodily action and property, such advice is self-destructive nonsense.

Knowledge, Judgment, and the Use of Property

Jörg Guido Hülsmann

Two Interpretations of the Causes of the Socialist Disaster

In recent years, the socialist calculation debate of the 1920s and 1930s has attracted anew the interest of thinkers in the Austrian tradition. With the breakdown of the Soviet empire Ludwig von Mises's claim that socialism as an economic system is impossible has received a somewhat late empirical confirmation. However, modern Austrian economists are far from sharing a common interpretation of the issue.

Some of them think that the impossibility of socialism stems from its inability to communicate dispersed knowledge.¹ In their eyes, information about the particular circumstances of time and place can never be centralized. It necessarily exists in dispersed form and yet it can be communicated by the market prices of capitalist societies. Only capitalism is thus capable of solving the knowledge problem.

Other authors consider the knowledge-problem to be secondary.² They hold that the absence or presence of private property is the salient point. In socialism

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¹Cf., for example, Peter J. Boettke, *The Political Economy of Soviet Socialism* (Boston: Kluwer, 1990), pp. 23ff; Gerald P.O'Driscoll, *Economics as a Coordination Problem* (Lawrence: University of Kansas Press, 1977), pp.16ff; Richard M. Ebeling, "Economic Calculation Under Socialism: Ludwig von Mises and His Predecessors," in *The Meaning of Ludwig von Mises*, Jeffrey M. Herbener, ed. (Auburn, Ala.: Ludwig von Mises Institute, 1993), pp. 56ff; Jesús Huerta de Soto, "Entrepreneurship and the Economic Analysis of Socialism," in *New Perspectives on Austrian Economics*, Gerrit Meijer, ed. (London: Routledge, 1995), pp. 228ff; Israel M. Kirzner, *The Meaning of Market Process* (London: Routledge, 1992), pp. 51f, 100f; Don Lavoie, *Rivalry and Central Planning: The Socialist Calculation Debate Reconsidered* (New York: Cambridge University Press, 1985); Karen Vaughn, "Economic Calculation Under Socialism: The Austrian Contribution," *Economic Inquiry* 18 (1980); Leland B. Yeager, "Mises and Hayek on Calculation and Knowledge," *Review of Austrian Economics* 7, no. 2 (1994): 93–109.

²Cf., for example, Jeffrey M. Herbener, "Ludwig von Mises and the Austrian School of Economics," *Review of Austrian Economics* 5, no. 2 (1991): 33–50; idem, "Economic Calculation and the Question of Arithmetic," *Review of Austrian Economics* 9, no. 1 (1996); Hans-Hermann Hoppe, *A Theory*

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there can be no calculation because the latter presupposes market prices. Market prices, however, presuppose exchange and, thus, private property.

This division of opinions goes back to Mises and Hayek. Mises considered the emphasis on the knowledge problem to be insufficient because it merely suggested a *practical difficulty* for the implementation of a socialist regime. What he had in mind was that socialism was, for purely logical reasons, *impossible*.³ Hayek, on the other hand, focused entirely on the problem of dispersed knowledge.⁴ He not only developed this point in the context of the socialist calculation debate but it is the foundation of all of his later social philosophy.

Importance of the Dispute

We are not merely discussing the reasons for the failure of socialism, because the dispute concerns both the understanding of what economics is all about and the practical conclusions that can be inferred from our science. The whole issue is of fundamental importance.

of *Socialism and Capitalism* (Boston: Kluwer, 1989); idem, "Socialism: A Property or Knowledge Problem?" *Review of Austrian Economics* 9, no. 1 (1996): 143–49; Murray N. Rothbard, "Ludwig von Mises and Economic Calculation Under Socialism," in *The Economics of Ludwig von Mises*, Lawrence Moss, ed. (Kansas City: Sheed and Ward, 1976); idem, *Man, Economy, and State*, 3rd ed. (Auburn, Ala.: Ludwig von Mises Institute, 1993), esp. pp. 542ff, 825ff, 830ff; Joseph T. Salerno, "Ludwig von Mises as Social Rationalist," *Review of Austrian Economics* 4 (1990): 25–54; idem, "Mises and Hayek Dehomogenized," *Review of Austrian Economics* 6, no. 2 (1993): 113–46; idem, "Reply to Leland B. Yeager," *Review of Austrian Economics* 7, no. 2 (1994): 111–25.

³Commenting on Hayek's article "The Present State of the Debate" (in *Collectivist Economic Planning*, F. A. Hayek, ed. [London: Routledge, 1935], p. 211), Mises says: "Hayek has shown that the use of equilibrium for economic calculation presupposes knowledge of the future valuations of the consumers. However, he has seen in this merely a problem of the practical application of the equations, not a fundamental and unsurmountable obstacle for their practical use." I am indebted to Dan Cristian Comanescu for bringing this passage to my attention. Consider also the following statement from Mises: "We do not deal with the problem of whether or not the director will be able to anticipate future conditions. What we have in mind is that the director cannot calculate from the point of view of his own present value judgments and his own present anticipation of future conditions, whatever they may be." Ludwig von Mises, *Human Action*, 3rd ed. (Chicago: Regnery, 1966), p. 700, my emphasis. Here Mises stresses the role of calculation, that is, of a method of thought. He explicitly denies the importance of knowledge for the issue under consideration.

⁴Hayek says: "The peculiar character of the problem of a rational economic order is determined precisely by the fact that the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess." F. A. Hayek, "The Use of Knowledge in Society," in idem, *Individualism and Economic Order* (Chicago: University of Chicago Press, 1948), p. 77. Moreover, Hayek explicitly contended that economic calculation would be possible without private property: "It is the great contribution of the Pure Logic of Choice that it has demonstrated conclusively that even such a single mind could solve this kind of problem only by constructing and constantly using rates of equivalence (or "values" or "marginal rates of substitution"), that is, by attaching to each kind of resource a numerical index which cannot be derived from any property possessed by that particular thing, but which reflects, or in which is condensed, its significance in view of the whole means-end structure." *Ibid.*, p. 85).

According to Mises, economics is a science that consists of *a priori* propositions about reality. In his eyes these propositions are implied in the conditions of action and are arrived at by an exercise of logic. Whatever is the product of sound discursive reasoning, so the argument goes, must be valid for reality.

This is precisely the point that Hayek wants to oppose. To his understanding, economic theorems are in some way detached from reality. They are mere tautologies. Additional statements about the acquisition of knowledge are necessary to make them relevant for the understanding of our world. Thus, consider the programmatic declaration that he gave in his article on “Economics and Knowledge”:

my main contention will be that the tautologies, of which formal equilibrium analysis in economics essentially consists, can be turned into propositions which tell us anything about causation in the real world only in so far as we are able to fill those formal propositions with definite statements about how knowledge is acquired and communicated. In short, I shall contend that the empirical element in economic theory—the only part which is concerned not merely with implications but with causes and effects and which leads therefore to conclusions which, at any rate in principle, are capable of verification—consists of propositions about the acquisition of knowledge.⁵

Formal equilibrium analysis in the sense Hayek uses refers to the mathematical approach. However, it is at least doubtful whether one really has to condemn equilibrium analysis altogether in order to refute socialism. This is an issue beyond our present scope. Rather the focus is on a critique of the Hayekian emphasis on knowledge problems and on a reconstruction of the fashionable expressions of market process and knowledge in terms of property and calculation. The Hayekian approach has been elaborated with delicacy by Israel M. Kirzner. Therefore, the present critique will refer mainly to his works.⁶ The whole knowledge paradigm is a blind alley and its infallibility leads to nihilism of the Shacklean–Lachmannian brand.

The Case Against the Knowledge Paradigm in Economics

Do Prices Communicate Knowledge or Coordinate Actions?

The first thing we have to ask is whether prices do have a communicative function at all. According to Kirzner, there are two quite different communicative functions of prices. He distinguishes between the communicative functions

⁵Ibid., p. 33.

⁶For a statement of some of my criticisms, see Jörg Guido Hülsmann, *Logik der Währungskonkurrenz* (Essen: Management Academie Verlag, 1996), pp. 13ff, 122ff.

of equilibrium and disequilibrium prices, and places particular emphasis on the latter:

It is one thing to recognize the role of equilibrium prices as economic signals which permit instantaneous coordination of decentralized decisions, based on dispersed bodies of knowledge. It is quite another thing to recognize the role of *disequilibrium* prices in stimulating entrepreneurial discoveries concerning the availability of dispersed information (whose existence had hitherto escaped relevant attention).⁷

Let us consider these functions in turn. This first thesis refers to equilibrium prices. It is, indeed, composed of three distinct sub-theses.

First off, prices are claimed to contain economic information in a condensed form.⁸ This is undoubtedly true if one intends to say that prices give information about exchange ratios of the past. Yet, we have to remark that past prices are the outcome of past conditions. Action, however, is never confronted with past but with future conditions, namely, with all conditions prevailing during its course. Moreover, and this is the crucial point, we should not overlook that prices are always the *outcome* of an action. Therefore, all information that this action was based upon had to be acquired beforehand. The price itself could not have communicated the knowledge that brought it about. Only in a metaphorical sense could one say that prices reflect or contain information on present conditions. For acting man these conditions of the immediate past are already by-gones.

The second sub-thesis says that equilibrium prices permit the communication of dispersed bodies of knowledge.⁹ These particular circumstances of time and place are never known by anyone in their totality. Yet, through the exchange ratios of the market, they are transmitted in abridged form to all market participants. According to these advocates, socialism suffers because it has no equivalent mechanism. The socialist planning board cannot determine the values of the factors of production because these values are determined by facts of supply and demand that are too widely dispersed.¹⁰

⁷ Kirzner, *The Meaning of Market Process*, p. 117. For a forerunner of Kirzner see Otto Conrad, *Der Mechanismus der Verkehrswirtschaft* (Jena, 1931), pp. 36ff. Conrad advocated what he called a "road sign" theory of prices. The first instance of an equilibration process is probably Spencer's law of adaptation. According to this law, "the ultimate development of the ideal man is logically certain." *Social Statics*, 1st ed. (reprint; New York: Robert Schalkenbach Foundation, 1970), p. 55–57. The driving force in the adaptation process is man's moral sense (see *ibid.*, pp. 83ff).

⁸ See Kirzner, *The Meaning of Market Process*, p. 151; and *idem*, *Competition and Entrepreneurship* (Chicago: University of Chicago Press, 1973), p. 10.

⁹ See also Kirzner, *The Meaning of Market Process*, pp. 139ff; and *idem*, *Competition and Entrepreneurship*, p. 228.

¹⁰ Hayek, *Individualism and Economic Order*, pp. 90f: "Only to a mind to which all these facts were

Let us observe that the positive part of this reasoning contains no argument at all. It is asserted that prices communicate abridged relevant information. This, however, is only a metaphorical expression. Each exchange ratio is determined by particular circumstances of time and place. Yet, it is not important *that* this be so but rather—if at all—*how precisely* this determination operates. As long as there exists no theory about the exact determination of our choices, we can infer nothing from the fact that everything must be determined. It is also mere assertion that no mechanism other than prices could communicate those dispersed facts with the same speed.¹¹ However, if we assume, for the sake of the argument, that this was the case, then the market economy would stumble from one crisis into another. The quickest information for the capitalist-entrepreneurs is in the observation of market prices. Only then would they begin to act. In other words, if information really were so important, there would be no use for anticipating the future, yet it is precisely the latter that permits the market to operate smoothly.

Finally, the advocates of the importance of knowledge problems argue that exchange ratios permit the coordination of decentralized decisions. It is difficult to see how coordination as such could ever be a problem that socialism is incapable of solving. Indeed, in a larger sense all actions are somehow coordinated. Our actions are no less coordinated with the actions of milkmen and movie tycoons than with those of robbers, rapists, and murderers. It is not the problem of murder that the Hayekian knowledge theorists have in mind when they speak of coordination, so an additional criterion is required to distinguish “good” from “bad” coordination. This criterion—and not coordination—would then be the cornerstone of economic analysis.¹²

Thus, one is led to wonder whether the word “coordination” is but an unfortunate expression that obscures some valuable insights. We should therefore take a closer look at the illustrations given in support of the knowledge-problem approach. Probably most famous is the tin example that Hayek uses to illustrate the claim that “prices can act to coordinate the separate actions of

simultaneously known would the answer necessarily follow from the facts given to it. The practical problem, however, arises precisely because these facts are never so given to a single mind, and because, in consequence, it is necessary that in the solution of the problem knowledge should be used that is dispersed among many people.”

¹¹“We cannot expect that this problem will be solved by first communicating all this knowledge to a central board which, after integrating all knowledge, issues its orders.” *Ibid.*, p. 84. On this point and its implications see in particular Hoppe, “Socialism: A Property or Knowledge Problem?”

¹²For a critique of coordination as a relevant criterion for economic theory, see also Stephen Shmanske, “On the Relevance of Policy to Kirznerian Entrepreneurship,” *Advances in Austrian Economics* 1 (1994): 204ff.

different people in the same way as subjective values help the individual to coordinate the parts of his plan." Hayek suggests that we:

Assume that somewhere in the world a new opportunity for the use of some raw material, say, tin, has arisen, or that one of the sources of supply of tin has been eliminated. It does not matter for our purpose—and it is significant that it does not matter—which of these two causes had made tin more scarce. All that the users of tin need to know is that some of the tin they used to consume is now more profitably employed elsewhere and that, in consequence, they must economize. There is no need for the great majority of them even to know where the most urgent need has arisen, or in favor of what other needs they ought to husband the supply. If only some of them know directly of the new demand, and switch resources over to it, and if the people who are aware of the new gap thus created in turn fill it from still other sources, the effect will rapidly spread throughout the whole economic system and influence not only all the uses of tin but also those of its substitutes and the substitutes of these substitutes, the supply of all things made of tin, and their substitutes, and so on; . . . The whole acts as one market, not because any of its members survey the whole field, but because their limited individual fields of vision sufficiently overlap so that through many intermediaries the relevant information is communicated to all.¹³

There can be no doubt that the effect of the increased scarcity of tin will rapidly spread throughout the whole economic system and influence not only all the uses of tin but also those of its substitutes, etc. This process is, however, not best characterized by a coordinative function of prices.

The fundamental fact of scarcity implies that not every demand for tin can be satisfied. Some people have tin whereas others do not. An increased scarcity of tin implies that some market participants who otherwise could have benefited from tin are now of necessity prevented from using it. If a quantity of tin is sold, then the seller cannot sell it again, *regardless of the exchange rate*. There is simply no more of this tin left. Whether the seller takes notice of this or not is immaterial. He cannot sell what is no longer in his possession. Moreover, tin does not become scarcer and *then* this fact can come to be known to someone and lead to adaptations. Rather it is the other way around. The very fact that demand increases means that someone *already knows* of a more value-productive employment of tin.

It is not prices that coordinate the actions of sellers and buyers of tin; prices are the outcome of (coordinated) action, not its coordinators. It is property,

¹³Ibid., pp. 85f.

rather than knowledge, that coordinates the separate actions of different people. The terms coordination and communication rather obfuscate than adequately express this fact. This is another example of the dangers linked to the use of metaphors in scientific discourse.

The Attraction Theory of Equilibration

Now, let us return to the second of Kirzner's theses. How far is it justified to speak of a communicative function of disequilibrium prices? Previously, we have seen that Kirzner believes them to stimulate entrepreneurial discoveries concerning the availability of dispersed information. The important word in this expression is "stimulate." Does Kirzner intend to say that prices or price spreads are the *causes* of actions? Indeed, this seems to be the position that he advocates. He says: "opportunities for profit can attract and inspire market actions which turn out to reduce market ignorance and misallocation."¹⁴

It is important to realize that this conception does not coincide with entrepreneurial alertness in the definition used by Kirzner. Entrepreneurial alertness is to be "understood as the capacity independently to size up a situation and more correctly reach an imagined picture of the relevant (as yet indeterminate) future. All of us share in this ability to some extent . . . But some have higher degrees of this ability."¹⁵

Indeed, who would venture to deny that each of us, at least to some extent, manages to size up a situation and correctly reach an imagined picture of the relevant future?¹⁶ However, Kirzner's conception of the communicative function of disequilibrium prices relies on something entirely different from alertness in the above sense. He claims that

it is the *prospective gain offered by [future] realities* which "switches on" entrepreneurial alertness.¹⁷

¹⁴Kirzner, *The Meaning of Market Process*, p. 36. He also uses other expressions for this claim. Thus he says, for example, that "opportunities for pure profit [are] able to attract the attention of the most alert entrepreneurs," idem, *Perception, Opportunity, and Profit* (Chicago: University of Chicago Press, 1979), p. 151. See also Israel M. Kirzner, *Discovery and the Capitalist Process* (Chicago: University of Chicago Press, 1985), pp. 27ff, 96, 132. Kirzner also advances Hayek's claim that a mode of organization can generate learning, see, *Perception, Opportunity, and Profit*, p. 147; and Hayek, *Individualism and Economic Order*, p. 95). Esteban Thomson, a student of Kirzner's, puts forth the same argument: "Market prices . . . are not merely an efficient way of aggregating and transmitting information already known by someone but, more important, they are the stimulators of a discovery process." Esteban Thomson, *Prices and Knowledge* (London: Routledge, 1992), p. 37.

¹⁵Kirzner, *The Meaning of Market Process*, p. 26.

¹⁶This point is lucidly stated by Hans-Hermann Hoppe in "On Certainty and Uncertainty, Or: How Rational Can our Expectations Be?" *Review of Austrian Economics* 10, no. 1 (1997): 49–78.

¹⁷Kirzner, *The Meaning of Market Process*, p. 27.

We know very little about the precise way in which pure profit opportunities attract entrepreneurial attention. But there can be little doubt about the powerful magnetism which such opportunities exert.¹⁸

Kirzner has invited us, without supporting argumentation, to share his belief in what could be labelled an attraction or revelation theory. For if action is conscious behavior, what does it mean that price spreads *cause* action? There must be a sort of mechanism that brings price spreads to the attention of some entrepreneurs. Price spreads must then be conceived of as somehow jumping into an entrepreneur's consciousness without requiring any prior action on his part. In general terms, Kirzner's conception implies that we (or some of us) do have information about an object because the object itself puts it somehow in our consciousness. We are passive and the object is active.

Of course, this is not true. The objects in our environment are as they are—whether we know something about them or not. However, without conscious action on our part we will never know anything about them. Or could you even describe the color of the seat you sit upon right now without consciously looking at it once again? Could you even say precisely how many steps one has to climb to get to your hotel room without counting them? There is an infinite number of questions of this kind, and each time the answer is no. It is not the objects that attract our action. We have to act to make them enter into our consciousness.

To be sure, an object must be there to be perceived. Its existence is a necessary condition for its being perceived. Yet a perception is always an action, that is, the manifestation of a choice; and choice is in no known way determined by any object. Thus, without consciously taking notice of the prices that are formed on the market we cannot possibly know about them. As a consequence, we cannot be attracted by prices and price spreads, either.

Price differences in the same market are no exception. Even if there are different prices at the same time and in the same geographical area, entrepreneurs have to consciously look for them. They have to *act* in order to know where to buy and where to sell.

At each moment there is probably an infinite number of undiscovered price spreads. We would all be much better off if Kirzner was right and these price spreads were revealed to some of our fellows. They could stay at home, sit in their armchairs and reap some pretty profits. Unfortunately, this is not how things happen in our world. It is therefore impossible to conclude with Kirzner that

¹⁸Ibid., p. 160.

“this very spread between high and low prices suggests to some alert entrepreneurs that arbitrage profits may be won.”¹⁹

Kirzner does not claim that every alert entrepreneur will be attracted by profit opportunities. However, this is no solution to the difficulty that his attraction theory faces. In a sense it rather creates additional difficulties. For one still has to explain *how* an object, by its sole existence, can enter our consciousness. Yet, now, one also has to explain *why* some persons are more susceptible to price spreads than other persons.

However, even if one ignored these objections and even if one assumed, for the sake of argument, that alert entrepreneurs could somehow know the marginal value product of factors of production, the attraction theory would still be contradictory. For either a factor of production has already been sold on the market or not. If it has been sold at a price below its discounted marginal value product then there is a profit opportunity. Yet, in this case, it would be too late for an alert entrepreneur to intervene, for the very reason that it already has been bought by a competitor. If, by contrast, that factor has not yet been sold to anybody then there is no price spread. As a consequence, no alert entrepreneur *can* be attracted to purchase this factor. Thus, the attraction theory is invalid even on its own assumptions.

Kirzner would probably deny that his theory leads him close to the grounds of a somewhat crude materialism. He sometimes emphasizes that one “can never say that alertness rendered its possessor sure that he would successfully discover that which he later discovers.”²⁰ However, one should not overlook that his attraction theory is of crucial importance to what he considers to be the central theorem of economics, namely, the theorem that “demonstrates the equilibrative and coordinative tendencies in the market process.”²¹ This theorem, as Kirzner understands it, rests on the notion of a systematic learning process that is generated throughout subsequent time periods.²²

¹⁹ Ibid., p. 146, emphasis added.

²⁰ Israel M. Kirzner, *Discovery, Capitalism, and Distributive Justice* (Oxford: Basil Blackwell, 1989), p. 24; see also idem, *Discovery and the Capitalist Process*, p. 109.

²¹ Ibid., p. 160.

²² Kirzner did not always advocate an attraction theory, see *Competition and Entrepreneurship*, p. 227, and idem, *Perception, Opportunity, and Profit*, p. 130. Yet, he always believed that a theory of the market process has to rely on a way to determine choices by the physical environment of action. In his *Competition and Entrepreneurship*, he did not conceive of this determination as running through price spreads. Rather he stressed, in a more general way, that the “newly acquired information concerning the plans of others can be expected to generate, for the succeeding period of time, a revised set of decisions. The overambitious plans of one period will be replaced by more realistic ones; market opportunities overlooked in one period will be exploited in the next.” Ibid., pp. 10 and 70ff; also see *The Meaning of Market Process*, pp. 48, 16, 129. To be sure, this is mere assertion as well. Nowhere does Kirzner give an argument as to *why* the plans will be revised and *why* they will be more realistic.

Now such a theorem must of necessity show that discoveries (that is, pertinent judgments) are in some way determined by the objective conditions of action. If discoveries were determined by choice alone, such a demonstration would be impossible, as choice implies that one can err. Hence, Kirzner's central theorem requires that discoveries be explained by factors other than choice. This is precisely what Kirzner attempts to do with his attraction theory. Indeed, it would be insufficient for his purpose to merely stress the "motivation to see relevant facts as they are."²³ For such a motivation alone would, of course, not assure any success. It is not sufficient to claim that entrepreneurs are alert if one wants to prove the existence of a Kirznerian equilibrating process. One has to show *that* they succeed and why. Above we have seen that Kirzner can hardly be said to have solved this problem. The reason is, of course, that one cannot think of action apart from choice. Yet, does this mean that it is vain to look for any tendency of the market toward equilibrium? Be that as it may, even if the analysis of equilibrium or equilibration were defective it could hardly be helpful to supplement it or to replace it with another fallacious theory.

The Consequence: Empiricism

By the way, Kirzner seems not to be very convinced of his proof of equilibration, either. Above we have noted that at the bottom of Kirzner's attraction theory there is nothing but his *belief* in it. This is no exaggeration. Indeed, Kirzner is very conscious that this is the basis of his theory. Consider the following statements:

It can be shown that our confidence in the market's ability to learn and to harness the continuous flow of market information to generate the market process depends crucially on our belief in the benign presence of the entrepreneurial element.²⁴

An assertion that the attempted execution of a set of incompatible plans will set in motion a systematic series of plan changes tending toward equilibrium cannot be made on purely logical grounds. Such an assertion must depend on a postulated propensity on the part of market participants to learn the correct lessons from their experience.²⁵

This reliance on mere assertion and on an appeal to share in his belief indicates that Kirzner has abandoned the idea of praxeology, that is, of a logic of the social phenomena. Indeed, his empiricism has constantly grown over the years.²⁶ In his last book he explicitly says:

²³Kirzner, *Discovery and the Capitalist Process*, p. 83.

²⁴Kirzner, *Competition and Entrepreneurship*, p. 14.

²⁵Kirzner, *Perception, Opportunity, and Profit*, pp. 24 and 33.

²⁶Cf. also Eran Binenbaum, "Kirzner's Core Concepts," in *New Perspectives on Austrian Economics*, Meijer, ed., p. 146ff.

economic science has always proceeded from the important empirical circumstance of economic order. . . . The market obviously works. That the market works is perhaps the most significant lesson of modern history.²⁷

It is the central tenet of market process theory, under the present variant of it, that despite the complexities thus introduced by continually changing UV's [underlying variables], the essential character of the market process, as a matter of historical experience, does remain largely intact.²⁸

This is not the way Mises conceived of the market or of the relationship between the historical and the theoretical branches of the social sciences. It is an open question whether market-process analysis of the Kirznerian variant is not essentially a kind of historical investigation. However, we cannot address this topic at this place as our purpose is more limited.

Robbinsian Economizing and Kirznerian Entrepreneurship

From what has been said so far it follows that Kirzner's whole characterization of entrepreneurial activity as a resourceless discovery²⁹ is unfounded. For if action implies that scarce means are employed in the pursuit of ends, and if one has to act in order to perceive anything whatever, then there can be no such thing as a discovery—or better: a judgment—without the disposition of one's brains and sensory apparatus. There can be virtually no activity at all without at least *some* property.³⁰ As a consequence, it would be equally impossible to realize any judgment on the market without becoming a capitalist. Likewise it is inconceivable to be simply a capitalist lending funds to an alert idea man. For doing this, one would at least have to make the discovery that this credit is at the moment the best way to use one's property.³¹

We have seen that the root of Kirzner's errors concerning entrepreneurial discoveries lies in his attempt to determine choice—if only implicitly. Choice is

²⁷ Kirzner, *The Meaning of Market Process*, p. 35.

²⁸ *Ibid.*, p. 43.

²⁹ "What the introduction of the pure entrepreneur means, however, is that for our analysis we create a decisionmaker who starts without any means whatsoever." Kirzner, *Competition and Entrepreneurship*, pp. 40, and 16, 22, 44, 47ff, 53f, 83.

³⁰ Even though Mises advocated a functional distinction between capitalists and entrepreneurs he emphasized that "it is impossible . . . to imagine an entrepreneur without any resources" and that entrepreneurial risks "are inseparable from the ownership of the material means of production" (my translation). "Les hypothèses de travail dans la science économique," in *Cournot, nella economia e nella filosofia*, Padora, ed. (Venice: Facoltà de economia e commercio, 1939), p. 118. See also Shmanski, "The Relevance of Policy in Kirznerian Entrepreneurship," pp. 214–19.

³¹ Cf. Murray N. Rothbard, "Professor Hébert on Entrepreneurship," *Journal of Libertarian Studies* 7, no. 2 (1985): 283ff. It is remarkable that nowhere does Kirzner address this critique.

the universal problem with which acting man is confronted. At each moment he has to choose the supposedly most important action that can be executed. This kind of judgment is the cornerstone of economic science. It is well known that Kirzner tends to qualify this. All of his work—virtually all of his articles—starts from a critique of what he calls the “Robbinsian economizer.”³²

Kirzner claims that the problems of real life are disfigured if one considers the economic data to be given to the market participants. In Kirzner’s eyes, if a datum is given this means that it is *known* to some or all market participants.³³ As a consequence, he emphasizes that the market participants have to discover the data. If the latter are only incompletely perceived, there can be something like “sheer ignorance” of the present data. It is through the market process that the data become known as they are discovered. Kirzner further argues that what counts is not equilibrium and perfect knowledge but equilibration and discovery. Let us not waste our time, so the argument goes, with the never-never land of the evenly-rotating economy and perfect knowledge. Let us rather focus on our way to acquire knowledge and thus approach equilibrium in a process of equilibration.

One cannot deny that not all data are given to us in the sense that we know them. However, it is a different question whether this was claimed in Lionel Robbins’s *The Nature and Significance of Economic Science*. And it is also a different question whether, if Robbins did do so, the Kirznerian entrepreneur would be a viable alternative.

An impartial reader of Robbins’s above-mentioned book cannot help but wonder what Kirzner’s critique is based upon. Kirzner rarely gives quotations to support this argument, and it is only in his work *The Economic Point of View* that he quotes at length from Robbins.³⁴ Yet even in these quotations nothing can be found which could possibly support his claim against Robbins. To avoid any misunderstandings: I do not intend to say that nothing can be found in these quotes that would not be worthwhile criticizing. However, it is obvious that Robbins does not consider the ends of action to be *known*. Rather, he explicitly states that, for economic theorems to be valid, the concrete means-ends frameworks are irrelevant.³⁵

³² Cf., Kirzner’s *Competition and Entrepreneurship*, pp. 33f and 71ff; idem, *Perception, Opportunity, and Profit*, pp. 5ff and 167; idem, *Discovery and the Capitalist Process*, pp. 81f, 153ff; and idem, *The Meaning of Market Process*, pp. 124ff.

³³ Cf., Kirzner *Competition and Entrepreneurship*, pp. 29, 108, 118; idem, *Perception, Opportunity, and Profit*, pp. 14f; idem, *Discovery and the Capitalist Process*, p. 154; and idem, *The Meaning of Market Process*, p. 154f.

³⁴ Israel M. Kirzner, *The Economic Point of View* (New York: D. Van Nostrand, 1960), pp. 108ff.

³⁵ Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, 2nd ed. (London: Macmillan, 1935), pp. 24ff.

Perhaps Kirzner's purpose is not to criticize Robbins but some contemporary microeconomic textbooks featuring a caricature of acting man. Thus, he points out "that the purely allocative decision never does occur, and that in fact it is sheer illusion to imagine that economic science can ever provide the kind of precision suggested in microeconomic textbooks."³⁶ However, in this case it would be inadequate to charge Robbins with the fallacies of some writers who are (or can be considered to be) inspired by his work. And still the question remains, then, whether the emphasis on discovery and knowledge represents any conceivable advance over the emphasis on choice.

Of course, we do not know everything in our environment in the sense that we have already experienced it. But this is completely irrelevant for the problem of choice. For to choose correctly does not mean that one has experienced all relevant data, but that one acts according to a correct *judgment* upon these data.³⁷ That data are given does not mean that they are known. It means rather, that our action is confronted with them, be they means or obstacles. Yet they *are* means and obstacles independently of the question whether we know them or not. It is also irrelevant whether a datum does already exist at the moment of our decision. If it comes into existence only in the future it is no less a datum than any other. For our action, it is then given in the same sense as the presently-existing data are given, too. Entrepreneurial appraisements of the factors of production do not presuppose information about the future. They are judgments based on estimates, that is, judgments about the future.³⁸

Does all this mean that knowledge has no bearing on action whatever? Indeed, one cannot avoid this conclusion by saying that most of our past knowledge can successfully be applied in the future. For the very question is *why* this is so. The validity of empirical knowledge has been established by experience, and all our experiences are determined by the totality of their conditions. Yet,

³⁶Kirzner, *Discovery and the Capitalist Process*, p. 83.

³⁷This is regularly pointed out by Kirzner's critics. See Jack High, "Alertness and Judgment: Comment on Kirzner," in *Method, Process, and Austrian Economics*, Israel M. Kirzner, ed. (Lexington, Mass.: Lexington Books, 1982), p. 165; and Emile Wubben, "Austrian Economics and Uncertainty," in *New Perspectives on Austrian Economics*, Meijer, ed., p. 130f.

³⁸This crucial fact has already been stated by Henry Hazlitt: "It is not enough that the entrepreneur be 'alert' and that he 'perceive' an opportunity; he must *act* on his alertness and perception. . . . By omitting this link [Kirzner] tends to overstress the entrepreneur's alertness and perception while under-emphasizing his courage in taking risks. . . . It is not always true that the entrepreneur perceives an opportunity. He *thinks* he perceives it. He perceives an *apparent* opportunity. In fact, he is *betting on an assumed future condition*. What he acts on may not be a perception but a *guess*. . . . Every entrepreneur is pitting his own guess or 'perception' against the composite guess or perception of all the rest." Hazlitt, "Review of *Competition and Entrepreneurship*," *The Freeman* (December 1974): 759.

the conditions of action are not immutable. Rather, they change from day to day. Here lies the problem of the application of past knowledge. We have to *judge* whether the same conditions will prevail in the future as well. To this task all our empirical knowledge is of no help.

Therefore, there can be no such thing as a “generation of knowledge” through disequilibrium prices. The latter do not “reveal, to alert market participants, how altered decisions on their part . . . may be wiser for the future.”³⁹ No past experience tells us what we should expect for the future to come. Neither can it tell us which actions we should choose.

Each action presupposes an ingredient that is entirely distinct from knowledge and information, namely, a judgment upon the conditions prevailing in the future. Why, then, do we need the Kirznerian entrepreneur at all?⁴⁰ Even Kirzner himself sometimes describes the Robbinsian economizers as “decision makers [that] are passive price-takers, simply optimizing against the background of assumed data.”⁴¹ Thus Robbinsian economizers do not behave as mechanically as Kirzner would have us believe them to be. At least they anticipate the future. They thus cannot be simple price-takers. Kirzner would surely retort that nothing in their behavior assures equilibration. However, as we have seen, nothing in his concept of an entrepreneur can assure this, either. Kirzner’s argument, therefore, boils down to saying that “some assumptions about the future prove to be profitable whereas others do not; *therefore* the former are ‘entrepreneurial discoveries’ whereas the latter are the ‘data’ assumed by Robbinsian economizers.” True enough, but this kind of wisdom would not require an economist.

Searching for Knowledge of the Future: the Road to Shackleanism

Kirzner’s emphasis on discovery and equilibration is not necessary to give meaning to any sound economic doctrine. As we have already noted, in its attraction-theory version it merely leads to additional problems. Now we have to focus on another area of difficulty that inevitably follows from considering knowledge problems as the cornerstone of economics. For the talk of knowledge and sheer ignorance leads ultimately to what is erroneously called extreme or radical subjectivism (erroneously, because it is rather a spurious subjectivism). If

³⁹ Kirzner, *The Meaning of Market Process*, p. 146.

⁴⁰ Roger Garrison remarks perceptively that it is a “fundamental point of logic” that at “some points in the analysis . . . an entrepreneurial function lying outside the supply-and-demand framework is necessary.” “Equilibrium and Entrepreneurship,” *Advances in Austrian Economics* 2 (1995): 68 and 76. However, it is not alertness that fulfills this function but action based on a judgment about the future.

⁴¹ Kirzner, *Competition and Entrepreneurship*, p. 42, emphasis added. See also idem, *The Meaning of Market Process*, p. 129.

knowledge can only be acquired after perception, then economics (and all other social sciences, too) can only be an empirical, *ex post* science of human action. Now, strictly speaking, *all* knowledge that we ever acquire is acquired *ex post*, i.e., after a perception.⁴² We always have to advance additional reasons to argue for the more or less universal validity of a perception. Yet, the spurious subjectivists just claim (correctly) that there can be no present experience of future events. From this they infer that there can be no scientific statements about the future, either. For them, the future is kaleidoscopic, veiled and, in principle, unknowable.

Emphasis on discovery and equilibration cannot avoid these conclusions at all. It is vain to think that there is a kind of knowledge-producing mechanism called equilibration. Despite all claims to the contrary, this kind of a mechanism is the very core of Kirzner's comprehension of the market. One may discuss the question whether it is really a mechanism that is at stake. But it is hardly possible of denying that Kirzner's theory of equilibration aims at and relies upon statements about the systematic nature of entrepreneurial discoveries. Call this systematic nature of discoveries a mechanism or call it something else—the crucial point is that there must be a constancy that links perceptible events and their perception, that is, their discoveries. Otherwise, one could not speak of a theory at all, for a theory always aims at the establishment of general rules. There cannot be such a rule without constancy.

Of course, neither Kirzner nor anybody else has succeeded in elaborating such a theory. However, we have to address the question of whether it is at least conceivable that such a theory can be constructed. For in this case, Kirzner's attempts could be considered to be a quite normal failure but not without some merit. Unfortunately this is not the case. The notion of a constant relationship between perceptible objects and their perception, which must be rejected. It is not a viable approach to economics at all. We know nothing about the precise reasons for perceptions.

This criticism has already been noted above. The only way to counter it is to claim that, in the course of time, acting man discovers more and more of the environment of his actions. Once we have discovered an object, we learn each day to deal a little bit better with it. As time goes by, we can better discern what kind of perceptions it does permit under what circumstances.

⁴²This point is stressed by all subjectivists. Cf., for example, Ludwig Lachmann, *Expectations and the Meaning of Institutions*, Don Lavoie, ed. (London: Routledge, 1994), esp. chaps. 16 and 17; Brian J. Loasby, "Economics of Dispersed and Incomplete Information," in *Method, Process, and Austrian Economics*, Kirzner, ed., pp. 122f; G.L.S. Shackle, *Epistemics and Economics* (Cambridge, England: Cambridge University Press, 1972), p. 91.

Even if this is true, let us note three points. First of all, it does not concern the lack of a viable perception theory. The proposition that, once we know something, we know it for all time does not answer the question of how we came to know it. Furthermore, this proposition ignores the fact that the conditions of action do not cease to change. Therefore, the knowledge that we acquired through an *ex post* evaluation of the past cannot simply be applied again in the future.⁴³ Yet most importantly, it merely refers to objects different from human action. But what about action itself? What about choice and perception? Can choice and its offspring, prices and price spreads, be studied with the same results as the dead matter around us? The answer to this question is no. Not only is it impossible to deduce choice from any other conditions of action, there also *can* be no theory featuring the causes of choice. Such a theory would have to assume that there was something like constancy in the thought of acting man. In other words, such a theory would have to presuppose that man cannot learn; this, however, is self-defeating.⁴⁴

To be sure, no entrepreneur can base his judgments on the sole analysis of conditions of action other than choice. He has to analyze choice as well. Yet, this he must do in the way of thymological understanding.⁴⁵ Thus, he can never arrive at any general conclusions. There is no possibility to say in a general manner under which conditions our discovered knowledge about price spreads will be valid.

The emphasis on knowledge and discovery cannot avoid the pitfalls of spurious subjectivism. However, the latter doctrine is definitely not the position Kirzner advocates. In *The Meaning of Market Process*, he emphatically refutes the case of spurious subjectivism. He tries to defend what Roger Garrison calls the Austrian middle ground.⁴⁶ However, on the basis of his own account of economic doctrine, this would be an impossible undertaking. If equilibrium analysis presupposes that all data are *known* to each market participant, one cannot counter the arguments of the spurious subjectivists. Yet, in his refutation of the latter, Kirzner does not try to show that they have given a wrong account of the allegedly-important problems of knowledge and sheer ignorance. Rather, he makes an excellent case for common sense, and this case he states without recourse to knowledge and ignorance, but with emphasis on action and choice. He says:

⁴³ Cf. on this point Salerno, "Mises and Hayek Dehomogenized": 126f.

⁴⁴ Cf. Hans-Hermann Hoppe, *Kritik der kausalwissenschaftlichen Sozialforschung* (Opladen: Westdeutscher Verlag, 1983), and idem, *A Theory of Socialism and Capitalism* (Boston: Kluwer, 1989), chap. 6.

⁴⁵ Cf. Ludwig von Mises, *Theory and History* (Auburn, Ala.: Ludwig von Mises Institute, 1985).

⁴⁶ Cf. Roger W. Garrison, "Austrian Economics as the Middle Ground," in *Method, Process, and Austrian Economics*, Kirzner, ed., pp. 131ff.

The usual, layman's, perception of human decisions is that some of them are taken wisely, judiciously, successfully. These are the decisions which, in retrospect, one recognizes as having been crucial to the achievement of some desirable outcome. Other decisions, the usual perception has it, turn out to have been unsuccessful; in retrospect, at least, they are seen to have been mistakes. . . . Here we have the nub of our apparent disagreement with the radical subjectivists: is it or is it not meaningful to describe a decision as having been appropriate, in the light of subsequent events, or as having been inappropriate?⁴⁷

What are these statements other than an implicit acknowledgement of the irrelevance of knowledge problems? In any case, they do not mark a new turn in Kirzner's thought on these problems. In a revealing passage from his *Competition and Entrepreneurship*, he made the following remarks:

My discussion of entrepreneurial alertness has deliberately avoided its speculative character. I have of course recognized that in a world of uncertainty every entrepreneurial decision, no matter how much alertness it reflects, must to some extent constitute a gamble. But it has been my purpose to point out that the entrepreneur's decision—despite its unavoidably speculative character—represents his judgment that an opportunity for profit *does* exist. All human action is speculative; my emphasis on the element of alertness in action has been intended to point out that, far from being numbed by the inescapable uncertainty of our world, men *act upon their judgments* of what opportunities have been left unexploited by others.⁴⁸

This is the common ground of sound economics. However, with regard to Kirzner's theory of discovery and equilibration we are unconvinced. As will be seen in the next section, Kirzner's contributions are defective where one would least suspect them to be so, namely, in their account of the market process as it was conceived by Böhm-Bawerk and Mises.

The Case for Property and Calculation

Does Market Process Analysis Rely on Knowledge Problems?

In this section it will be argued that the problems of action that underlie the fashionable expressions of market process and knowledge can be entirely analyzed in terms of property and choice. Let us first take a look at the way in which prices for capital goods are formed on the market. This process has found its

⁴⁷Kirzner, *The Meaning of Market Process*, pp. 23f.

⁴⁸Kirzner, *Competition and Entrepreneurship*, pp. 86f.

first statement in Böhm-Bawerk's *Positive Theory of Capital*⁴⁹; Mises called it the market process.⁵⁰ The advocates of the alleged importance of knowledge problems claim that the market process is beneficial because it is a device to *diffuse and communicate* knowledge. However, this is not what a sober analysis reveals.

There are two steps that have to be distinguished in the market process, namely, the formation of prices for consumer goods and the formation of prices for capital goods. The former depends entirely on the individual values of the consumers. The more they appreciate a product the more they will be ready to give in exchange for it. This has direct repercussions on the market for capital goods. The higher the proceeds of a product the more can be successfully given in exchange for its factors of production. Now, what is implied in the fact that each capital good will be exchanged against the highest price its owner can obtain? It means that only the supposedly most-value-productive enterprises can be realized. All other entrepreneurs simply cannot bring the needed capital goods into their possession. They cannot pay prices as high as their competitors.

What role does the knowledge of the market participants play in this analysis? In particular, is any communication or diffusion of knowledge necessary in order to bring the above result? The answer to the latter question clearly is in the negative. The competing entrepreneurs may know nothing at all about other possibilities to employ the factor of production they all want to buy. However, this does not alter in the least the conclusion that, as a consequence of the formation of market prices, only the supposedly most-value-productive enterprises are realized. Out of the available alternatives known to each partner in exchange, none is, at this moment, more beneficial than the exchange itself. This conclusion is a necessary implication of any exchange. Thus, even if every single market participant just knows how to realize his own project and rests ignorant about all other opportunities, the market process still leads to beneficial results.⁵¹

The distinguishing feature of the market process does not lay in the communication of knowledge. The formation of prices rather implies a *comparison* of projects in value terms. This comparison has nothing in common with a dissemination of knowledge. It is through action that the competing projects are com-

⁴⁹ See in particular Eugen von Böhm-Bawerk, "The Law of Cost," in idem, *Capital and Interest*, vol. 2 (South Holland, Ill.: Libertarian Press, 1959), pp. 248–56.

⁵⁰ Cf. Mises, *Human Action*, pp. 333ff. He also uses the expression "pricing process" and "process which makes the prices of the factors of production spring from the prices of products." Ibid., p. 338.

⁵¹ See Hayek's brilliant article on "The Meaning of Competition," in idem, *Individualism and Economic Order*, pp. 92ff.

pared. *Because* an entrepreneur pays higher prices for the factors of production, his project must realize higher (discounted) proceeds.

The market process is thus inextricably linked to choice and action. Knowledge and communication, on the other hand, are secondary.⁵² This is the core of the analytical problems of Kirzner and his followers. To be sure, from each of Kirzner's articles we learn about another facet of market process. However, what we learn about is a Kirznerian market process the central idea of which is some mystical revelation through prices. This revelation theory has nothing in common with Misesian market-process analysis. It is, therefore, nothing short of ironic when Kirzner regrets "a certain tendency, present in a number of recent expositions of Mises's work, to de-emphasize (or flatly to deny) the centrality of the idea of the market as a process in the Misesian system."⁵³ Indeed, nobody has probably done more harm to this idea than Kirzner himself.

It is one thing to note Kirzner's noble modesty in emphasizing that his own work is but an elaboration of Mises's writings. It is another question whether this "elaboration" does not, as a matter of fact, amount to negation of the theory. Kirzner claims that, in regard to market process analysis, there is no difference between Mises and Hayek whatever.⁵⁴ Nothing could be more contrary to truth, though. What Hayek and Kirzner have in mind is a learning process. Ultimately, this is a process leading to perfect knowledge, that is, to equilibrium. In other terms, Kirzner as well as Hayek try to explain *why and how* we learn about the truth and thus about true prices. They believe that such an explanation can be provided because this "process by which facts are hammered into human consciousness is not wholly ungoverned by the logic of human action; it fits naturally in the tendency for alert acting human beings to notice what is likely to be of service to them."⁵⁵ Kirzner's solution to this problem is that the necessary information is revealed through "wrong" actual prices. Mises, however, was not concerned about this problem at all. To Mises, the analysis of the market process was meant to uncover the implications of human action for the formation of prices on the market:

In supplying the market with those consumers' goods in the sale of which the highest profits can be earned, they create a tendency toward a fall in their prices.

⁵²For an excellent exposition of the meaning of the market process see Salerno, "Mises and Hayek Dehomogenized": 124ff.

⁵³Israel M. Kirzner, "Reflections on the Misesian Legacy in Economics," *Review of Austrian Economics* 9, no. 2 (1996): 144–45.

⁵⁴*Ibid.*: 146–47.

⁵⁵Kirzner, *Perception, Opportunity, and Profit*, p. 30.

In restricting the output of those consumers' goods the production of which does not offer chances for reaping profit, they bring about a tendency toward a rise in their prices. All these transformations go on ceaselessly and could stop only if the unrealizable conditions of the evenly rotating economy and of static equilibrium were to be attained.⁵⁶

Mises makes no attempt to solve the problem that Hayek and Kirzner are eager to solve, namely, why equilibrium is likely to come about. Rather he does not bother about this question at all. In Mises's eyes equilibrium is a necessary tool of *analysis*. Yet the validity of economic theorems does not depend at all on the question why and how equilibrium should ever be realized. It is precisely this point that is denied both explicitly (Hayek⁵⁷) or implicitly (Kirzner) by all would-be market process theorists. Despite all their disdain for mathematical equilibrium theorists they are arguing on the very same grounds. They endlessly repeat the term "market process." Yet, they strongly believe that the reality of equilibrium has to be proven and explained.

All this is of no relevance for Mises's market process analysis. From the Misesian perspective there may be equilibrium and disequilibrium prices. One might even follow Kirzner and say that the market process consists in the continual "correction" of disequilibrium prices that occurs in the course of entrepreneurial competition.⁵⁸ Yet, it is important to see clearly what that means. The correction is in fact an implication of any successful action on the market. The point is that prices are always formed according to the best knowledge available to property owners. Hence, the sole fact that I sell my tomatoes to A and not to B implies that, *ex ante* at least, this use of my property, and thus the price being established on the market, is better than any other possible use of it (and thus any other price) that could have been realized otherwise. This holds true for disequilibrium and for equilibrium prices. There are no separate explanations for them. All prices are market prices, and as such they have to be explained.

It can hardly be emphasized enough that these different views of the market process have momentous implications. The most important one concerns the very dynamics of market process analysis. The word process means that this kind of analysis is supposed to explain the succession of events in time. This in turn

⁵⁶Mises, *Human Action*, p. 336. There are, of course, countless other statements on how Mises saw the market process. However, this quote has been given by Kirzner ("Reflections on the Misesian Legacy in Economics": 145) to show that Mises also had in mind a corrective learning process. However, no such interpretation can be inferred from it.

⁵⁷Cf. Hayek, *Individualism and Economic Order*, p. 33.

⁵⁸Kirzner, "Reflections on the Misesian Legacy in Economics": 144ff.

presupposes that one is able to establish a causal link between the events that follow one another. Kirzner's basic error consists in his attempts to link discoveries (or true judgments) to former events. As no such links can, without inner contradiction, be claimed to be necessary, that is, generally and apodictically valid, Kirzner makes assertions of alleged empirical evidence to make his case at all. Thus, the theorems that he is able to derive must inevitably be empirical. It is for these reasons that Kirzner now considers economics to be based on empirical postulates or empirical facts. On the other hand, the Misesian view on the dynamics of the market process starts from the recognition of the universal fact of scarcity. This alone suffices to arrive at *a priori* theorems about the succession of real events in time. Some examples are: if I consume more now I shall of necessity be unable to consume as much in the future as I would if I saved more; or: if I overestimate the quantity of means at my disposal I shall nevertheless be led to discover my error sooner or later in the future.

Hence, there doubtlessly is no approach to market-process analysis that is commonly shared by Böhm-Bawerk and Mises on the one hand and by Hayek and Kirzner on the other hand. Most importantly, however, only Mises's analysis is a viable option to build upon. It does not contain the fallacies of the Hayek–Kirzner approach that have been identified above.

Property and Knowledge

Above we have argued that the advocates of the pre-eminence of knowledge problems in economics cannot adequately deal with the fact that there can be no present experience of future events. However, there is still a more fundamental condition of action. This is the fact that knowledge as such is never scarce. Knowledge problems thus do have a place in economics only insofar as knowledge has to be selected for application. Yet the selection of knowledge depends entirely on the property of the acting person.

At each moment we dispose of a myriad of information, and we often know of many ways to achieve any given end. For example, if my apartment is cold, I could keep my body warm through gymnastics or additional sweaters. I could also burn parts of my furniture or simply turn on the heating and pay higher bills. I could also sit down in my armchair and invent a new technology permitting one to heat my apartment at half of the present cost.

To be sure, the latter alternative is the most elegant one. In any case, as conditions do not cease to change, we constantly have to acquire new knowledge if only to conserve our present standard of living. However, economic science does not have to deal with the factors conditioning the acquisition of knowledge. We may also leave the question open whether economics *can* deal with them. This

is of no importance for the issue at hand. For the moment we are entirely unconcerned with the creation of knowledge, that is, of judgments that prove to be successful in action. We do not bother about the way we reduce our sheer ignorance. Rather we have to consider the principles that govern the selection of the judgments that we actually apply in our actions.

Consider the problem of lighting your cigarette. Do you use a flame-thrower, matches, heat your coke-oven until it is red-hot, or wait until the next lightning-flash strikes a piece of wood? Any solution could be most appropriate under certain conditions. Or, consider the myriad of technically-possible ways to get from Harlem to downtown Manhattan. You can take the subway, the express subway, a taxi, your car, rent a bus, rent a helicopter, buy an F-16 and two personal airports, etc. Of course, one would say that the latter alternative is absurd under *normal* conditions. It is always the conditions of action that we deem reasonable or absurd, not the action as such.

The quantities of means we can dispose of—our property—are always limited. Thus, choice implies that some of our ends must remain unfulfilled. We steadily run the danger of pursuing ends that are less important than the ends that could have been pursued. We have to choose the supposedly most important action, though what we choose is how we use our property. Action means to employ our property in the pursuit of what appears to be the most important ends.

In choosing the most important action we implicitly select some parts of our technological knowledge for application. In other terms, our choices imply a judgment upon the *importance* of our technological knowledge under the expected conditions of our action. This economic judgment is our only concern. Technological knowledge *as such* is immaterial for economics. Even if information on particular circumstances of time and place was communicated through prices this would be of secondary importance. Yet, without reference to our property we could not possibly select knowledge in terms of importance. Moreover, once we own property we then know which kind of knowledge could be useful. It is this property that directs our learning toward useful channels.

Property in this sense encompasses the disposition of goods. However, there is a more fundamental sense in which economic knowledge is linked to property, namely, to appropriation. This is because the creation of any good is more fundamental than the disposition of this good. Appropriation is at the core of property itself.⁵⁹ Thus, the question which kind of technology serves the supposedly most

⁵⁹“Appropriation is a natural phenomenon given by providence, essential to life; property is nothing but an appropriation that has become a right through labor.” Frederic Bastiat, “Propriété et loi,” in *Les libéraux*, Pierre Manent, ed. (Paris: Hachette, 1986), p. 230.

important end under prevailing conditions cannot be answered independently of the property regime. This is of utmost importance.

It is clear that in *all* property regimes the ultimate end of action is to enjoy the services of consumers' goods. And in *all* property regimes consumers' goods can only originate from human productivity, that is, from original appropriation, from production, and from exchange.

However, in capitalism there is but one way to enjoy the goods of our neighbors. One has to acquire them through exchange on the market, that is, one has to give to its owner some other good that he prefers to the one we desire. Yet this good must of necessity have been produced beforehand. Exchange thus implies mutual production of goods or values. It implies further that only value-productive actions prove to be successful. Therefore, only value-productive knowledge is selected and sought.

Of course there can be error and failure. Our technological judgments can be wrong. We can also discover after our action that we have not sought the most important ends under prevailing conditions. However, all this is irrelevant for the question at stake. Under private property, all of our judgments concern the production of goods. Producing goods is the unique occupation of all members of society. In this endeavor they select the knowledge they want to apply.

The case is different in a system featuring a coercive agency. Here, by definition, a knowledge different from value-productive knowledge is, at least sometimes, more important. (The extent of "sometimes" depends on the range of activities and on the permanence of the coercive agency.) There is, for example, the knowledge of how to reap the fruits of other persons' labor without provoking their resistance. There is also the knowledge of how to acquire control and ownership of the coercive agency. And there is the knowledge of how to persuade one's neighbors about the utility of this system, too.⁶⁰ One can add an infinite number of items to this list. The result, in general terms, remains the same: a violent agency necessarily affects the knowledge structure of the society upon which it is imposed.⁶¹

⁶⁰Murray N. Rothbard, *Man, Economy, and State*, p. 776: "In the market, the fittest are those most able to serve the consumers. In government, the fittest are either (1) those most able at wielding coercion or (2) if bureaucratic officials, those best fitted to curry favor with the leading politicians or (3) if politicians, those most adroit at appeals to the voting public." See also idem, *Power and Market*, 2nd ed. (Kansas City: Sheed Andrews and McMeel, 1970), pp. 18ff.

⁶¹Leonard E. Read has analyzed this effect under the heading of "unnatural specialization." See Leonard E. Read, "How Socialism Harms the Economy," in idem, *Anything That's Peaceful*, 2nd ed. (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, 1992), pp. 78ff. With great clarity he states: "Take, for example, the moon project . . . putting aside personal prejudices against this multibillion dollar project, it is obvious that it would not, at this time, emerge from the free market. Now, consider the countless specializations that this single government project call into

Property, Calculation, and the Structure of Production

Yet, this is not all that private property implies for the selection of knowledge. The greatest benefits accrue to those who participate in the division of labor. Most of our knowledge is valuable only because there is a market. As we have noted above, the market process is essentially a selection procedure. All investment projects are compared in terms of value productivity, and only the most value-productive ones are selected (*ex ante*) for execution. On the market, *the totality of individual knowledge is continually compared in value terms.*

The value of the knowledge that the property owners venture to apply is compared through the anticipated exchanges on the market. A calculated profit means that one's knowledge is valuable under prevailing conditions. A calculated loss means that one's knowledge is not of value. Its application would take means away from more value-productive enterprises and thus prevent the application of more valuable knowledge.

To be sure, this comparison does not run in terms of freely-floating bits of knowledge that are detached from private property. Rather, each entrepreneur tries to use his property in the most value-productive way that is known to him. Through the pricing process, this value, productivity is compared to the value productivity that can be achieved by the action of other property owners. The entrepreneur makes an estimate of the proceeds that he will realize through his venture. Then, by means of calculation, the entrepreneur knows how much of his property he can give in exchange for a capital good. He cannot give more than the discounted marginal value product that the capital good will earn. And he can appropriate it only if no other entrepreneur knows of a way to realize a higher discounted marginal value product of this capital good. Thus, each single factor of production accrues to him who knows of the supposedly most value-productive way to use it. This knowledge is marginal value knowledge. It is the knowledge about the most value-productive employment of each of the exchanged goods which, at the time of the exchange, is known to their owners.

It might be objected that one could conceive of market participants who had more value-productive ideas than their fellows but who unfortunately lacked the capital to realize their endeavors. There is no use in discussing the probability of

existence. Take only one of them: finding out how to cushion the landing of a TV set on the moon. . . . This project qualifies as an unnatural specialization." *Ibid.*, p. 78. He adds: "the fact is that tens of millions of American citizens are now engaged and wholly dependent on *unmarketable* specializations [and] more and more millions are becoming dependent on such forced exchange of their unwanted specializations for those goods and services without which they cannot live." *Ibid.*, p. 80. Cf. also the analogous remarks of Hans-Hermann Hoppe on the effects of socialism on the character structure of society and the evolution of nonproductive personality types in his *A Theory of Socialism and Capitalism*, esp. chap. 3.

such an event. Indeed, the wealth of a man is often indicative of his expertise. Yet, for the sake of the argument, let us assume the above case to be given. The first thing that such persons could do is to try to convince some of their fellows to lend them the funds necessary for their projects. If they do get the capital, then everything is fine for them and the rest of mankind. However, what if they find nobody willing to support them? Would this not be to the great disadvantage of all the other market participants who are now deprived of the most value-productive investment? Those who argue in this way fail to see that one cannot divide the market at will. A person's property is not only the fund out of which he buys capital goods; it is the fund for his consumption as well. The very fact that our would-be promoter does not obtain the necessary funds means that all other market participants do think other investments to be more value productive. One cannot separate property from the possibility of error; nobody can be free only to succeed. If one fails to use one's property in a value-productive manner, then one consumes it in one's errors.⁶²

Let us recall that *ex ante* calculation does not consist of computation based on past market prices; it is a judgment in quantitative terms that relies on an expectation of future prices. However, and this is the important point, *calculation is the source of present market prices* as they are continually formed in the market process. Present prices are starting points for our estimates. We regard them as the products of all prevailing conditions of action. Considering the intervening changes of these conditions we form, by way of *Verstehen*, a judgment upon the prices of the future. Without the basis provided by present money prices, this procedure would be impossible.⁶³ It is indirectly that present prices permit calculation and thus the selection of the most value-productive technology under prevailing conditions. They can have no communicative function because they are only the, if indispensable, starting point for our understanding of the future. If any prices could have a communicative function it would be future prices, but tomorrow's prices can never be known today.

Moreover, since without private property there could be no successful calculation, marginal value knowledge could not be recognized, either. Property and calculation are clearly prior to the recognition of the knowledge that should be applied.⁶⁴

⁶²For analogous reasoning see Murray N. Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," in *On Freedom and Free Enterprise: Essays in Honor of Ludwig von Mises*, Mary Sennholz, ed. (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, 1995).

⁶³For the regression theorem see Mises, *Human Action*, pp. 408ff. Of course in the case of barter, Mises realized that past exchange ratios are not necessary to the forecasting of future ones. *Ibid.*, p. 336. On economic calculation and the regression theorem, see also Hülsmann, *Logik der Währungskonkurrenz*, pp. 133ff, 166ff.

⁶⁴It is therefore futile to claim that "the circumstance that in fact current market prices do

This fact illustrates the most important problem of socialist planning, namely, knowing what to do next. Even if it knew the ends that should be attained, it would be incapable of identifying marginal value knowledge. Hence, it would not know which actions were, at each point of time, most value productive in bringing those ends about. Private property is required to recognize these actions; without it, no capital structure can be built.

Conclusion

We now come back to the question of why “socialist planners would be stymied by inability to perform calculations in the narrow arithmetic sense”⁶⁵ even if they possessed all the information conveyed by genuine market prices.

Only past market prices can be perceived and could thus convey any information at all. However, it is not past but future prices that are of any interest to the market participants. Furthermore, as there exists no general relationship between past and future prices one cannot deduce the latter from the former. Thus, it is not knowledge but entrepreneurial *judgment* that drives the market process.

Most importantly, all relevant information (in the economic sense) about technology is *not the cause but the outcome* of action. The market process is not a learning but essentially a selection process. The competition for the factors of production permits only the realization of those technological ideas which, under given circumstances, are supposedly most value productive. This competition, however, relies on calculations. Without them, the marginal value knowledge could not be identified.

Why is it that market prices are superior to the prices that central planners are dealing with? Hayek, Kirzner, and their followers believe that market prices are better because of their *function*, namely, that of communicating information. Mises, in contrast, showed that the primary virtue of market prices is attributable to their *origin*. Genuine market prices originate from voluntary cooperation; they can never be simulated. *They can never be grasped by intellectual inquiries because their significance does not relate to truth or knowledge.* They can only be brought about by entrepreneurial *actions*. For only the unhampered use of private property assures a selection that is inspired by value productivity.

reflect that corrective market process . . . should convince us that an appreciation of the role of market prices stated in terms of the ‘Hayekian’ knowledge problem is simply a somewhat differently articulated appreciation of the calculative properties Mises taught us to understand to exist in those market prices.” Kirzner, “Reflections on the Misesian Legacy in Economics”: 153–54.

⁶⁵Leland B. Yeager, “Mises and Hayek on Calculation and Knowledge”: 94.

Calculation and Knowledge: Let's Write *Finis*

Leland B. Yeager

I regret prolonging the discussion, but remarks by Joseph Salerno, Hans-Hermann Hoppe, and Jeffrey Herbener in the first 1996 issue of this *Review*¹ foster the impression that my position is so wrong as to require further discussion. They obscure what the original issue was.²

In earlier writings, Murray Rothbard, Joseph Salerno, and Jeffrey Herbener had tried to distinguish between calculation and knowledge problems besetting socialism. F.A. Hayek, they suggested, had shoved aside or perverted the analysis that Ludwig von Mises got straight in the first place. My 1994 article challenged this supposed distinction.³ I argued that knowledge was intimately bound up with the calculation problem that Mises had diagnosed. Hayek elaborated on points that were implicit and very nearly explicit in Mises's own writings.

Neither Salerno's "Reply"⁴ nor his and the other two latest comments justify the supposed wedge driven between the analyses of Mises and Hayek. They do not adequately specify the supposed crucial nonknowledge aspects of the calculation problem that Mises emphasized and from which Hayek diverted attention. Yet

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¹Jeffrey M. Herbener, "Calculation and the Question of Arithmetic," *Review of Austrian Economics* 9, no. 1 (1996): 151–62; Hans-Hermann Hoppe, "Socialism: A Property or Knowledge Problem?" *Review of Austrian Economics* 9, no. 1 (1996): 143–49; and Joseph T. Salerno, "A Final Word: Calculation, Knowledge, and Appraisalment," *Review of Austrian Economics* 9, no. 1 (1996): 141–42.

²I am informed that these authors wrote their contributions separately and that Hoppe did not even have my "Rejoinder: Salerno on Calculation, Knowledge, and Appraisalment," *Review of Austrian Economics* 9, no. 1 (1996): 137–39, in mind. Nevertheless, their comments, especially happening to appear together immediately following my "Rejoinder," foster an impression that, along with their substance, requires correction.

³Leland B. Yeager, "Mises and Hayek on Calculation and Knowledge," *Review of Austrian Economics* 7, no. 2 (1994): 93–109.

⁴Joseph T. Salerno, "Reply to Leland B. Yeager on 'Mises and Hayek on Calculation and Knowledge'," *Review of Austrian Economics* 7, no. 2 (1994): 111–15.

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Hoppe says that "Hayek's distinct contribution to the debate was fallacious from the outset"⁵ and "false, confusing, and irrelevant"⁶; Hayek's thesis is "absurd" and "nonsensical."⁷

Hoppe blames Hayek for playing down the importance of private property. But the whole discussion concerned an inherent flaw of socialism, conceived of as government ownership and administration of the means of production (as socialism was indeed generally understood when Mises wrote his critique). The whole discussion concerned *why* a system of private property and private enterprise is much superior to socialism. Mises and Hayek went beyond merely trumpeting this superiority. In setting forth the calculation problem, both were explaining *reasons* why the private-property system is superior to socialism.

Salerno⁸ says I make a "very important concession" to his position. Formerly I held the Hayekian position that past prices automatically convey to all passive producers "all the knowledge that is relevant to their business decisions in a near-equilibrium world." Now I concede that "knowledge is a primary matter of individual entrepreneurial experience, hunches," and so forth. In saying so, Salerno misstates Hayek's position, and mine, on the role of knowledge in an adequately functioning economy. In his celebrated article of 1945, Hayek⁹ explained why the decentralization of decisions is essential for using knowledge even of kinds that *cannot* be communicated by prices. As long-time students of the classics of Austrian economics, Salerno and I should concede each other a grasp of Hayek's seminal article. Misstatement of Hayek's and my positions draws still another red herring across the original issue of the supposed wedge between Mises and Hayek.

More than any other single passage in the three comments of 1996, the concluding paragraph of a footnote in Herbener¹⁰ pushes, however unintentionally, against the bounds of academic propriety. It unavowedly shifts ground while attributing to the opponent a position he never held. According to Herbener, neither he nor Salerno nor Rothbard nor Mises "claim that the central planners do not face an information problem. The SRH [Salerno, Rothbard, and Herbener] claim is that Mises's calculation argument has more to it than the information problem. Yeager's claim [is] that it does not." Furthermore, Herbener begins his 1996 comment with this remarkable statement: "The view that

⁵Hoppe, "Socialism: A Property or Knowledge Problem?": 143.

⁶Ibid.: 146.

⁷Ibid.: 144.

⁸Salerno, "A Final Word."

⁹Friedrich A. Hayek, "The Use of Knowledge in Society," *American Economic Review* 35 (September 1945): 519–30. Reprinted in idem, *Individualism and Economic Order* (London: Routledge and Kegan Paul, 1949), pp. 77–91.

¹⁰Herbener, "Calculation and the Question of Arithmetic": 158–59.

Ludwig von Mises had more in mind in his calculation critique of socialism than the Hayekian knowledge problem has recently been attacked by Leland Yeager.”

I ask the fair-minded and attentive reader whether this is a correct statement of my position. I never denied that there might be more to the calculation problem than the knowledge aspect. I was challenging SRH to specify just what that other aspect was. More particularly, I was challenging them to justify their sharp distinction between the two (or more?) aspects. What nonknowledge aspect is so distinct and central that Hayek's elaboration of the knowledge aspect is diversionary and, to use Hoppe's words, “false, confusing, and irrelevant,” “absurd,” and “nonsensical”? I ask the impartial reader to find any passages in which Salerno, Hoppe, and Herbener have squarely faced my challenge. Have they not, instead, merely obfuscated their failure to do so?

Of course arithmetic enters into economic calculation. People making business (and consumer) decisions use arithmetic all the time. Herbener makes much of people's not being able to add apples and oranges. Money prices are needed for calculation, for commensurability, for arithmetic, for comparing values and costs and, for recognizing gains and losses. Sure, all this is a standard part of the logic of the market and money. It is a standard part of the argument about why socialism could do nowhere near as well as capitalism in putting scattered knowledge to use. But none of this helps refute my refutation of a supposed sharp wedge between the positions of Mises and Hayek.

Herbener's points about incommensurate units (apples and oranges) are further symptomatic of a particular style of argument worth identifying so that readers can recognize it when it occurs. I am not aware of any generally accepted name for it, but having one would be useful. Anyway, it works this way. Make lots of valid statements as if they were highly relevant to the issue at hand and as if one's opponent in discussion were nevertheless ignorant of them. These valid points, in the present instance, are roughly of the nature of $2 + 2 = 4$, grass is green, demand curves slope downward, and private property is essential to a decently-functioning economy. Perhaps the unalert reader, after agreeing with valid (but diversionary) points for page after page, will get the impression that they demolish the opponent against whom they are ostensibly deployed. (Sometimes, though not in the present instance, this style of argument carries a further twist: even though the facts and figures deployed are not really relevant, make them detailed, numerous, and recondite enough to foster the impression that the speaker or writer is a consummate expert on his topic.)

Not only on the socialist-calculation issue but on the other topics also, Salerno, Hoppe, and Herbener, like Rothbard before them, work to distinguish

between Hayek's and Mises's positions. (I particularly have in mind articles on "dehomogenization" in various issues of this *Review*.) A reader not very familiar with Austrian economics might get the impression that Hayek-bashing is under way. Surely (or so I hope, anyway) no one wants to let this impression prevail.

I'll try to conclude what I hope is the entire debate in this *Review*. On any reasonable interpretation of exactly what calculation means in the debates over socialism, calculation is closely intertwined with the development and use of knowledge. One ill-serves Mises's reputation and ill-serves understanding of momentous issues by trying to drive a wedge between Mises and Hayek, specifically, by imagining and overemphasizing (yet not specifying) some aspects or other of calculation crucially distinct from the knowledge aspects on which Hayek elaborated, all while disparaging Hayek's elaborations. A correct understanding of the socialist-calculation problem is important to economic theory, the history of economic thought, twentieth-century economic history, and future policymaking. I hope that we respectful students of Mises, Hayek, Rothbard, and other great Austrian economists can subordinate polemics among ourselves and can collaborate in achieving and spreading this correct understanding.



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Knowledge vs. Calculation



JULY 11, 2006 • Stephan Kinsella (<https://mises.org/profile/stephan-kinsella>)

TAGS Calculation and Knowledge (</austrian-school/calculation-and-knowledge/>), Philosophy and Methodology (</austrian-school/philosophy-and-methodology/>), Political Theory (</austrian-school/political-theory/>)

On occasion I'll see someone try to smooth over the Mises-Hayek "dehomogenization" debate which argued whether and to what extent Mises's and Hayek's approaches to the impossibility of socialism differed. One side--what I'll call the Rothbardian or praxeological-Misesian view--sees Mises's insight as having to do with the use of money prices to serve as a cardinal unit for purposes of economic calculation. This approach is championed by Rothbard, Hoppe, Herbener, Salerno, Huelsmann, and others, and arguably Mises. This view also sees Hayek's contribution as different, and as possibly confused or flawed: that prices help to spread otherwise localized information through the economy, thus enabling efficient use of resources. The Hayekians tend to emphasize the knowledge or informational aspects of money, but also maintain that this is just "the other side of the coin" of Mises's insights.

See, e.g., Yeager, in *Mises and Hayek on Calculation and Knowledge* (http://mises.org/journals/rae/pdf/rae7_2_5.pdf), "question[ing] the supposed distinction between calculation and knowledge problems." See also: Pete Boettke, *Hayek and Market Socialism: Science, Ideology, and Public Policy* (<http://mises.org/daily/1661>) (Don Lavoie [in *Rivalry and Central Planning*, 1985] argued that one must read Mises and Hayek's arguments as two sides of the same coin, and I follow him in this regard and will not dehomogenize their different

contributions to the analysis of socialism"); also his *Economic Calculation: The Austrian Contribution to Political Economy* (http://economics.gmu.edu/pboettke/pubs/pdf/Economic_Calculation.pdf) ("the essential argument that Mises and Hayek rose against socialist proposals--the problem of economic calculation--*and* their understanding of how the private property system affords monetary calculation are complementary contributions to economic theory").

Also see Steve Horwitz, *Monetary Calculation and the Unintended Extended Order: The Misesian Microfoundations of the Hayekian Great Society* (http://www.gmu.edu/rae/archives/VOL17_4_2004/1-Horowitz.pdf) ("An Austrian economics for the 21st century is going to have to rediscover those Misesian insights and more fully integrate them with Hayek's work on knowledge and coordination. ... a "praxeological" social scientist has both a Hayekian and a Misesian task: The Hayekian task is to recognize and describe the nature of the unplanned order that is to be explained, while the Misesian task is to describe the process by which intentional human action is guided such that it can produce that Hayekian order. ... The "de-homogenizers" have ... correctly identified microfoundations [including] the importance of monetary calculation and Mises's concept of "appraisement," but ... they ignore what seems to be the obvious relationship between those microfoundations and Hayek's vision of the social order. That is, they ignore that the outcome of the use of economic calculation by individual entrepreneurial actors and by firms and households is precisely the "use of knowledge in society" that characterizes the Hayekian spontaneous market order."). Also: Bob Murphy in a recent post (<http://blog.mises.org/archives/003700.asp>) wondered: "I don't understand why Salerno (and Kinsella and perhaps others too on their side of this) think it so crucial to hammer home the point that market prices don't convey knowledge." Murphy and I had some back-and-forth on this in the comments to this post (<http://blog.mises.org/archives/004346.asp>), as well.

(Some more information is available on the Wikipedia entry on the economic calculation debate (http://en.wikipedia.org/wiki/Economic_calculation_debate)).

So the Rothbardians/praxeologists view the Mises and Hayek approaches as different (and the latter as a weaker point, at best, or confused and distracting, at worst); while the Hayekians claim the approaches are complementary and intertwined.

On occasion I have corralled and summarized some of the resources but do this often enough that I thought it might be useful to put some of the links and references in one place. It is my view that the (primarily Rothbardian/praxeological) sources below, at the very least, make it difficult to argue that the two approaches are "two sides of the same coin". Below is a brief discussion and summary of and some links to some of these arguments.

What I take to be the Rothbardian or praxeological-Misesian approach to the socialism-knowledge-calculation debate is found in the writings of: Salerno (Economic Calculation in the Socialist Commonwealth: Postscript: Why a Socialist Economy is "Impossible" (<http://mises.org/econcalc/POST.asp>)), Reply to Leland B. Yeager on "Mises and Hayek on Calculation and Knowledge" (http://mises.org/journals/rae/pdf/rae7_2_6.pdf), Ludwig von Mises as Social Rationalist (http://mises.org/journals/rae/pdf/rae4_1_2.pdf), Hoppe (Socialism: A Property or Knowledge Problem? (http://mises.org/journals/rae/pdf/rae9_1_13.pdf)), Hülsmann (Knowledge, Judgment, and the Use of Property (http://mises.org/journals/rae/pdf/rae10_1_2.pdf)), Herbener (Calculation and the Question of Arithmetic (http://mises.org/journals/rae/pdf/rae9_1_9.pdf); Ludwig von Mises and the Austrian School of Economics (http://mises.org/journals/rae/pdf/rae5_2_2.pdf)), Rothbard (The End of Socialism and the Calculation Debate Revisited (http://mises.org/journals/rae/pdf/rae5_2_3.pdf)), and, of course, Mises (The Equations Of Mathematical Economics And The Problem Of Economic Calculation In A Socialist State (http://mises.org/journals/qjae/pdf/qjae3_1_2.pdf); Economic Calculation in the Socialist Commonwealth (<http://mises.org/econcalc.asp>); Human Action (<http://mises.org/humanaction.asp>), esp. Ch. 16, Secs. 1 (<http://mises.org/humanaction/chap16sec1.asp>), 2 (<http://mises.org/humanaction/chap16sec2.asp>), and 3 (<http://mises.org/humanaction/chap16sec3.asp>)).

A summary of some of these views is found in my essay Knowledge, Calculation, Conflict, and Law (http://mises.org/journals/qjae/pdf/Qjae2_4_4.pdf). See. e.g. p. 53 and n. 8, discussing Hülsmann (http://mises.org/journals/rae/pdf/rae10_1_2.pdf)'s discussion of Hayek's tin example:

In this example, what information, *exactly*, is supposed to be conveyed by prices? Let us explore the possibilities. Can the original cause of the price increase (i.e., the change in demand or supply) itself be conveyed via prices? Well, no. Prices are the *result* of action. Thus, action that changes the prices must already be informed by knowledge.⁸

8 In other words, the prices generated on the market are past prices, which are always the *outcome* of action, *not* its cause. Hülsmann (http://mises.org/journals/rae/pdf/rae10_1_2.pdf) (p. 26) explains that "all information that this action was based upon had to be acquired beforehand. The price itself could not have communicated the knowledge that brought it [the price] about." With regard to the tin example, "tin does not become scarcer and *then* this fact can come to be known to someone and lead to adaptations. Rather it is the other way around. The very fact that demand increases means that someone *already knows* of a more value-productive employment of tin" (p. 28).

Note that even Hayek says that mere users of tin do not know "anything at all about the original cause of these changes." So prices might rise for a number of reasons: 1. because some people *correctly assess* that supply is reduced and therefore bid prices up; 2. because some people *mistakenly believe* supply is reduced and therefore bid prices up; 3. because some people correctly assess that demand will increase; 4. because some people mistakenly forecast that demand will increase. Etc. So if price goes up does it give you any information? All you know is it went up for some reason. You don't know why. The people who bid it up know why they bid it up, based on their own assessment and knowledge--which is of necessity information they have that they did not get from prices; it is their knowledge and opinions that they use to form the price, not the other way around.

In fact it's important to realize, in my view, that it is not a bad thing that information is "dispersed." In fact, as Salerno points out (http://mises.org/journals/rae/pdf/rae7_2_6.pdf) (pp. 114-15), "dispersed knowledge is not a bane but a boon to the human race; without it, there would be no scope for the intellectual division of labor, and social cooperation under division of labor would consequently, prove impossible."

Prices are important because they serve as an "accessory of appraisalment." "Current" (immediate past) prices tell only what the current price structure is, and thus serve as a basis for forecasting what the future array of prices will be, given the current starting point. For this reason, Hülsmann

argues (http://mises.org/journals/rae/pdf/rae10_1_2.pdf) (p. 47) that present prices "can have no communicative function because they are only the, if indispensable, starting point for our understanding of the future."

Some of Mises's writing is extremely useful here, on the formation of prices and the distinction between *future* and *past* prices. See, e.g., *Human Action* (<http://mises.org/humanaction/chap16sec3.asp>), pp. 336-37:

In drafting their plans the entrepreneurs look first at the prices of the immediate past which are mistakenly called *present* prices. Of course, the entrepreneurs never make these prices enter into their calculations without paying regard to anticipated changes. The prices of the immediate past are for them only the starting point of deliberations leading to forecasts of future prices. The prices of the past do not influence the determination of future prices. It is, on the contrary, the anticipation of future prices of the products that determines the state of prices of the complementary factors of production. The determination of prices has, as far as the mutual exchange ratios between various commodities are concerned, no direct causal relation whatever with the prices of the past. The allocation of the nonconvertible factors of production among the various branches of production and the amount of capital goods available for future production are historical magnitudes; in this regard the past is instrumental in shaping the course of future production and in affecting the prices of the future. But directly the prices of the factors of production are determined exclusively by the anticipation of future prices of the products. The fact that yesterday people valued and appraised commodities in a different way is irrelevant. The consumers do not care about the investments made with regard to past market conditions and do not bother about the vested interests of entrepreneurs, capitalists, landowners, and workers, who may be hurt by changes in the structure of prices. Such sentiments play no role in the formation of prices. (It is precisely the fact that the market does not respect vested interests that makes the people concerned ask for government interference.) The prices of the past are for the entrepreneur, the shaper of future production, merely a mental tool. The entrepreneurs do not construct afresh every day a radically new

structure of prices or allocate anew the factors of production to the various branches of industry. They merely transform what the past has transmitted in better adapting it to the altered conditions. How much of the previous conditions they preserve and how much they change depends on the extent to which the data have changed.

The economic process is a continuous interplay of production and consumption. Today's activities are linked with those of the past through the technological knowledge at hand, the amount and the quality of the capital goods among various individuals. They are linked with the future through the very essence of human action; action is always directed toward the improvement of future conditions. In order to see his way in the unknown and uncertain future man has within his reach only two aids: experience of past events and his faculty of understanding. Knowledge about past prices is a part of this experience and at the same time the starting point of understanding the future.

If the memory of all prices of the past were to fade away, the pricing process would become more troublesome, but not impossible as far as the mutual exchange ratios between various commodities are concerned. It would be harder for the entrepreneurs to adjust production to the demand of the public, but it could be done nonetheless. It would be necessary for them to assemble anew all the data they need as the basis of their operations. They would not avoid mistakes which they now evade on account of experience at their disposal. Price fluctuations would be more violent at the beginning, factors of production would be wasted, want-satisfaction would be impaired. But finally, having paid dearly, people would again have acquired the experience needed for a smooth working of the market process.




For some other interesting views on this:

- Rothbard (http://mises.org/journals/rae/pdf/rae5_2_3.pdf) (p. 66): "the entire Hayekian emphasis on 'knowledge' is misplaced and misconceived"
- Hülsmann (http://mises.org/journals/rae/pdf/rae10_1_2.pdf) (p. 39): discussing "the irrelevance of knowledge problems"
- Salerno (http://mises.org/journals/rae/pdf/rae4_1_2.pdf) (p. 44): "[t]he price system is not-- and praxeologically cannot be--a mechanism for economizing and communicating the knowledge relevant to production plans. The realized prices of history are an accessory of appraisalment"
- Hoppe (http://mises.org/journals/rae/pdf/rae9_1_13.pdf) (p. 146): "Hayek's contribution to the socialism debate must be thrown out as false, confusing, and irrelevant."
- Kinsella (http://mises.org/journals/qjae/pdf/Qjae2_4_4.pdf): "The encoding metaphor seems to be a pseudoscientific and scientistic attempt to give this kind of economic theorizing a patina of scientific respectability by borrowing engineering terminology. It is scientistic because, in vainly trying to borrow natural science terminology, there is an assumption that only the "hard" or natural sciences have true validity. It is akin to using such inapt phrases as the "momentum" of the leading team in a basketball game, the "energy" of crystals and astral forms, or, even worse, "revving the engine" of the economy. Both economics and ethics can be sciences, but not in the same way as the causal, natural sciences."

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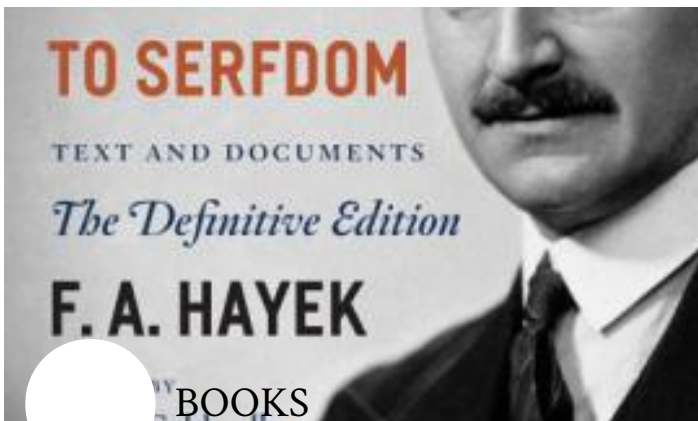
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**PROTECTING
FOREIGN INVESTMENT
UNDER INTERNATIONAL LAW**

Legal Aspects of Political Risk

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Appendix I Economic Calculation Under Socialism

Everything brought forward in favour of Socialism during the last hundred years, in thousands of writings and speeches, all the blood which has been spilt by the supporters of Socialism, cannot make socialism workable. The masses may long for it ever so ardently, innumerable revolutions and wars may be fought for it, still it will never be realised. Every attempt to carry it out will lead to syndicalism or, by some other route, to chaos

—Ludwig von Mises¹

In a sense, this book is about socialism—about its effects, ways to reduce or avoid them, and the relevant international law concerning it. For political risk is the risk of government intervention with property rights, and socialism, properly understood, is best defined as “an institutionalized interference with or aggression against private property and private property claims.”² Thus, political risk endangers private investment just as full-scale socialism makes human survival impossible. The economic case against socialism is thus briefly summarized in this Appendix.

With the collapse of socialism, mainstream opinion is finally beginning to realize that socialism, in addition to being immoral and wasteful of human life, simply does not work. The collapse of socialism comes as no surprise to the Austrian school of economics as developed by the great economist, Ludwig von Mises. Over seven decades ago, at the dawn of Soviet socialism, Mises provided a sound explanation of why socialism simply cannot work.³ Although Mises’s amazingly prescient ideas have, unfortunately, been ignored for decades by establishment thinkers, Mises has finally been vindicated by the universally (if belatedly) ac-

1 LUDWIG VON MISES, *SOCIALISM: AN ECONOMIC AND SOCIOLOGICAL ANALYSIS* 113, 117, 118 (J. Kahane trans., *LibertyClassics* 3d rev’d ed. 1981) (pp. 131, 135, 137 of the 1951 enlarged edition) (first published in German under the title *Die Gemeinwirtschaft: Untersuchung über den Sozialismus* (Jena: Gustav Fischer, 1922)).

2 HANS-HERMANN HOPPE, *A THEORY OF SOCIALISM AND CAPITALISM* 2 (1989).

3 See note 1, *supra*. Mises’s arguments against the possibility of economic calculation under socialism were first published in an article in 1920, under the title *Die Wirtschaftsrechnung im sozialistischen Gemeinwesen*, in vol. 47 of *ARCHIV FÜR SOZIALWISSENSCHAFTEN* (1920), currently available as LUDWIG VON MISES, *ECONOMIC CALCULATION IN THE SOCIALIST COMMONWEALTH* (Ludwig von Mises Institute 1990) (1920).

knowledgeable failure of socialism.⁴ It is now obvious that the moral basis for socialism is a sham, although its effects still linger.

In 1920 Mises published his devastating critique of socialism, “Economic Calculation in the Socialist Commonwealth.”⁵ Mises showed that, besides the well-known incentive problem of socialism (e.g., getting people to perform unpleasant, unglamorous jobs such as trash collecting)⁶ the central planner cannot know what products or how much of them to order to be produced, without the information provided by prices on a free market. In a free market with private ownership of property, the free exchange of goods by individual human actors establishes relative prices, in terms of money (which historically was gold and other precious metals). As Mises showed, these money prices are the indispensable tool of calculation for rational coordination of scarce resources.⁷ Without market prices, how can a central planning board know what or how many products to produce, with which techniques and raw materials, and in which location? These and a practically infinite number of questions are simply unanswerable without the information provided by monetary prices. As Murray N. Rothbard concisely explains:

Mises demonstrated that, in any economy more complex than the Crusoe or primitive family level, the socialist planning board would simply not know what to do, or how to answer any of these vital questions. Developing the momentous concept of *calculation*, Mises pointed out that the planning board could not an-

4 See Gertrude E. Schroeder, *The Dismal Fate of Soviet-Type Economies: Mises Was Right*, CATO J. v11 n1 (Spring/Summer 1991) p. 13. Robert Heilbroner, an avowed democratic socialist, has also admitted the triumph of capitalism and Mises’ prescience. “Less than seventy-five years after it officially began, the contest between capitalism and socialism is over: capitalism has won.” Robert Heilbroner, *The Triumph of Capitalism*, THE NEW YORKER, Jan. 23, 1989, p. 98, 98. “It turns out, of course, that Mises was right.” Robert Heilbroner, *After Communism*, New Yorker, Sept. 10, 1990, p. 91, 92. See also Mark Skousen, “Just because socialism has lost does not mean that capitalism has won”: Interview with Robert L. Heilbroner, FORBES, May 27, 1991, p. 130. Heilbroner had previously dismissed Mises’s arguments, helping to spread the myth that Mises’s anti-socialist claims had been “demolished” by socialist theorists responding to Mises’s arguments. See ROBERT HEILBRONER, BETWEEN CAPITALISM AND SOCIALISM 88-93 (1970). In this work, Heilbroner claimed that Mises was wrong, that socialist economic calculation was possible, and that the “superior performance” of socialism would “soon reveal the outmoded inadequacy of a free enterprise economy.” See also Maureen Johnson (AP), *Overhaul promised for Labor*, THE PHILADELPHIA INQUIRER, Thursday, Oct. 6, 1994, p. A10, which reports that the new leader of Britain’s socialist Labor party, Tony Blair, plans (as of October 1994) to overhaul his Party’s principles. The article reports that “Blair also signaled that he will drop the left’s most cherished maxim: a party clause advocating ‘common ownership of the means of production.’”

5 See notes 2 and 4, *supra*. See also LUDWIG VON MISES, HUMAN ACTION: A TREATISE ON ECONOMICS 200-31, 695-715 (3d rev’d ed. 1966) [hereinafter, Mises, *Human Action*]; Murray N. Rothbard, *The End of Socialism and the Calculation Debate Revisited*, 5 REV. AUSTRIAN ECON. 51 (1991).

6 Rothbard, *supra* note 5, at 51 (discussing the incentive problem).

7 See Mises, *Human Action*, *supra* note 5, at 259. On the profoundly *moral* nature of money, see AYN RAND, *The Meaning of Money*, in FOR THE NEW INTELLECTUAL (Signet 1961).

swer these questions because socialism would lack the indispensable tool that private entrepreneurs use to appraise and calculate: the existence of a market in the means of production, a market that brings about money prices based on genuine profit-seeking exchanges by private owners of these means of production. Since the very essence of socialism is collective ownership of the means of production, the planning board would not be able to plan, or to make any sort of rational economic decisions. Its decisions would necessarily be completely arbitrary and chaotic, and therefore the existence of a socialist planned economy is literally “impossible” (to use a term long ridiculed by Mises’s critics).⁸

Thus, “[t]he paradox of ‘planning’ is that it cannot plan, because of the absence of economic calculation. What is called a planned economy is no economy at all.”⁹ Defenders of socialism often countered with the bare fact of the Soviet Union’s existence and “success” as disproof of the contention that socialism is impossible. However, as Rothbard points out, Soviet GNP and other production figures relied upon as evidence of the USSR’s success were wholly inaccurate and deceitful—as the final collapse of socialism has made manifest. Further, the Soviet Union and other socialist countries have never enjoyed complete socialism, for despite their best efforts to stamp out individual initiative, free trade, and private property, the existence of black (i.e., free) markets and bribery is widespread, which prevent socialism from completely controlling and thus strangling the economy. Also, these socialist economies existed in a world containing many relatively capitalist markets, such as that in the United States. Thus, the socialist planners were able to parasitically copy the prices of the West as a crude guideline for pricing and allocating their own capital resources.¹⁰ To the extent true socialism was able to be imposed on the populace, economic calculation thereunder was impossible and the people suffered accordingly.

Thus, a prosperous society is only possible if, and to the extent that, private property and free markets are respected and permitted to flourish.¹¹ By the same token, political risk in a given country is minimized to the extent that it respects the investor’s property rights.

8 Rothbard, *supra* note 5, at 52-53.

9 Mises, *Human Action*, *supra* note 5, at 700.

10 *Id.* at 73-74. *See also* Mises, *Human Action*, *supra* note 5, at 702 (discussing the use of Western price systems by socialist governments).

11 For further discussion of the problem of economic calculation under socialism, see COLLECTIVIST ECONOMIC PLANNING (F.A. Hayek ed., 1935); DON LAVOIE, RIVALRY AND CENTRAL PLANNING: THE SOCIALIST CALCULATION DEBATE RECONSIDERED (1985); DAVID RAMSAY STEELE, FROM MARX TO MISES: POST-CAPITALIST SOCIETY AND THE CHALLENGE OF ECONOMIC CALCULATION (1992); *idem*, *Posing the Problem: The Impossibility of Economic Calculation under Socialism*, 5 J. LIBERTARIAN STUD. 7 (1981); TRYGVE J.B. HOFF, ECONOMIC CALCULATION IN THE SOCIALIST SOCIETY (Liberty Press 1981) (1949).

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*To Judge Rosalyn Higgins
and J. Lanier Yeates, Esq.*

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SUMMARY OF CONTENTS

Dedication	iii
About the Authors	v
Summary of Contents	vii
Table of Contents	xi
Preface	vii
Introduction	ix
PART I INTERNATIONAL LAW AND POLITICAL RISK	
Chapter 1: Political Risk	1
A. Overview of Political Risk	1
B. Types of Political Risk	3
C. Measuring Political Risk	17
Chapter 2: International Law Related to Political Risk	23
A. International Law In General	24
B. Can a Sovereign Bind Its Future Actions?	25
C. State Responsibility	32
D. Remedies Under International Law For State Actions Against Investors	35
E. Exhaustion of Local Remedies	38
F. Nationality of Claims	40
G. National Treatment	44
H. Immunity of States from Jurisdiction	45
Chapter 3: International Law of Expropriation	57
A. History and Sources of the Law of Expropriation	57
B. Current State of the Law of Expropriation	58
C. Breach of Contract	77
Chapter 4: Treaty Provisions Regarding the Protection of Investment	99
A. The Utility of an Investment Treaty to the Investor	99
B. Bilateral Investment Treaties	101
C. Multilateral Treaties	115
PART II PRE-INVESTMENT DECISIONS TO REDUCE POLITICAL RISK	
Chapter 5: Structuring Transactions To Minimize Political Risk	127
A. Types of Projects	127
B. Transaction Structures	130
C. Investor-State Contracts	133
Chapter 6: Investment Insurance	151
A. OPIC	152

TABLE OF CONTENTS

Dedication	iii
About the Authors	v
Summary of Contents	vii
Table of Contents	xi
Preface	ixx
Introduction	xxi
PART I INTERNATIONAL LAW AND POLITICAL RISK	
Chapter 1: Political Risk	1
A. Overview of Political Risk	1
B. Types of Political Risk	3
1. Expropriation, Nationalization, and Confiscation	3
a. Definition and Examples	3
b. Distinguish from Nationalization and Confiscation	6
2. De facto Expropriation	8
a. Definition	8
b. Expropriation or Acceptable Regulation	10
c. Examples of De Facto Expropriations as Determined by International Tribunals	12
3. Currency Risk	15
4. Risk of Political Violence	16
5. Breach of Contract	16
C. Measuring Political Risk	17
1. Factors Contributing to Risk	18
2. Political Risk Services	21
Chapter 2: International Law Related to Political Risk	23
A. International Law In General	24
B. Can a Sovereign Bind Its Future Actions?	25
1. In General	25
2. State Promises in Investor-State Contracts	28
a. Internationalization of Investor-State Contracts	28
b. Arguments that Investor-State Contracts Cannot Be Internationalized	30
C. State Responsibility	32

1. In General	32
2. Acts of State Agencies	33
3. For Injury to Investors	34
D. Remedies Under International Law For State Actions Against Investors	35
1. Remedies Available to the State	35
2. Remedies Available to the Investor	36
E. Exhaustion of Local Remedies	38
F. Nationality of Claims	40
1. Individuals	40
2. Corporations	41
3. Partnerships	43
G. National Treatment	44
H. Immunity of States from Jurisdiction	45
1. The Doctrine of Restrictive Sovereign Immunity	45
2. Sovereign Immunity in the United States	48
a. The Foreign Sovereign Immunities Act	48
(1) The Waiver, of “Immunity” Exception	49
(2) The Commercial Activity, Exception	49
(3) The Expropriation Exception	51
3. The Act of State Doctrine	52
4. Sovereign Immunity in Great Britain	52
a. The State Immunities Act	55
b. Doctrine of Judicial Restraint and Abstention	56
Chapter 3: International Law of Expropriation	57
A. History and Sources of the Law of Expropriation	58
1. Expropriation and Standard of Compensation Prior to World War II	58
2. Challenges to the Traditional Standard	62
a. Latin American States	62
b. Nationalization in the 20th Century	62
c. The Third World’s Justifications for Expropriation and the UN Resolutions Regarding Permanent Sovereignty	65
3. Arbitral Awards After World War II	69
4. Treaties As Evidence of Customary International Law	74
5. Negotiated Settlements	76
B. Current State of the Law of Expropriation	77
1. Public Purpose and Non-Discrimination	80

2. Compensation	81
a. Full Compensation as Standard under International Law	81
b. Justifications for Full Compensation	84
3. The Requirements of Non-Discrimination and Public Purpose: Concepts of Limited Significance	85
4. Valuation	87
a. Methods for Determining Value	87
b. Damages or Lost Profits?: An Irrelevant Question	89
c. Arbitral Decisions	91
(1) Tangible Property	92
(2) Business Enterprises-Going Concern	92
(3) Business Enterprises-Not A Going Concern	95
d. Equitable Considerations	96
e. Conclusions	97
C. Breach of Contract	98
Chapter 4: Treaty Provisions Regarding the Protection of Investment	99
A. The Utility of an Investment Treaty to the Investor	99
B. Bilateral Investment Treaties	101
1. The U.S. Model BIT	104
a. Definitions	105
b. Standards of Treatment	105
c. Expropriation	106
d. Currency Transfers	107
e. Settlement of Investment Disputes	108
f. Termination	109
g. The U.S. BIT Program Today	110
2. BITs of Other Developed States	110
a. Expropriation	111
b. Standard of Treatment	113
c. Settlement of Investment Disputes	113
d. Special Provision in the China-Japan BIT	115
C. Multilateral Treaties	115
1. North American Free Trade Agreements	117
a. Expropriation	117
b. Standard of Treatment	119
c. Transfer of Currency	120
d. Settlement of Investment Disputes	120

2. The Energy Charter Treaty	120
a. Expropriation	121
b. Standard of Treatment	122
c. Settlement of Investment Disputes	122

**PART II PRE-INVESTMENT DECISIONS TO REDUCE
POLITICAL RISK**

Chapter 5: Structuring Transactions To Minimize Political Risk.	127
A. Types of Projects	127
1. Petroleum Arrangements	127
2. Infrastructure Projects	129
3. Other Arrangements Between Investors and States.	130
B. Transaction Structures	130
1. Structures Prior to Investing	130
2. Modification of Structures When Interference is Threatened	132
C. Investor-State Contracts	133
1. Arbitration Clause	134
2. Choice of Law Clause	135
3. Stabilization Clause	138
a. Structure.	138
b. Validity and Effect	139
(1) Generally	139
(2) Case Law	140
(3) Suggested Clause	143
4. Damages Clause.	144
5. No Requirement to Exhaust Local Remedies	145
6. Waiver of Sovereign Immunity	146
7. Conversion of Currency Clause.	147
8. Payment of Currency to Offshore Account (Service and Technical Assistance Contracts)	148
9. Interest Rate Clause	148
10. Force Majeure Clause	148
11. State As Party to the Contract	149
12. State Interest and Project's Success.	149
Chapter 6: Investment Insurance	151
A. OPIC	152
1. Background	152

2. Risks Covered by OPIC insurance	154
a. Currency Inconvertibility	154
b. Expropriation	155
c. Political Violence	156
d. Specialized Insurance	158
(1) Financial Institutions and Leases	158
(2) Oil and Gas and Other Natural Resources	158
(3) Contractors and Exporters	159
3. Eligibility for OPIC Insurance	159
a. Eligible Investors	159
b. Eligible Projects	160
c. Eligible Countries	161
d. Political Considerations	161
4. Terms	162
a. Duration	162
b. Cost	163
c. Insurance Limits	166
d. Coverage Multiples and Amount of Insurance	166
e. Application	166
B. MIGA	167
1. Background	167
2. Risks Covered by MIGA Insurance	169
a. Currency Inconvertibility	169
b. Expropriation	170
c. Political Violence	170
d. Breach of Contract	171
e. Other Coverage	171
3. Eligibility for MIGA Insurance	171
a. Eligible Investors	171
b. Eligible Projects	172
c. Eligible Countries	172
d. Political Considerations	173
4. Terms	173
a. Amount of Insurance	173
b. Cost	174
c. Duration	176
d. Coinsurance	176
e. Disputes	176

f. Application	177
C. Other National Insurance Programs	177
1. Japan: EID/MITI	177
2. Germany: Treuarbeit	179
3. Australia: Export Finance and Insurance Corporation	180
4. Other Countries	180
D. Private Insurance	181
1. Background	181
2. Risks Covered by Private Insurance	182
3. Terms	182
E. General Considerations	183

PART III RESPONSES TO MANIFESTATIONS OF POLITICAL RISK

Chapter 7: Arbitration	185
A. Validity and Effect of an Arbitration Clause	187
B. Drafting the Arbitration Clause	189
1. Scope of Arbitration	191
2. Institutional or Ad Hoc Arbitration	191
3. Place of Arbitration	192
4. Consistency Among Arbitration Clauses	195
C. Arbitration Using the UNCITRAL Rules	195
1. General	195
2. Selecting UNCITRAL Arbitration	196
3. Appointment of Arbitrators	197
4. Other Administrative Matters	197
5. Substantive Proceedings	198
D. ICSID Arbitration	199
1. History	199
2. Jurisdiction of the ICSID Centre	201
a. Disputes Between Contracting States	201
b. Submission of Particular Disputes	202
c. Arise out of an “Investment”	203
d. Exclusive Remedy	204
3. Administrative Issues	204
a. Submission of a Dispute for Arbitration	204
b. Constituting the Arbitral Tribunal	204

c. Other Administrative Matters	205
4. Governing Law	205
5. Substantive Proceedings	205
6. Recognition of ICSID Awards	208
7. Enforcement of ICSID Awards	208
8. The Annulment Issue	209
9. Additional Facility	212
E. Other Arbitration Institutions	212
F. Other Dispute Resolution Techniques	214
Chapter 8: Action by the Investor's Home State and the International Community	217
A. Diplomacy and Settlement of Claims	217
B. Economic Sanctions	219
C. Claims Before International Tribunals	221
D. Invalidation of Title	222
1. General Rule	222
2. United Kingdom	224
3. United States	225
4. Other States	226
5. Conclusions	227
E. Prohibitions Against the Use of Force	227
1. The United Nations Prohibitions Against the Use of Force	229
2. Futility of Awards of Restitution	231
F. The Foreign Claims Settlement Act of the United States	233
1. History and Purpose	233
2. Adjudicatory Powers	234
3. The Claims Process	136
G. Recognition and Enforcement of Arbitration Awards Under the New York Convention	237
1. General	237
2. Methods to Enforce Awards	239
3. Grounds for Refusing to Enforce Awards	240

APPENDICES

Appendix I: Economic Calculation Under Socialism	243
Appendix II: World Bank Guidelines	247

Appendix III: U.S. Model BIT	255
Appendix IV: List of States that Signed U.S. BITs.....	267
Appendix V: OPIC Contract.....	269
Appendix VI: OPIC Member States	291
Appendix VII: MIGA Contract	293
Appendix VIII: MIGA Member States	319
Appendix IX: Sample Private Contract	323
Appendix X: Berne Member States	341
Appendix XI: ICSID Convention	351
Appendix XII: ICSID Member States	373
Appendix XIII: Foreign Sovereign Immunities Act	377
Appendix XIV: New York Convention.....	386
Appendix XV: New York Convention Members	391
Appendix XVI: Contact List	393
TABLE OF CASES.....	397
TABLE OF AUTHORITIES.....	405
INDEX.....	431

Market Socialism and the Property Problem: Different Perspective of the Socialist Calculation Debate

Mateusz Machaj

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Historical Argument and Market Socialist Response

In 1920 Mises presented his famous essay on socialism, which would change, and eventually destroy, the whole scientific case for Marxist socialism (Mises 1990). Afterward, no one could seriously defend that doctrine. Mises argued that socialism cannot be effectively organized because of the “calculation problem.” He based his analysis on the comparison of central planning to the private property regime. Here is a brief summary of his argument.

Socialism means the abolition of private property. More precisely—it means an outright nationalization, that is, a *compulsory creation of one owner, which is to be sustained by compulsory measures*. With one owner established, it is impossible for him to be involved in exchange, since by definition, an act of exchange is possible only if there are at least two owners. Hence without exchange it is impossible to create a price system, which reflects monetary inputs and outputs in the processes of production. Every factor needs to be priced in terms of money if one wants to assess its utility and productive employment in the economy. In the socialist economy there are no prices, thus this assessment does not exist. It is not possible to exercise economic judgment *ex ante* (before production) without prices; neither is it in the *ex post* (after employment decisions).

After Mises demolished Marxist analysis, socialist economists did not question the idea that prices are a necessary means for the productive employment of the factors of production in a complex economy. Prices, in their eyes, were very important *parameters*, without which correct economic decisions in modern reality

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are impossible. Whereas the first socialists responding to Mises were naïve in their analysis of the price system,¹ this was not the case in the Anglo-Saxon world, where advocates of central planning offered a market socialism model that was very similar to the working mechanism within the capitalist system. Consumers would spend their earned money on final goods. This would be a clear indication of what should be produced and by what means. Through these consumer signals, value would be imputed to producers' goods; therefore the price system could easily be created.²

At first the central planner would simply set prices at whatever level he might want. Next a list of prices would be published and the managers of public enterprises would produce half-finished products and consumption goods at a level guaranteed to minimize costs. Moreover, the price list would be adjusted to the conditions of demand, and any shift in prices would be a result of the existence of surpluses and shortages. In the case of capitalism the situation is very simple. When prices are too low, shortages quickly appear; when they are too high, we face surpluses. Exactly the same mechanism would be present under market socialism; therefore there is no essential difference between capitalism and socialism. The proper model of socialism allows for the efficiency of the production process—prices adjust so as to equalize the level of supply to the level of demand.

Lange based his thesis on the market socialism model first presented by Fred Taylor, whose view is compatible with Lange's (although the former wrote about *factors* and the latter about *commodities*, the basic trial and error method is adopted in both the consumer and the resource market; prices of factors are to be imputed from the consumer market).³ Other socialist economists agreed on this point and repeatedly based their efficient socialist model on Taylor's insights. The function of prices is to equalize quantity demanded and quantity supplied and to optimize the level of production. This has nothing to do with the property system, but rather with the existence of prices that are free to adjust to the presence of shortages and surpluses.⁴

We should add two important points in defense of the market socialism model. First, this model is not based on abstract equilibrium analysis, i.e., it is not a product of a simple perfect competition model, in which prices for the factors of production are set automatically by their marginal productivity. It is a purely practical project

¹See Mises (2002), the first response to particularly weak criticism.

²Famous responses to Mises include: Lange and Taylor (1956), Dobb (1933), Dickinson (1933), Durbin (1936), Knight (1936), Lerner (1934). See also newer work: Gordon (1970), Roemer (1992).

³Imagine a simple scenario: there is a shortage of chairs—the price is raised in order to satisfy greater demand. But the price for wood stays the same, hence the managers have an incentive to increase production of chairs—greater demand for wood causes its relative shortage. Then the price for wood should also be raised—by this method prices would be imputed in market socialism in a dynamic setting without any assumptions about “equilibrium” in the production structure. Shleifer and Vishny (1992) argue that managers would have an incentive to create shortages of output and collect bribes from consumers. But this as they note is present if the managers cannot keep profits. This relates to the incentive problem, which could be solved by relating wages of managers to their performance within the market socialism price structure (the lower costs they achieve, the higher salary they get).

⁴That is why Hayek sees the problem of market socialism in the fact that “changes will occur later than they would if prices were determined by the market parties” (Hayek 1940, p. 135). Moreover, for Hayek the difference between the market system and socialism is due to centralization, not difference in property regimes (p. 131).

with a clearly realistic mechanism of dealing with the problem of efficient allocation of resources. No equations are written, there are no functions describing optimal solutions for the structure of production; we have a list of prices for all the factors, a list that is intended to bring balance between the supply and demand for these factors. We should certainly not criticize the model on the grounds that it is possible only in the “stationary” or “equilibrium” state. This model describes the mechanism in the real and dynamic world no less than the capitalistic model. That is why we doubt whether some Austrian theoreticians are correct in arguing that the market socialism model is a product of “preoccupation with equilibrium.”⁵

Professor Boettke’s (2001, p. 40) answer is that Lange’s model assumes everything it needs to prove. Similarly Professor Kirzner (1988, p. 7) says that Lange’s model is a result of equilibrium analysis. The same is the case with Vaughn (1994) and Bradley (1981, p. 32). These writers rely on Hayek’s statement about the “excessive preoccupation with problems of the pure theory of stationary equilibrium.” A closer look at Lange’s statement, however, reveals that this thesis is not necessarily correct. His trial and error method *is not about equilibrium analysis*. There is no equilibrium theory here, as Lange himself clearly stated:

To establish the prices which serve the persons “solving equations” as a parameters no mathematics is needed either. Neither is there needed any knowledge of the demand and supply functions. The right prices are simply found out by watching the quantities demanded and the quantities supplied and by raising the price of a commodity or service whenever there is an excess of demand over supply and lowering it whenever the reverse is the case, until, by trial and error, the price is found at which demand and supply are in balance.

...[T]here is not the slightest reason why a trial and error procedure, similar to that in a competitive market, could not work in a socialist economy to determine the accounting prices of capital goods and of the productive resources in public ownership. (Lange and Taylor 1956, p. 89)

It seems some Austrian theoreticians do not really address the trial and error method when their critique concerns the equilibrium model.⁶

The second point that needs to be emphasized in the analysis of market socialism is the fact that this mechanism solves the problem of economic calculation *per se*. The main thesis presented in Mises’s original paper is the inability of the socialist state to arrive at calculation, because there is no *unit of account*. This problem, however, is avoided in market socialism, since prices on the central list are set in the universal medium of exchange—every single good has a price expressed in money. From that it follows that we can easily engage in cost accounting, which will show which process of production is profitable, simply by looking at revenues that are higher than costs. The problem of a heterogeneous capital structure, which does not

⁵This is a consequence of Hayek’s rhetorical question (Hayek 1940, p. 131).

⁶Mises did not think that Lange’s answer was an “equilibrium” answer. See below. Some Austrians’ mistakes are understandable in light of the fact that even Lange himself did not completely realize that. In (1967) he revealed that he sees a market as a primitive calculator solving equilibrium equations, which can now be substituted for the supercomputer.

have a natural unit (you cannot add a hammer to a computer), is solved: centrally administered prices are expressed in one unit.

We see then that calculation is possible within the socialist system. Calculation would be impossible in socialism only if the “unit” needed for calculation did not exist. That is for example the case with utility calculation—there are no “utils,” or any other units measuring utility.⁷ The case is different with money prices under socialism—the unit *does* exist, hence *calculation is possible*.⁸ After Taylor’s response the relevant problem is as follows: is there an essential difference between the prices produced under the private property regime and the prices produced under socialism? Or to put it another way, in what way does calculation under private property differ from centrally planned calculation? The problem of socialism becomes a property problem, not a problem of calculation.

Mises’s Response to Market Socialism

In his *magnum opus*, *Human Action*, Mises presented a critique of market socialism. The major significance of his book is that he made a clear-cut distinction between the “equilibrium solution” and the “trial and error method.” This distinction is still not present in some modern Austrian writings. They are different things, and Mises

⁷See Rothbard (1956).

⁸The market socialism model is also perfectly compatible with Hayek’s essay on knowledge, which could be titled “The Use of Knowledge in Socialism” with few changes of words that do not destroy the argument, e.g.:

Fundamentally, in [socialism] in which the knowledge of the relevant facts is dispersed among many people, [market socialism] prices can act to co-ordinate the separate actions of different people in the same way as subjective values help the individual to co-ordinate the parts of his plan. It is worth contemplating for a moment a very simple and commonplace instance of the action of the [socialist] price system to see what precisely it accomplishes. Assume that somewhere in [the socialist economy] a new opportunity for the use of some raw material, say, tin, has arisen, or that one of the sources of supply of tin has been eliminated. It does not matter for our purpose—and it is significant that it does not matter—which of these two causes has made tin more scarce. All that the users of tin [in socialism] need to know is that some of the tin they used to consume is now more profitably employed elsewhere and that, in consequence, they must economize tin. There is no need for the great majority of them even to know where the more urgent need has arisen, or in favor of what other needs they ought to husband the supply. If only some of them know directly of the new demand, and switch resources over to it, and if the people who are aware of the new gap thus created in turn fill it from still other sources, the effect will rapidly spread throughout the whole [socialist] system and influence not only all the uses of tin but also those of its substitutes and the substitutes of these substitutes, the supply of all the things made of tin, and their substitutes, and so on; and all this without the great majority of those instrumental in bringing about these substitutions knowing anything at all about the original cause of these changes. The whole acts as one [socialist] market, not because any of its members survey the whole field, but because their limited individual fields of vision sufficiently overlap so that through many intermediaries the relevant information is communicated to all. The mere fact that there is one central price for any commodity—or rather that local prices are connected in a manner determined by the cost of transport, etc.—brings about the solution which (it is just conceptually possible) might have been arrived at by one single mind possessing all the information which is in fact dispersed among all the people involved in the process. (Hayek 1945, p. 526)

properly pointed this out when he dealt with the two arguments in different chapters. The problems of the mathematical solution and differential equations are problems of equilibrium analysis, so their association with the dynamic model of “trial and error” and quasi-market is very loose.

First Mises points out that in order for the trial and error method to work it must be based on the “arithmetical process” providing a yardstick that would assess the height of profits and losses in production. He then emphasizes that without private ownership, buying and selling of factors is impossible, so no money prices suggesting their productive use can be formed (Mises 1966, p. 704). This, however, as we have seen, is not entirely fair to the socialists. Whether market socialism is feasible or not, it *does have* a unit that can be calculated and related to all the factors of production owned by one agency. In the Taylor–Lange model all the factors with their money prices are published on the centrally administered list, thus their usefulness might be computed in a common monetary unit. As we pointed out earlier, the problem changed after the Anglo-Saxon response and so the proper question should be: what is the difference between monetary calculation produced by the private property regime and monetary calculation produced by one compulsory owner of all the resources?

The problem of arithmetic is absent in market socialism, so Mises was incorrect, but his critique grows very strong, when it comes to managers’ decisions. The planner sets the level of prices in the socialist economy and decides about the range of planning, but some of the decisions must be transferred into the hands of managers, who act in a similar fashion as the entrepreneurs do in the capitalist system. Lange argued that they could engage in the production process in exactly the same way as entrepreneurs do in the private property system. Their demand will depend on the final consumer demand and their choices will influence the volume of spending on particular factors of production. Cost accounting will easily develop; shortages and surpluses will indicate the correct direction in which centrally administered prices should change.

In order to fully grasp the Misesian analysis of the managerial model, it might be helpful to note the essential difference between Mises and Kirzner on this point. Kirzner’s thesis is that *the manager can be an entrepreneur*. Not only that, but also the question of whether or not this is the case cannot be “decided by *a priori* reasoning” (Kirzner 1978, p. 72). It seems to be the natural consequence of Kirzner’s statement that the entrepreneur does not need to own any resources. Mises’s idea however openly rejects the thesis that entrepreneurship is possible without resources:

The managerial function is always subservient to the entrepreneurial function. It can relieve the entrepreneur of a part of his minor duties; *it can never evolve into a substitute for entrepreneurship*. This fallacy to the contrary is due to the error confusing the category of entrepreneurship as it is defined in the imaginary construction of functional distribution with conditions in a living and operating market economy. *The function of the entrepreneur cannot be separated from the direction of the employment of factors of production* for the accomplishment of definite tasks. The entrepreneur *controls* the factors of production; *it is this control that brings him either entrepreneurial profit or loss*. (Mises 1966 p. 306; emphasis added)

This brilliant insight contradicts Kirzner's statement that ownership can be separated from entrepreneurial activity. As Mises emphasized, capitalism is an entrepreneurial system—a system based on private property. What defines the entrepreneur is the control of scarce resources in an uncertain world, not “alertness,” but control and ownership. The entrepreneur is not “alert,” he's “in control.”⁹ Alertness is possible under any system, including full socialism, and the analysis in this case can be based on empirical observations, not apriorism. It is entirely different from the problem of controlling the resources; under socialism the control lies in the hands of one agency, and no one else is permitted to act freely within that system. This fact can be recognized by *a priori* reasoning. In the Misesian framework entrepreneurship is necessarily abolished in the socialist system, but in the Kirznerian framework “entrepreneurship” might function under socialism.

Mises criticized the idea of substituting entrepreneurship (private property control) for public management on the grounds that managers can only act within the limits set by the final decision maker.¹⁰ In the capitalist society, managers are bound by the shareholders and the capital owners, who do have the tools to allow them to decide ultimately what happens with the resources. In the case of the socialist economy there is only one ultimate decision maker: a central agency formulating the plan. In other words, managers cannot “play” competition, since in order to act like real entrepreneurs they would have to be fully sovereign in their decisions just as the private property owners are. But they are not, because any “competing” manager is equipped with resources and instructed by the same single owner. As Mises notes:

The entrepreneurs and capitalists establish corporations and other firms, enlarge or reduce their size, dissolve them or merge them with other enterprises; they buy and sell the shares and bonds of already existing and of new corporations; they grant, withdraw, and recover credits; in short they perform all those acts the totality of which is called the capital and money market. It is these financial transactions of promoters and speculators that direct production into those channels in which it satisfies the most urgent wants of the consumers in the best possible way. These transactions constitute the market as such. If one eliminates them, one does not preserve any part of the market. What remains is a fragment that cannot exist alone and cannot function as a market. (Mises 1966, p. 708)

The entrepreneur must be in full control of the resources he directs. This control allows him to engage in competition with other owners, and this control brings him profits or losses. Capitalists decide what to do with a particular factory—e.g., they can at any time open a pharmacy, dance club, or hospital. They can choose among many different factors of production and the decision about the destination of the resources controlled by them *lies in their hands*. In the socialist economy it is

⁹For more critiques of Kirzner see: Salerno (1993) and Hülsmann (1997). Kirzner seems to go too far in his process of abstraction, since he abstracts from the very fact that he is supposed to explain (“precise abstraction” (Long 2005)).

¹⁰And this insight is present not only in *Human Action*, but can be traced back to the original argument. See Mises (1990, pp. 33–40). Unfortunately this argument is unnecessarily mixed with the “incentive problem,” which might cause confusion.

necessarily absent, since, as we have indicated, socialism is a compulsory creation with one owner deciding about all the resources. Managers are not the ultimate decision makers, and the breadth of their decision-making is a product of one socialist plan imposed by a central agency. It is an illusion and an open contradiction to call that situation competition, since *the “competitive” conditions are a by-product of one will acting.*

Every single manager is equipped with resources by the decision making body and his alternative choices are given to him by one economic planner. He cannot simply close the factory and start some other business; he is not allowed to offer different prices than the ones in the central plan. The manager cannot simply withdraw resources from one line of production and put them into the another; he cannot speculate and try to guess the future more accurately than the central planner, because he must obey his master (central planning board). He is not free to choose, since the very idea of socialism is to take the control away from the people and put it into the hands of one state-organized agency. This will not be a real market, where different owners bind each other’s choices, but a *false, staged, market*. Calling this situation sovereign decision-making is contrary to both common sense and economic science. The rules of competition are imposed by the central planning agency, hence it is the very agency and its plan that decides about production—not “competing” managers.

Extending Mises’s Criticism: The Fallacy of Centrally Administrated Prices and the Process of Equilibration in Socialism

Although Mises did not fully address the “trial and error” method, he did however present a powerful critique of the socialist-managerial system, a critique that can easily be extended to the analysis of prices and the equilibrating mechanism (“equalizing” demand and supply) under socialism. First let us state the problem once again. After the market socialist response, the debate changed from the problem of calculation to the problem of property—is there a difference between the calculation of money ratios under socialist production and the calculation of prices produced in the private property regime? And if a difference exists, what are the economic implications of this difference? What are the characteristics of these numbers in socialism as compared to capitalism?¹¹

To understand the nature of market socialism we must go back to the basic point, of what socialism is. Let us repeat then, socialism is a compulsory control of all the productive resources in society by one owner who is supported and maintained by the use of power. What matters is that there is one owner of all the factors and the decisions concerning these factors lie completely and ultimately in the hands of a single entity. The final verdict cannot be challenged, no one is free to question it, or compete with this agency. The decision is up to one owner, whether it be collective or individual.

¹¹As Professor Herbener (1996) argued, in socialism there is a problem of calculation, since we cannot add apples to oranges. This problem, however, is absent in the market socialist model—we have one unit, in which everything is priced, so the “calculation problem” (the problem of adding) is solved.

The organization of the whole capital structure, the relationship among different stages of production, the amount of employment of different factors among the sectors—all this is subject to one will. This central planner has to deal with the fact that there are many heterogeneous capital goods, which can be employed in many different ways. He exclusively makes the decisions, and every step in production must conform to his plan. Therefore, it is a final, central, and authoritative plan of one owner that directs all the resources.

What the central planner will do and how factors will be allocated is completely up to his decision. Either way, since he is the only owner and decision maker, he makes the judgment and he will assess that judgment. Nobody else is granted that power. This fact is an essential feature of all socialist programs and should never be forgotten, no matter what kind of “socialism” we’re talking about. It is exactly the same case with market socialism.

How according to Lange should socialism be organized? All the factors owned by one agency should be listed centrally and the central planner should set a price for them, then allow directors and managers to act upon these prices. This, however, does not change the fact that market socialism is still socialism, and still has the same basic rule. Prices on that list are set by the central agency, the decisions by directors and managers are derivative of the central planner’s instructions, and changes in these centrally administrated prices are a product of the very will that organized the whole production. We see then that *market socialism with its paper price system is no different from pure dictatorship*.

One will produces the price list and one will assesses the production afterward. Its decisions are subjected to its own assessment. This neglects the basic feature of any kind of objective test. Whether decisions are correct or not, the assessment of their correctness must come from outside the confines of these decisions. Acting and assessing man needs some external yardstick, which will help him to judge whether he makes bad decisions. And who is the judge in the case of market socialism?

The central planner sets any prices he wants for all the factors. Then from the very beginning he makes the judgment about the situation in which he is about to act, so he does not need any numbers in the first place. Let’s imagine that Robinson Crusoe wants to make a sandwich. Instead of just preparing the sandwich he starts to price all the factors he has. Bread is 2 R-dollars, butter 1 R-dollar, and ham 2 R-dollars. Then Crusoe prints 6 R-dollars and gives them to himself in exchange for the sandwich. The ratios in this situation are not needed, since all decisions are subject to his own will’s assessment. Only Crusoe decides what happens, and what should be judged as wrong. If one person acts, there is no point at all in assigning numbers to every resource that he uses. This is due to the fact that he does not need to deal with these numbers as if they were a *constraint* upon his action. He produced these numbers and he can easily change them as he wishes. The numbers are not needed at all.

A similar absurdity lies within the “equilibration mechanism.” Imagine a socialist economy, in which the central planner owns every single factor of production. He also decides about the whole structure of production. What then does the phrase “quantity supplied equal to quantity demanded” mean? Let us consider the following example: hammers made of steel. Who decides about the price of steel? The central planner. Who decides about the fact that forgone alternatives cannot be realized? The

central planner. Who decides about the *ex post* judgment? The central planner. The whole process is subject to a single will and one will only. Hence *quantity supplied and quantity demanded are always equal*. Since everything is owned by one will, it simply follows that every single unit of any stock is demanded by the central planner. However, the central planner cannot tell which particular employment is more or less efficient, since every single unit of capital good finds its employment (in the hands of the central planner).

Let's imagine that one person owns five chairs and a table. What is the price that equalizes the quantity demanded and supplied in this situation? The answer is: *any price*. If the price is three chairs for one table, then one will “exchange” three chairs for one table, and two chairs represent the “reservation demand.” The *ex post* situation is that the quantity demanded equals the quantity supplied. If the price is five, then the situation is exactly the same. If the price is six chairs for one table, then “exchange” is not realized, and there is a “reservation demand” for the table. But the situation is still the same as in all other cases. One will owns five chairs and one table—the quantity demanded still equals the quantity supplied, no matter what the price is. Assigning any ratios is clearly a game, since the planner still owns all the factors and he is making decisions.¹²

Socialists might respond by saying that these particular situations (“reservation demand” for the table, reservation demand for the chairs, or “equilibrium” at the price of five tables per chair) although from the point of view of ownership are the same, might still be a guide to allocating the tables and chairs in different ways. Of course, this could be the case, but it gets us back to where we started. The way in which this guide is constituted and exercised depends on...one will.¹³

Also, Lange completely misses the nature of the economic process being extended through time. Production is not instantaneously synchronized, which is why there is the phenomenon of “reservation demand.” Let's imagine that some factory produced 100 computers. If these computers are not sold the next day, is the price supposed to be lowered in order to empty the warehouse? What is the sign of a surplus? Are we to recognize “surplus” as a *physical* observation of some goods

¹²Some might respond that in socialism the consumers will buy commodities and the mechanism of “trial and error” will be useful. However, (1) this will be the case of two wills, not one (the central planner *vis-à-vis* consumers), (2) this would set *constraints* upon the central planner, hence producing a better situation than one that would have existed without the free consumer market, but (3) this is not the main problem of socialism, since as Mises (1990) from the very start emphasized that the real socialist problem is the capital goods market, not the consumer market (Lange and Taylor suggested that free consumer markets should exist). Also, the consumer market is the last element of the economic system. If the whole production structure is destroyed, then very few consumption goods will be produced. The system will end up as in the former Soviet Union, where in every shop consumers were choosing between vodka and vinegar. And last, but not least, even in the consumer market there will be huge problems.

¹³As Bornstein (1962, pp. 97–98) wonderfully demonstrated:

while prices can be set to equate supply with demand according to planner's preferences, these preferences cannot themselves be based on an independent calculation of opportunity costs, as reflected in independently determined scarcity prices, since the scarcity prices in use *are themselves fixed on the basis of planner's preferences*. (emphasis added)

being stocked?¹⁴ Shall they all be sold in one hour? In the capitalist economy many cars are parked at every single moment, but nobody seriously calls this situation a “surplus” (Hülsmann 1996, p. 11).

Economic textbooks speak of demand and supply, the price system and exchange, when there is a two-person model (two owners). And with reason, we might add. It is useless to speak about supply and demand in the case of a Robinson Crusoe economy, because the whole economy is subject to his will.

Let us push the critique further, since most theoreticians suggested that the consumer market could work properly under socialism due to the “trial and error” method. However, the problems would still exist on the consumer market. How do we define surplus there? Are all goods supposed to be sold instantaneously? Are empty seats at the movies, on buses, or in cabs a sign of a surplus? Even the consumer market under socialism would be a mess. *Because for the consumer market to work one needs not only consumer prices adjustable to demand, but also the costs of production.* Since costs depend on one will and there is no imputation derived from different property owners (social appraisal process¹⁵), then even the consumer market cannot work properly in socialism (this will be explained more clearly in the next section, see especially the quote by Cole below).

As Mises demonstrated in his analysis of the “third way,” the problem with price controls is not just that they cause goods to be stocked in some place or that we notice their deficiency (Mises 1952). The very nature of the problem is that *price control destroys the relationship between costs and consumer prices*, which falsifies the profitability produced by the judgment of owners. The problem is not the physical stocking, but the false relationship between costs and prices (Mises 1952, pp. 22–23). We can recognize a surplus or a deficit caused by the price control, because we know the relation between the prices of the factors of production as created by the private property owners and those consumer prices produced by the state. We compare the prices on the producer’s market with the consumer prices imposed by the state. Only from that do we know the surplus or deficit and understand its relation to monetary prices. If the market for the factors of production is abolished, then the surplus and deficit cannot be spotted in the monetary sense.

The nature of a “surplus” and “deficit” cannot be analyzed through *physical* observation and cannot be grasped with one’s eyes (as Lange suggested). It can only

¹⁴This is Lange’s main point: “The use of right accounting prices is vital to avoid disturbances in the *physical* course of production and those prices are far from being arbitrary” (Lange and Taylor 1956, p. 93). Now, if we treated any good not used right away in the production process as a sign of a surplus, the results would of course be pretty obvious. Hammers not sold instantly are a sign of a “surplus,” their price is lowered so that hammers are sold right away, but the production (according to the official tables) becomes unprofitable, hence no manager decides to produce hammers, because resources are more expensive. A “surplus” in the production resources is “solved” by lowering of prices for steel, wood, etc., so that everything from the inventories disappears. The natural end of this system is a gross shortage of everything in the whole economy.

¹⁵See Salerno (1990a, p. 57). It is worth pointing out that some very basic elements concerning “appraising” used by Mises and Salerno can be found in Böhm-Bawerk’s analysis. “Subjective valuations” and “the *rational appraisal* of the functioning of prices” decide about the market operations. This “process” is not a metaphor but a “living reality” (Böhm-Bawerk 1959, vol. 2, p. 229). On the “social appraisal process” and the intellectual division of labor see the classic paper in Salerno (1990a, b).

be understood by using economic analysis, that is, with reference to the price system, monetary outlays, and monetary revenues. Just think about the case of a theater where ten people are watching a movie and there are fifty empty seats. No serious economist would call this situation a surplus, because he analyzes costs as compared to consumer prices. But in socialism there are no costs in the market sense (competing private property judgments). The socialist planner can only notice that some seats are empty.

What should he do in this situation? Lower the price in order to have a full theater for every single showing? The price would have to be really low in this case. If an entrepreneur in the market economy did that, he would immediately go bankrupt. The socialist planner would not go bankrupt and wouldn't even know that in fact he is not solving the problem of a surplus, but is instead creating a shortage!¹⁶ There would be no empty seats in a theater. But there would be a tremendous waste, overuse of resources and a shortage, which could not be spotted without the reference to the real market. In other words, consumer goods need not only valuation, but also appraisal. We see then that even the consumer market would be a mess under socialism.¹⁷

Capitalist Prices as Private Property Constraints

The characteristic feature of socialism as dictatorship will help us understand the nature of capitalism. Under the system of private ownership, heterogeneous goods are owned by many owners, who can exchange their property titles. Any entrepreneur is then *constrained* by certain external (to his will) factors in order to employ some factors of production and in order to successfully act.

First of all, he needs to buy the factors of production from other entrepreneurs. That is, the prices of these factors are not arbitrarily set by him, but are set by some *other decision maker*, and he just *faces* them. Of course, he can certainly influence these prices by his actions (that is, by buying the factors or abstaining from buying them). However, what we need to remember is that these prices are not produced by him alone, but by interaction with other people.

Second, the acting entrepreneur faces not only the prices of the factors of production, but also the fact that there are other entrepreneurs competing with him for the factors of production that he wants to buy. That is why his decision whether not to buy some factors, is not the only determinant of prices. The entire demand for the factors determines the price. We see that an acting entrepreneur is not only constrained by those who sell him the factors of production, but also by the competitors, who might be willing to bid up the prices even higher. We need to emphasize the point that the visions of the competing entrepreneurs (buying or not selling) are *in conflict* with the decisions of our entrepreneur. Essentially, it is not the

¹⁶We know this not from the point of view of the central planner, who obviously could not discover it, but only because we engage in a comparative analysis.

¹⁷Hoff (1981, Chapter 6) also argued this, but his analysis is based on the problems that exist even under capitalism (like substitution relations, elasticity discovery, and so forth). For a very good analysis of price controls see Reisman (1996, Chapter 7).

case that this entrepreneur *tells* his competitors what to do. If this were the case, we would then name the case a mere *play*.¹⁸

The third thing to point out is the *ex post* case. After buying the factors of production and producing something, the entrepreneur sells his product on the market. That is, again he is constrained by the decisions of other people who decide whether or not to buy his product. *As a result of the private property order*, this assessment is not produced by his will alone, but is a result of many people exercising their individual wills. If he decided about the demand for his product, then he would in fact decide about the amount of profit, therefore again this could be mere “play acting.”

Our analysis explains in a nutshell how the market system works. The acting entrepreneur faces three important *constraints* on his actions. He faces the socially determined prices of the factors of production; he faces competing entrepreneurs who are also willing to buy these factors; and he faces an *ex post* judgment when he sells his finished product on the market. He is dependent on the *will of others*. To a certain extent he is a planner. He plans what to do with the resources he buys, what to produce, and where to sell. These decisions are purely *planning phenomena*. But the whole plan depends on the will of the entrepreneurs who sell the factors of production, on the will of other entrepreneurs who compete for the same factors of production, and the entrepreneurs, who, when the production is finished, decide to buy the finished product (or the consumers in the case of a final good). Hence we see that *planning within the private ownership system is conditioned by the planning of others*.

This is the essence of what was emphasized by the Misesian term “intellectual division of labor” (Mises 1990, p. 18; Salerno 1990a, p. 54).¹⁹ In the market economy we have different owners deciding the destinations of owned resources. They are not dictators, since their decisions are constrained by the decisions of other owners, and this explains the phenomena of competition and demonstrates why prices in the private property system are not just cardinal numbers. They are the results of competing economic decisions. That is why they are relevant for the production process. When an entrepreneur *calculates* under capitalism, he is in fact referring to the judgment of others and dealing with competing plans of *other* property owners. When the central planner *calculates* in market socialism, he is only referring to *his* own opinion and judgment, because he *exclusively* produced the numbers he uses.

So the price ratios *per se* are not the key element here. The key element is competition, based on private property boundaries. If someone can produce cups and tables cheaper than an entrepreneur owning a bar, then it easily follows that he is more efficient at it. His intellectual entrepreneurial ability is a constraint upon the owner of the bar. When the owner of a bar determines in monetary terms that it is

¹⁸A “play” in a sense that everything would be staged by one person. In modern times, with the prevalence of game theory, we need to be careful with the usage of this term.

¹⁹We should add here that the Misesian intellectual division of labor should not be confused with Hayekian knowledge of particular place and time. These two are different phenomena. The term was also translated as “mental” division of labor. As we will see later it would be better to use the term “entrepreneurial” division of labor.

more *profitable* to rely on outsourcing than to produce the complementary factors on his own, then it simply means that his entrepreneurial ability in this field is lower than the ability of some other entrepreneurs. Once again, what is behind the capitalist prices is not just calculation *per se*. The capitalist price in itself is not a constraint, just as the knife did not kill Abel. What constrains the individual entrepreneur within the market system are the property decisions of the other entrepreneurs, *the price being only a manifestation of that constraint*.²⁰ Thus we see that the fundamental check upon vertical integration is not just a price system, but that which stands behind it: private property and the possibility of exclusion from the resources.²¹

The above paragraphs restate the Misesian analysis of capitalism as opposed to socialism. The fundamental problem of the economic system is not a “calculation” problem. Calculation is just adding and subtracting particular cardinal units that can be present under any system. The institutional framework, however, is not about ratios, but about making decisions and organizing the production process. When we say in the market economy context that it is not *profitable* to produce some particular economic good, we mean in fact that we are *constrained by the decisions of others*, who find our current judgment about the future to be wrong.²²

Socialism, on the other hand, is an aggressive abolition of the property-judgment boundaries, which serve as a basis for the intellectual division of labor. Socialism means the *nationalization* of all resources, *expropriating private owners* and putting their property under the command of *one will*. All decisions in that economic system are dependent on one will. What should be done with a particular scarce resource? This will be ultimately decided by one person only (or one board), and not by competition. Other judgments resulting from private property and the intellectual division of labor are excluded by force, not by competition and successful planning. The point then is not that prices disappear in the socialist economy and we will not have cardinal numbers that enable us to generate profits and losses. The problem is that all decisions are compulsory made by one will only; everything is forcibly planned from the very outset. We can simply imagine the central planning board

²⁰It is worth referring to Kornai's (1979) work here on the comparison of resource-constrained systems and demand-constrained systems. Property constraints in capitalism are economically expressed as demand constraints and budget constraints. In socialism those disappear and the only constraints left are resource constraints. Unfortunately those are not appraised in the competitive environment, hence the only thing achieved by socialism is shortage without efficient employment.

²¹This insight is particularly useful for the Austrian analysis of the firm. The famous article by Coase posed the question “Why do firms exist?” and hinted that the answer is supposed to be found in the relationship between “organization costs” and “transaction costs” (Coase 1937). The Misesian extension of the problem is quite obvious from the discussion above. The existence of firms is conditioned by the intellectual division of labor. When it is more profitable to use the external market (e.g., buy tables for a restaurant business) it is a manifestation of the intellectual division of labor. It means that there are other people, more skilled and gifted in their economic planning, i.e., they expend fewer money units to do the same job, hence they are more productive and the intellectual division of labor should step in. (Coase objected to finding the reason for the existence of the firm in the division of labor. But his arguments apply to the division of labor, not to the *intellectual* division of labor as developed by Mises and Salerno).

²²Some might ask: who gave certain people the power to judge whether somebody is correct or not? The answer is that, in the market economy, the capital flows into the hands of those who were more successful in their judgments than others.

assigning ratios to different goods. But these ratios will not be the same as “prices” under capitalism. The essence of the price system under capitalism is not cardinal numbers *per se*, but cardinal numbers that are the result of the intellectual division of labor and competing private property owners. Under capitalism *price reflects a constraint* placed upon any entrepreneur by all the other entrepreneurs, those supplying the factors of production, those competing for them, and those assessing the decisions *ex post*. Under socialism all these constraints disappear because tanks, guns, and prisons are used instead.

In this environment, assigning ratios is just a game. Ultimately there is one owner, who decides about the employment of resources. He can assign some ratios and call them “prices,” but the relevant question is who decides about these prices, who influences them, and who judges decisions *ex post*? The answer then is obvious: everything is dependent on the socialist will. These ratios are not useful, meaning that *they do not guide the central planner in any way, since he himself produces these ratios*. In the capitalist economy prices are guiding the entrepreneur, because they reflect competing judgments of many other owners. In the socialist economy there are no other entrepreneurs; there are no other decisions. And so there can be no constraints working as a check on any economic decision of the central planner.

Under socialism the external test, which would be a guide for the allocation of resources, is forbidden by compulsory measures. That is why the socialist planners attacked black markets: because the existence of these markets revealed the planners incompetence and lack of ability to reasonably run the economy.

Thus it is easy to see that market socialism is just a “play.”²³ It is just a play, because *between market socialism and total dictatorship there is no difference*.

Interestingly, one of the few people who grasped this fact was a socialist G. D. H. Cole, who in the 1930s (before Mises used the term “play” market) explained the problem clearly and lucidly. It is worth quoting *in extenso*:

A planless economy, in which each *entrepreneur* takes his decisions apart from the rest, obviously confronts each *entrepreneur* with a broadly given structure of costs, represented by the current levels of wages, rent and interest. But in a planned Socialist economy this is not the case; for these charges may not exist at all, or, if they do exist, they do so not as objective factors beyond the control of the collective *entrepreneur*, but as charges determined by that *entrepreneur* as elements of the economic plan. How far wages continue to exist depends on the methods adopted by the planned economy in distributing incomes to the citizens: how far rent exists depends on the decision of the collective *entrepreneur* to make at a level which it decides, or not to make at all, a charge for the use of land and other rentable property by its constituent enterprises: whether interest exists depends on the decision of the collective

²³The term was used by Mises (1966, p. 709). This is, I believe, the essential argument against socialism, which was not sufficiently elaborated upon by the Misesians (and Mises himself). This also might suggest that Mises and Hayek do in fact differ in their analysis of socialism, since for Hayek the problem of market socialism was its *speed* of adjustment. For Mises the problem lies in the very *idea of adjustment*. Also it should be stressed, as Professor Salerno pointed out, when Mises used the term “play,” he was speaking of playing children’s games where the activity is *the end itself*. This paper, on the other hand, uses the term “a play” to mean that socialism is *staged by one will*.

entrepreneur to credit. All these charges can be made, or not made; and, if they are made, the rates at which they are made are bound to be controlled rates, determined by the collective *entrepreneur* in one capacity and paid by this same *entrepreneur* in another capacity. Such charges may possibly serve a valuable purpose in cost-accounting; but they are utterly different in nature from the objective costs which the *entrepreneurs* in a planless capitalist economy have to meet.

Accordingly, in a planned Socialist economy there can be no objective structure of money costs. Costs can be *imputed*, to any desired extent; and indeed, as long as money costs at all remain in being they must be imputed, to that extent at least. But these imputed costs are not objective, but *fiat* costs determined by the public policy of the State. The State decides, through its appropriate organs, what the level of wages are to be for the various occupations, what rents are to be charged, what interest is to be paid on capital, what industry is to contribute by way of taxation to the expenses to the State—or it decides to abolish such charges altogether. To the extent to which it retains any of them, it is imputing costs at a level which it decides for itself.

But imputation can, if the State so desires, go much further than this; for costs can be imputed without being actually charged at all. Imputed wages, rent and interest costs can be chalked up against each separate enterprise belonging to the planned economy, without any money actually changing hands.

...[T]he expediency of such methods does not alter the fact that the structure of imputed costs is bound to be arbitrary. (Cole 1971 pp. 183–85)

We saw that, from the Misesian point of view, there is no difference between market socialism and total dictatorship. Both systems are the same. That is how the idea of a socialist economy can be rejected by *a priori* analysis. If there is one owner established by force—if everything depends on one compulsory agency—this means that every single element in the economy depends on its decisions, and the intellectual division of labor is abolished. Prices are set by one will; the employment of the factors of production is set by one will; their distribution is set by one will; the combination of the different factors is set by one will. This means that *profits and losses are already defined*. “Correct” and “incorrect” decisions are already recognized. Everything from the very beginning is a product of one will. That is, from the outset the planning depends on one owner and no established ratios can change the fact that there is no external judgment.²⁴ *This fact is a logical necessity*. That is why the “socialist economy” is a failure and *this is the only way* we can understand Mises’s argument.²⁵

The whole problem with socialism is that it is a one-will (owner) system, created through aggression and sustained by violence. The essential cause of its economic failure is that the pricing process or rationing process is imputed by one will using

²⁴We can also make a statement that in practice socialist systems could, in a way, work, because they could rely on external judgments to be found in the world economy. Also let’s not forget about the important and highly beneficial role of the black market.

²⁵Hence we see that it is hard to agree with Vaughn (1980, p. 544) that Mises did not attack the trial and error method on logical grounds, but rather on practical grounds.

force. In the market economy the complex production process is dependent on the intellectual abilities of competing wills within a voluntary framework, and that is why the whole imputation process is different.²⁶

Socialism: The Property Problem

The above analysis brings us to the conclusion that socialism is (contrary to the thesis of many modern Austrians) neither a calculation, nor a knowledge problem. It has nothing to do with numbers (calculation is based on them), and it has nothing to do with the states of mind and gathered data of any kind (knowledge). It has to do with actions of private property owners and the results of the entrepreneurial process of imputation. The abolition of private property is the abolition of the intellectual division of labor and of the whole “market.” One will exercises its plan with the use of force and no one else can compete with it. No other owner is constraining its decision; nobody else can come up with a more productive idea for the use of a particular resource. Nobody else will judge whether the central planner’s decisions would be efficient or not, since he himself is the ultimate judge in socialism.²⁷ Just as killing all the scientists would destroy technological advancement, killing all the entrepreneurs (private property owners), destroys the intellectual division of labor, which is the basis for the advance of the economy.²⁸

Curiously, both Mises and Hayek to a certain extent recognized this fact in their responses to market socialists. Mises did not emphasize “calculation” in his critique of the “quasi market,” and Hayek did not emphasize the “knowledge” of the circumstances of a particular place and time. Each felt he could not fall back on his original thesis. Although their assessments of Lange’s proposition are not the same, at least they show that neither calculation, nor knowledge was the real problem. The central planner can produce prices for the factors of production and compute with them, subjecting them to the mathematical calculus. The central planner can also have every relevant datum. He can know the state and specifics of all the factors of production in a particular place and time, and all the possible ways of using the resources and technology. Moreover, let us suppose that he could somehow know the prices that would have been established on the market based on private property.

²⁶Rothbard in his article on the socialist calculation debate touches on that problem (Rothbard 1991, p. 65), when he writes that the key element is price imputation of capital goods. This is the one point in which he is close to the real problem of socialism, but instead falls back again into the calculation problem and talks about “money prices” and the existence of “markets,” somehow moving in a circle.

²⁷Hayek also touched on this problem when he said that the economy needs “price competition,” but he did not make this claim a central argument (Hayek 1940, p. 139).

²⁸Managers in the socialist system are only subordinates. This is why they cannot be substituted for the entrepreneurs. As we indicated in the note above Mises was close to this in 1920, but unnecessarily mixed it with the classical incentive problem. He wrote: “The property owner on the other hand himself bears responsibility, as he himself must primarily *feel* the loss arising from unwisely conducted business” (Mises 1990, p. 40; emphasis added). The term “feel” (*spüren*) is misleading and surprising, especially to a praxeologist, for whom psychological speculations are not important. What matters is not his *feeling*, but the ability to act and *constraints* upon his actions.

This “economic knowledge” and these numbers, however, still would not help, because with the abolition of the private property regime, the whole competitive process is destroyed.

Predecessors

The analysis of socialism in this paper is clearly connected to the Rothbardian theory of monopoly (Rothbard 2004, Chapter 10). Rothbard argued that the problem of monopoly is that some competitors are excluded by force from the market, and cannot rationally appraise the factors of production, and serve the consumers. They are not allowed to bid for the factors of production, create new markets, offer new products. That is why a monopoly grant creates problems on a particular market, and hence causes a decrease in social prosperity. Socialism is just a universal and absolute monopoly of this kind.²⁹

To understand the role of property, as opposed to numbers, in economic action, the following analogy should be helpful. Imagine a contest, in which dancers compete for a prize. Their performances are being evaluated by a panel of judges assigning cardinal numbers to each contestant. The best dancer is chosen by the judges. However it would be incorrect to state that the cardinal numbers allowed choosing the best performance. It is a judgment by the judges that allowed the whole contest to be realized. These numbers that we see on the boards raised by the panel are not just plain cardinal numbers—their meaning is much deeper than simple accounting. If one person decides to eliminate the judges and all other competitors, then the whole idea of the contest disappears. The case remains valid, even if one person pretends to compete with himself, and then pretends to be the judge by assessing his own performances with cardinal numbers. These numbers are produced by that person; hence the very judgment based on them does not make any sense here, because one will acts. The whole act is a play, because it is staged from beginning to the end.

The above metaphor shouldn't be taken as a metaphor for market activity, since the market is not like a simple competition for a prize. However the point stated above is a useful illustration of the fallacy of context dropping.³⁰ We cannot say that cardinal numbers allowed for the assessment of the dancers in the contest, because it is *not the numbers that allow for the assessment, but the decisions made by the judges*. Numbers are just a tool for them; they are not the primary reason for the action taking place.³¹

²⁹Rothbard would probably say that in the case of monopoly the problem is not some mystical lack of the “competitive price,” but the lack of full private property in some sector. We argue the same about socialism: the problem is not lack of the “price system,” but the abolition of private property.

³⁰This popular mistake was used by Professor Reisman to criticize the Keynesian doctrine (Reisman 1996, p. 879).

³¹One of the most important papers written on the calculation debate in recent years, which was a great step in the reformulation of Mises's argument, was one by Professor Mahoney (2002). In this article Mahoney offered to change the word “price” for “the amount of property that needs to be given in exchange.” Although to some it might seem only a definitional change, it is however a very important difference.

Some Austrians do not emphasize the problem of property and the intellectual division of labor enough and instead say that the socialist problem is a problem of the lack of prices and monetary calculation based on them. This is not the case—just as the problem of organizing a competition with one contestant is not linked to the lack of the judges' cardinal numbers, but to the lack of judges themselves. *We lack the judges in this case, not the numbers used by them.* The problem of economic order does not depend on some numerical system, but is strictly connected to the decision making, which cannot be separated from ownership.³²

Eucken and Hutchison (1948b) should also be recognized for perceiving the basic flaw in the market socialist model.³³ At a time when the whole Anglo-Saxon world was drunk with the market socialism model, they pointed out something important: in socialism instead of *exchanges* we have *allocations*. Prices in socialism are the guide exercised by one will:

To believe in the possibility of grafting prices on to the mechanism of control in a centrally administered economy is to believe in a squaring of the circle. Either the central administration is directing labour and means of production by its allocation, or the multitude of households and firms are decisive in the economy, in which case prices are formed. If control is left to the price mechanism, the central administration abdicates economically, while if the central administration takes over control, prices lose their directing function. (Eucken and Hutchinson 1948b, p. 190)³⁴

In other words in a system based on one will, like socialism, prices are a product of this one will, so they cannot be a guide, since they are directed at all times by this very same entity. One should add that the above fact coincides perfectly with Salerno's capitalist social appraisal process, which in socialism is substituted by the one-will decision process. The purpose of this paper was to follow the advice of Eucken and Hutchison, who stated that "economics should pay more attention to this peculiarity of economic calculation in a centrally administered economy, for it exercises a significant influence on the way in which the economic process works out" (Eucken and Hutchinson 1948a, p. 89).³⁵

We can think of some production process started by the central planner, which turns out to be inefficient and unprofitable. In the case of capitalism this project

³²A good introduction to the idea of how a price should be viewed as a contract between two owners is Hoppe's analysis. See Hoppe (1988, Chapter 2).

³³Actually Eucken is the main contributor, since he alone published the material before (in German).

³⁴In fact if one wants to seriously study the economic calculation debate, it is absolutely necessary to read the ingenious article by Eucken and Hutchinson. They were, however, mistaken about connecting the one will problem to a "perfect competition" model. Nevertheless their arguments are very powerful. In the present paper we connect the one will problem to the property system.

³⁵Paul Craig Roberts argued that market socialism and central planning are incompatible and having both of them is contradictory (1971). In fact the case seems to be that market socialism is *exactly the same thing* as central dictatorship planning (even on its highest theoretical level). Roberts referred to Eremín's view (1970), who argued that market socialism is an anti-Marxian concept. It is, however, a purely Marxian invention, intellectual manipulation, which is supposed to obscure the fact that market socialism in its fundamental assumptions is a pure dictatorship.

would be ended and the firm would be liquidated. But what does *this* mean? The consequence is that the less efficient owner loses control over the resources in favor of some other entrepreneur—the assets are switched. What does “liquidation” mean in the case of market socialism? The ownership does not change at all, hence there is no real bankruptcy process involved. In socialism there is no *social function of bankruptcy*.

Prices certainly are “signals.” But they are not the signals transmitting knowledge—they are the signals of exclusion by other property owners. When some factor is priced, it means that one is excluded from using it, unless he is able to meet the condition of paying the asking price. In socialism, the central planner setting the price sets the exclusion or price for himself by himself. From this stems the absurdity of market socialism.

Prices also are not information signals about the immediate past. When an entrepreneur buys the factors today, looking at current prices, it is not the case that prices manifest only the past conditions. Today’s prices manifest current conditions—present expectations of the private property owners—and they include current anticipations of future conditions. Therefore, when an entrepreneur looks at today’s prices, he sees not only the immediate past, but conflicting visions about the future between different private property owners. So the prices do inform us about important conditions, and their function is not just to register the past.

Creating and Maintaining a Socialist Order

The above analysis also brings us other results. Every step toward socialism is *uneconomical*, since it is not a result of the intellectual division of labor, but is a natural consequence of antisocial action, qualified as *aggression*. Some agency, or man, *becomes the owner of all the resources, not because he was better in judgment than others, but despite the fact that he was worse than others*. Under capitalism ownership is growing in the environment of constraints, which we emphasized before. These constraints are the judgments of other people, who *decide* about the efficiency of actions. Under socialism, the case is totally different, because the constraints are removed by *force*. There is no voluntary decision-making process, which would place boundaries on actions. The decision is clearly uneconomical, because it produced different results than would have been produced on the market. The point of aggression is to bring about different results than the ones attained on the market. If the results of the initiation of aggression were the same as those on the market, there would be no point in engaging in aggression.³⁶

Hence we can see why socialism is ineffective and cannot work. Rothbard (2004, p. 615) argued that the problem lies within the fact that the socialist economy is characterized by one owner only, hence there is no possibility of economic calculation, and so rational allocation is impossible. But, as we saw, the problem is not one owner *per se*, but rather *the elimination of the intellectual division of labor*

³⁶On the difference between aggression and contract from economic and sociological points of view, see Hoppe (1988, Chapter 2).

by means of aggression. Socialism then is inefficient not because there is no price system, but because there is no private property. We can state it even more clearly: not because there is no private property, but because *the private property is destroyed* and resources are redistributed to expropriators, not to the best employers of resources. That very act of destruction is the sole cause of the socialist catastrophe, not lack of some price system *per se*.³⁷

Lange, Taylor, Lerner, all socialist economists, could not succeed as entrepreneurs with economic integration toward one big cartel within the market context, because their planning abilities were worse than other entrepreneurs. They were so sure they would lose this competition that they did not even try to implement their plan within the social nexus. If that had happened we would have found out about their lack of abilities to organize the production system. That is why they proposed the opposite way: expropriating the very private property that had placed boundaries on their own poor skills. If socialists are so successful in their planning that they can organize the whole production system with the abolition of the intellectual division of labor necessary for it, then why do they not run the businesses and start voluntary transition toward one big cartel? If somebody can effectively organize the whole economy, then he can easily work on one particular market. Success on that market would bring him more capital, which would enable him to expand production and buy more and more firms. The fact that we do not see this happening is the result of the intellectual division of labor strictly associated with private property (these two are inseparable).³⁸

It is no surprise that the officials have an incentive to abolish the whole private property system.³⁹ By doing so the objective constraints set by the judgments of skilled entrepreneurs are abolished, the boundaries set by the intellectual division of labor cease to exist. This removes *all the limits upon the decisions* of the dictators running the socialized economy. No other owner supplies the factors of production, no other owner uses prices to limit their overuse, no other owner constrains the central planner by the possibility of outcompeting him in judgment (and offering a higher buying price), and there is no *ex post* judgment which would also be a constraint on future actions. Everything is owned by one agency; there are no limits to its decision and no boundaries set by the decisions of others. The full ideal of total dictatorship is established. No wonder then that the expropriators will support the

³⁷“Every step that takes us away from private ownership of the means of production and from the use of money also takes us away from rational economics” (Mises 1990, p. 20).

³⁸We cannot act without the means to act. We cannot employ resources and utilize the intellectual abilities to plan economically without property.

³⁹An interesting comment on government projects justified by the use of “cost-benefit” analysis may be added. The government, after nationalizing some portion of the resources (money income), can buy the factors of production needed to arrive at some ends. But this does not mean that the previous decision was economical. Taking the money with the use of force (and not the intellectual division of labor) is an aggressive removal of private property constraints. Buying the factors later is another constraint that was not removed. What happens here is: the government officials say between the lines “we nationalized your money, but we didn’t nationalize the factors of production”. A similar case is the thief who has stolen some amount of money and buys something in the shop, instead of stealing the product also.

case for the fastest nationalization possible. This phenomenon is explained by Lange:

[A] comprehensive socialization programme can scarcely be achieved by gradual steps. A socialist government really intent upon socialism has to decide to carry out its socialization programme *at one stroke*, or to give it up altogether. The very coming into power of such a government must cause a financial panic and economic collapse. Therefore, the socialist government must either guarantee the immunity of private property and private enterprise in order to enable the capitalist economy to function normally, in doing which it gives up its socialist aims, or it must go through resolutely with its socialization programme at maximum speed. Any hesitation, any vacillation and indecision provokes the inevitable economic catastrophe. Socialism is not an economic policy for the timid. (Lange and Taylor 1956, pp. 124–45)

Moreover, Lange supports our thesis stating,

The socialist government must start its policy of transition right away with the *socialization* of the industries and banks in question....If the socialist government would attempt to control or supervise them while leaving them in private hands, there would emerge all the difficulties of forcing a private entrepreneur or capitalist to act differently than the pursuit of profit commands. (Lange and Taylor 1956, p. 122)

What does it mean that the capitalist or entrepreneur acts in order to achieve profits? This means that he would act in order to allocate resources efficiently and to succeed in the correct judgment of the future. This poses a serious threat to the officials, whose lack of planning skills would soon be demonstrated by the superior decisions of the entrepreneur. Hence, the interest of the growing state is to destroy the whole private sector and loosen all the constraints placed upon any decision. The most salient historical case for this is that of Pol Pot in Cambodia. We should also point to Lange's emphasis on expropriating the property by surprise, because if some people knew about the incoming nationalization, they would try to secure their wealth (Lange and Taylor, p. 123).⁴⁰

It is important to add that after socialism is established, there is a need for total slavery in order for the central planners to stay in control. Freedom of action by the individuals would leave open the possibility of creating a market. If consumer goods are to be privately owned, if people were free to pursue any career, then entrepreneurship might be established in some sphere. This is the result of the connection between consumption and production goods, and also of the fact that the socialist dictator has practical problems with overseeing every single citizen.

This is exactly what happened in the former Soviet Union, where the black market prospered within the system and allowed for the production of goods that were not produced by the government apparatus. A limited range of possible actions, combined with the ability to avoid the state's control, often accompanied by the

⁴⁰Curiously despite their huge differences both Mises and Lange agreed on the instability of "middle of the road" policy.

corruption of officials, allowed for some sphere of entrepreneurial activity. Since the government becomes the owner despite its poor skills in economic planning, it should hardly surprise anybody that those underground entrepreneurs were very effective in their actions. This underground intellectual division of labor and a narrow field of ownership allowed for creation of the price system and saved the people from starvation and certain death. It also showed how superior are actions based on the ethical system of property rights as compared to the socialist system, which in essence steals everything. This price system only showed how absurd was the official “system” set by central planners.

This sociological analysis, obvious to most, brings us to not so obvious, although important, theses that can be developed within the property constraints framework. First, the organization of production into different firms, industries, and stages of production as well the appointment of managers and the allocation of labor among the different branches of production is already decided upon by the central planner *before* the trial and error method can even proceed, whereas under capitalism it is the *outcome* of the pricing process.⁴¹

Second, there is a huge difference between one cartel established under capitalism (voluntary) and one owner established under socialism. Under capitalism one owner in the global cartel still faces the property boundaries and can be constrained by other property owners, who might decide to compete with him. This is a powerful check on his decisions, and under socialism this is necessarily absent, since competitors are not outcompeted but compulsorily excluded.

Third, democrats are on the right track when they claim that the key to success of the political and economic order depends on the *social control* of the decision process. What they fail to realize is that the most successful method of social control is *not* voting in a very narrow and staged process of choosing between political parties. The most efficient of all possible controls is the right to peacefully exclude others from resources. It is hard to imagine a more successful way of controlling the officials and their actions than by threatening them with consumer sovereignty. In the light of, “I might stop giving you my money,” the threat, “I might not vote for you in four years” seems childish.

And fourth, the most important mistake in the post-Soviet systems is not the lack of desocialization, but the lack of competition. Governments in the post-socialist countries do not allow competition to take place. They still regulate the economy; they levy high taxes and intervene in the monetary sphere. If they would allow for competition and full private property rights from the current owners even without a just denationalization, this would bring huge benefits, and quickly liquidate the newly created welfare state. The *current* problem is a *lack of property constraints right now*, not lack of them in the past.⁴²

The scope of these points is of course beyond this paper.

⁴¹I am grateful to Professor Salerno for this point.

⁴²The establishing of private property constraints would require a right to secede.

Concluding Remarks

We tried to demonstrate in this article that the problem with socialism is not about numbers, price lists, calculation, gathered data, assimilated data, or any similar features. Socialism has to do with the property system on which it is based. As Mises brilliantly summarized: the establishing of socialism is a step that abolishes the whole economy, since the “intellectual division of labor” is impossible. Under socialism there are no competing entrepreneurs, who compete with their property (intellectually) for the productive employment of all the factors, who subject themselves to the constraints manifested by others, and who subject themselves to external judgment. Socialism is a disaster created and sustained by one compulsory will. We also showed that even the consumer market cannot work properly under socialism.

We also defended the market socialist model against the argument that it cannot solve the “calculation problem” and the argument that it refers only to “equilibrium” conditions.

“Calculation” must mean the “exclusion” from the realization of certain plans. It is not to be understood as a problem of the “unit of account” or the “arithmetical process.” Similarly “knowledge” must mean knowledge of what private entrepreneurs would do (and one can know this only by letting them act).

Marx hated capitalism and wanted to abolish the division of labor (so for him the natural economy seemed to be a better idea). Lange on the other hand hated capitalism and wanted to abolish the intellectual division of labor. We conclude with Eucken’s statement: “Competition can be used to improve efficiency, but as a mechanism of direction for an important section of the economy it cannot be applied without the abdication of the central authority” (Eucken and Hutchinson 1948a, p. 94).

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