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# The bias in centrally planned prices*

DAVID M. LEVY
*Center for Study of Public Choice, George Mason University, Fairfax, VA 22030*

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> I am always told by my socialist colleagues that as an economist I should occupy a much more important position in the kind of society to which I am opposed – provided, of course, that I could bring myself to accept their views.
>
> F.A. Hayek (1944: xvii)

## Introduction

The historical verdict must be surely in on the great central planning experiment Soviet block economies are fleeing central planning philosophy in droves; nonetheless, the brute fact constraining movement from central planning to market economy is the necessity of vastly increasing prices (Kurtzman, 1988).

The point of this note is to look back on the central planning debate of the 1930s and 40s with the perfect wisdom of hindsight and ask why *none* of the participants predicted this answer. By an easy process of elimination, we focus on the anti-central planning side of the debate; after all, if disinterested members of the pro-central planning side of the debate; after all, if disinterested members of the pro-central planning side had reached the correct answer, surely they would have switched sides! The brunt of the anti-central planning position was carried by two alone, von Mises and Hayek, so we reconsider their arguments using a bit of statistical notation to sharpen the points at issue.

The argument is that von Mises and Hayek focused on the complex technical issues in involved in central planning and ignored the simple incentives facing planners.[1] A concluding speculation is offered as to why neither von Mises nor Hayek got it right.

* Thanks are due to James Buchanan and Gordon Tullock for detailed comments on earlier versions. The errors which remain are my responsibility alone.

**Von Mises' case for central planning**

Consider a vector of the marginal products of factor inputs to production.[2] This vector we denote as **VMP**. The problem for either an ideal market economy or an ideal centrally planned economy to generate a price vector to equal **VMP**. Since all sides to the planning debate admit that no human institution is perfect, we propose to formulate the problem of **CP** v. **P** as one of estimation.[3] That is to say, let us look upon the market price vector, **P**, and the centrally planned price vector, **CP**, as estimators of **VMP**. What then are the properties of the market and planners as institutions by which to estimate **VMP**?[4]

First, is it fair to view market prices as stochastic estimators of **VMP**? Here von Mises' position is quit clear; there is randomness in prices:

> We can make systematic economic plans only when all the commodities which we have to take into account can be assimilated to money. True, money calculations are incomplete. True, they have profound deficiencies. But we have nothing better to put in their place. And under sound monetary conditions they suffice for practical purposes (1971: 105).

Second, is it fair to think that **CP** *would equal* **VMP** if the planners had an infinite amount of information? In our framework this would make **CP** a consistent estimator of **VMP**. In von Mises' framework, this infinity of information would be obtained when, and perhaps only when, two conditions held. Suppose (i) a move to central planning from a market economy did not change existing incomes or assets and (ii) there were no stochastic elements in the economy. The latter approximates von Mises' concept of the "stationary economic system." Inspite of the Mises legend, he stipulates that without calculation impediments, that a socialist market would suffice to give the exact answer. **CP** would equal **VMP**:

> Now it is a complete fallacy to suppose that the problem of economic calculation in a socialist community relates solely to matters which fall into the sphere of the daily business routine of managers of joint stock companies. It is clear that such a belief can only arise from exclusive concentration on the idea of a stationary economic system – a conception which no doubt is useful for the solution of many theoretical problems, but which has no counter-part in fact and which, if exclusively regarded, can even be positively misleading. It is clear that under stationary conditions the problem of economic calculation does not arise . . . there no longer exists a problem for economic calculation to solve (1971: 120).

Mises rests his case against socialism on the technical calculation problem.

Of course, von Mises asserts (in our terminology) that **P** is a more precise estimator than **CP** outside the stationary state:

> This is to say that the socialist community would be entirely at a loss. It would decide for or against the proposed undertaking and issue an edict. But, at best, such a decision would be based on vague valuations. It could not be based on exact calculations of value (1971: 105).

After this review of the texts – and the later discussions have followed von Mises in this – there is nothing to suggest in his argument that the central planners would be other than disinterested substitutes for the impersonal forces of the market. For instance, Mises assumes that pricing for consumer goods presents no planning problem at all:

> It will be evident, even in a socialist society, that 1,000 hectolitres of wine are better than 800, and it is not difficult to decide whether it desires 1,000 hectoliters 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 ... (1935: 103).

On the contrary, this is precisely where we find the heart of the matter. Mises (1935: 118–120) deals with incentives only insofar as they provide inducements to diligence and Mises explicitly waves such considerations (1935: 120):

> ... 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 to-day ...

Of course, the mathematical discussions following Barone (1935: 246) assume that the Ministry of Production maximizes social well-being. In the one case where there is sufficient information for the planners to compute **VMP**, Mises' argument allows them to do just that.

Later contributors to the debate focused their argument on the variance of **P** and **CP** around **VMP**. In this context, one of the debate's high points came when in *Economics of Control*, Lerner (1983: 111) demonstrated that the capitalist market is troubled with issues of monopoly and market power. Thus, capitalism cannot escape interest group politics. This would suggest that the mean square error of **P** is greater than that of **CP** because **P** could not be guaranteed to be competitive. Indeed, Lerner's economic analysis is so profound, his location of interest group politics at the heart of the difficulty for a competitive market economy, that even economists not renowned for their socialist learnings grant him the better part of the argument *as it was formulated*.[5] Another one of the high points of the debate came when Hayek 1935 demonstrated that competitive **P** utilizes more information than **CP** because more participants are involved in setting **P** than in setting **CP**. This would suggest that the mean square error of competitive **P** is less than **CP**. Nonetheless, the competitive assumption evades Lerner's objection to the reality of interest group politics in price setting, it does not address it.[6]

## If planners are not disinterested?

Lerner's argument for the superiority of **CP** to **P** as estimator of **VMP** usefully introduces the political aspect to pricing; nonetheless, as far as I know, in their debate with fellow economists neither von Mises nor Hayek suggest that the socialist price setters are anything but disinterested.[7] The worst that could be said about the price controllers is they do not have very much information. Suppose we drop this disinterested assumption – allowing planners back into the human race, Brennan and Buchanan 1980 – and ask: what can we say about the bias of **CP**? Additionally, was von Mises justified in granting consistency to **CP**?

One critical assumption which must be laid out at the outset is that price setting is performed in a decentralized manner. Thus, for each market there is a price setter to whom we shall refer as the planner. The underlying insight which shall drive the theory is found in Alchian and Allen's principles text which explains the puzzle of seemingly absurd low prices for Rose Bowl tickets, Alchian and Allen (1972: 145–146). If the central planner has the legal right both to set prices, and to allocate whatever shortages might exist from time to time, then perhaps the rational economic planner will set prices below market clearing. If this is so, and the burden of the argument below is to make the case, then we will have established that **CP** is a biased estimator of **VMP**.

The first order of business is to think through what sort of constraint might be laid upon the planners by higher authority. Without some sort of constraint, the planners can simply sell the goods at whatever price the market will bear. Consider in Figure 1 a demand curve D and a marginal cost curve MC, where the cost is understood to be the opportunities foregone facing the planner. This may have nothing whatsoever to do with any real cost notion from the point of view of a disinterested outside observer. The political perception of marginal cost is very complicated. Presumably, the planner would have to pay for the resources provided by other controlled markets where the payment will surely be, in part, to obtain inputs which are not available at market clearing prices, Smith (1977: 112–134).

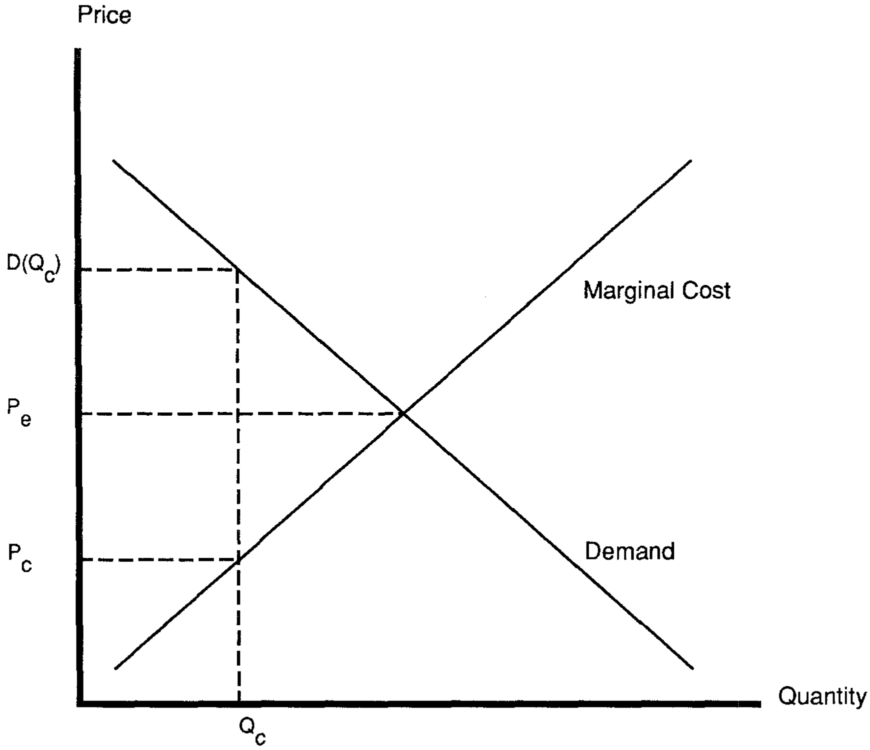


*Figure 1.* Wealth maximizing price controls

The condition of price equals marginal cost clears the market at $P_e$. (We suppose that a $P = 0$, the demand is infinite so we need not worry about such a possibility arising.) Consider some controlled price $P_c < P_e$ at which $Q_c$ is produced. The controller by assumption has the right to allocate the commodity and obviously there will be a shortage to allocate. When we ask, what the *right* to buy the commodity at $P_c$ is worth, the answer is $D(Q_c) - P_c$. The wealth maximizing planner facing one price for a right in the market will set the price such that our old friend, the monopoly output, results. Marginal cost to the planner equals marginal revenue.

The wealth created by planners can be appropriated by planners (Domar, 1981). If this monopoly model were a satisfactory explanation of the behavior of price controllers, we would have shown that there is good theoretical reason to expect that controlled prices would be below market clearing. Thus, there is reason to believe that **CP** is a biased estimator of **VMP**.

While there is no real world counter-part of a market socialism defended by Lerner, perhaps we can gain some insight into the dimension of the bias by glancing at Soviet experience. The *fact* of this bias is clear from any number of accounts of the Soviet economy. Just how big the bias can be is easily appreciated from recent discussions of the Soviet economy. Here is a *New York Times* report quoting Samuelson:

> For over a half-century, more than 25 million prices have been set by the Soviet Government and its ministries. Some have been in effect for decades. Rents, for example, were last raised in 1928. The current price of bread was set in 1954. Meat prices have been in effect since 1962 ...
>
> . . .
>
> "With bread selling for something like 7 percent of production cost, it's cheaper for farmers to feed bread to their cattle rather than grain," Professor Samuelson said. And with farmers unable to benefit financially from what they grow, up to 40 percent of the grain rots in the field (Kurtzman, 1988: 3–17).

The monopoly model has no prediction that prices will be *fixed*. This difference, I am inclined to believe, may result from the simple fact that the Soviet economy is not an instance of market socialism.

Moreover, there is a serious problem with this monopoly model, regardless of how it might fit the Soviet experience. Why, asks Tullock, is there such widespread "corruption" in the Soviet Union, which is not found in such an obvious manner in the context of Western price controls?[8] To answer this question, we inquire into what sort of constraints might be imposed upon the planner by higher authority and how might the fact of many controlled market change the incentives facing the planner.

## Exchange in the *blat* market

It being a capital offense to theorize without data, let us introduce a bit of data into consideration:

> The Soviet counter-economy has its own lore and lingo, its channels and conventions, understood by all and employed by practically everyone on an almost daily basis. Its mutations and permutations are innumerable. But the common and innocent [sic!] variety is what the Russians call *blat*-influence, connections, pulling strings. In an economy of chronic shortages and carefully parceled-out privileges, *blat* is an essential lubricant of life. The more rank and power one has, the more *blat* one normally has. . . . each has access to things or services that are hard to get and that other people want or need. *Blat* begins to operate when someone asks a favor with the understanding of eventually doing a favor in return (Smith, 1977: 115).

Perhaps, part of the answer to Tullock's question is that it takes time to get good at the finagle. Systematic price controls which are only wartime phenomena may have little lasting effect on an otherwise market economy. Consumers who know the controls will last only as long as the war have less incentive to invest in knowing how to get good at the counter-economy than consumers who expect controls to be forever.

However, there is an explanation why systemic, economy-wide controls, which one expects to be perpetual, are more important than controls on a few markets. This explanation is just a version of the rationale for a monetary economy. The famous difficulty for barter – the double coincidence of wants – is obviated in a Soviet economy when there are shortages in a vast number of goods. This explanation allows us to drop the crude assumption that the price controllers can simply set up shop and retail the price controlled good at the monopoly price, but obtain a qualitative similar answer.

Suppose you, a consumer, have A and want B. Some other consumer has B but wants C and not A. Will you take C in trade? If you think that C will be easier to trade for B than A, you certainly will. Isn't the Soviet system an illustration of an economy with an extremely large number of near monies? Conceive of exchange in a continuum of ascending liquidity – cabbage at the base and US dollars at the altar on the top, with the official Russian currency someplace between the two extremes. The rational consumer will trade up the hill of liquidity.

Consider the incentives facing a planner, who is also a consumer, in two societies, each with N commodities. In the first case there is one controlled price and in the second case the society has all N controlled prices. To make the cases comparable, suppose that a controller sets one price in either case.

In the first society when only one of N prices are controlled, the price controller can augment *his* income by buying at $P_c$ instead of $P_e$. A simple consumer surplus calculation would reveal the gain from setting $P_c$. Our new assumption that the planner cannot resell the good, precludes the Alchian and Allen answer that Rose Bowl tichets are traded for "discounts" on Mercedes, so this is all the gain which the planner acquires. Moreover, since the position of price controller has the possibility of gain – presumably not counted in the salary – other potential controllers might monitor extraordinarily large gains in private consumption in the controlled commodity. This presumably puts a limit on amount below market clearing which the controlled price can be pushed.

Next consider the case when all N goods have controlled prices. If the ith price controller can create a shortage in his good i, and then trade the right to buy i for the right to buy any or all of the N-1 other goods, then the incentives to created scarcity swell. (The mechanics might be trading rights or trading the goods themselves.) Not only does the ith controller get good i at a discount as above; moreover, his probability being able to get *any* other good for some fixed amount of time in a queue jumps. By having for trade the right to buy good i, he can obtain the right to buy other goods. This seems a fair representation of tolerated Soviet practice:

> *Krokodil*, the Soviet humor magazine, once did a takeoff on a floor-waker promoting some newly arrived items: 'Dear customer, in the leather goods department of our store, a shipment of 500 imported women's purses has been received. Four hundred and fifty of them have been bought by employees of the store. Forty-nine are under the counter and have been ordered in advance for friends. One purse is in the display window. We invite you to visit the leather department to buy this purse.'
>
> The black market begins where price-scalping leaves off because, as *Krokodil* suggested, clerks themselves by *defitsitny* items [deficit goods] and then illegally retail them ... (Smith, 1977: 117).

The political constraints specified above have not been violated. The planner does not trade goods for money; nor does his consumption of any particular good reach absurd proportions.

This is where we bring into consideration the fact of goods of different liquidity. The ith planner need not know all of the other N-1 planners; rather, he knows trades can be made from his inventory of price controlled goods. He can collect favors or rights in intermediate goods which can be eventually traded for the goods he wishes. Hence, the incentives facing one price controller in systematically controlled economy should be terrifically different than in an economy with only one good controlled. When there is only one commodity controlled, without cash changing hands, gains can be made in only one commodity. When all prices are controlled, gains can be made by the price controller in all commodities.

The most important, practical public choice question, I would think, that we are likely to face in our lifetime is whether Soviet economies can go to a market economies. The argument sketched above suggests that when N markets are planned, the first planner who moves his price to market clearing will pay a terrible price. When anyone who wishes can buy his good at the posted price, the right to buy the good at the posted price is worthless. Thus, the planner will lose his access to all other markets. The prisoner's dilemma consideration is obvious since if all planned prices went to market prices, each planner would lose less.

## Some speculation along the lines suggested by McCloskey

Did the gap in von Mises' and Hayek's argument originate in rhetorical constraints, à la McCloskey (1983), found in the economics literature? After all, the economists with whom von Mises and Hayek were arguing might very well be the very economists who would be responsible for the technical details of price setting in the new socialist economy. Would it be polite, or persuasive, to rest any part of the case on what might be easily interpreted as base motives on the part of those with whom one is arguing? "You support central planning because you want central planning to support you" may not be a compelling argument to address to a future central planner.

When Hayek left the technical economics discussion, he could attack generic planners somewhat more vigorously. Orwell's review of *Road to Serfdom* summarizes the argument wonderfully.

> By bringing the whole of life under the control of the State, Socialism necessarily gives power to an inner ring of bureaucrats, who in almost every case will be men who want power for its own sake and will stick at nothing or order to retain it . . . collectivism is not inherently democratic, but, on the contrary, gives to a tyrannical minority such powers as the Spanish Inquisitors never dreamed of (1968: 3: 118).

It is instructive to recall that in *Road to Serfdom*, Hayek exempts economists from all but technical criticism. Here is his tribute to the motives of market socialists:

> Of late, it is true, some academic socialists, under the spur of criticism and animated by the same fear of the extinction of freedom in a centrally planned society, have devised a new kind of "competitive socialism" which they hope will avoid the difficulties and dangers of central planning and combine the abolition of private property with the full retention of individual freedom (Hayek, 1944: 40).

Of course, Hayek continues in the same passage, "practical politicians" won't accept such an idea as market socialism.

Her is his tribute to economists in general:

> The economist is the last to claim that he has the knowledge which the coordinator would need. His plea is for a method which effects such coordination without the need for an omniscient dictator (Hayek, 1944: 55).

This gentleness left Hayek open to the charge that he did not take the modern discussions of market socialism seriously enough and might be responsible for the myth that Hayek conceeded to market socialism. This is from Durbin's review in the *EJ*

> It is of interest to note that Professor Hayek makes only one reference to the work of those of us who are both practicing economists and also Socialists, and that in a footnote. His only modern references are to the students of government and sociology, while his most recent Socialist economists are Marx, Engels, Shaw and the Webbs! (1945: 360).

As I read the book, the most serious quarrel Hayek has with his peers' proposals is the thought that public works programs might get too big (1944: 121–122).

In this vein it is instructive to read the professional reviews of *Road to Serfdom* by those economists most sympathetic with his point of view. Of these, Schumpeter's *JPE* review if most intriguing because he starts by raising, but then drops, a point about group interest:

> It is, moreover, a courageous book: sincerity that scorns camouflage and never minces matters is its outstanding feature from beginning to end. Finally, it is also a polite book that hardly ever attributes to opponents anything beyond intellectual error. In fact, the author is polite to a fault; for *not all relevant points can be made without more plain speaking about group interests than he is willing to resort to*. In this respect – perhaps also in others – he might have learned a useful lesson from Karl Marx (Schumpeter, 1946: 269; emphasis added).

Had Schumpeter not written at great length about what he admired in Marx, we might not catch his point. However, here is what he wrote about the Marxian analysis of rationalization of interest *as applied to economists*:

> Half a century before a full importance of this phenomenon was professionally recognized and put to use, Marx and Engels discovered it and used their discovery in their criticism of the 'bourgeois' economics of their time. Marx realized that men's ideas or systems of ideas are not, as historiography is still prone to assume uncritically, the prime movers of the historical process, but form a 'superstructure' on more fundamental factors . . . Marx realized further that the ideas or systems of ideas that prevail at any given time in any given social group are, so far as they contain propositions about facts and inferences from facts, likely to be vitiated for exactly the same reasons that also vitiate a man's theories about his own individual behavior. That is to say, people's ideas are likely to glorify the interests and actions of the classes that are in a position to assert themselves and therefore are likely to draw or to imply pictures of them that may be seriously at variance with the truth (Schumpeter, 1954: 35).

There is in *Road to Serfdom* the most oblique reference to these sorts of interests:

> I am always told by my socialist colleagues that as an economist I should occupy a much more important position in the kind of society to which I am opposed – provided, of course, that I could bring myself to accept their views (Hayek, 1944: xvii).

Hayek's gentleness with economists was noted in Director's review in the *AER* – in the section "Economic Systems; Post-War Planning" so as to give some pungency to Director's claim that economists were up to their eyebrows in plans:

> In view of the widespread approval of a planned society by members of the economic profession, readers of *The Road to Serfdom* will be somewhat surprised by the selection of individual examples from among the pseudo-economists and no economists at all. In view of the frankness o the chapter on "The Totalitarians in Our Midst" . . . the explanation cannot be a reluctance to offend. The writings of the economists on planning do not offer suitable examples since a certain amount of irresponsibility has crept into their making of grand proposals for reform without the requisite examination of the noneconomic implications (Director, 1945: 175).

Director (1945: 174) sees the theory of market socialism as an intellectual puzzle of no practical importance and passes to other issues.

By couching his argument as he did, exempting members of the economics profession from all base motives, Hayek had an impact at the highest level of the British economics profession. To give the only needed example, while Keynes believed that planning was likely to be more efficient than a market society (1980, 27: 386), his tribute to Hayek on the non-economic issues is quoted on the back of the paperback edition.

> In my option it is a grand book. We all have the greatest reason to be grateful to you for saying so well what needs so much to be said. You will not expect me to accept quite all the economic dicta in it. But morally and philosophically I find myself in agreement with virtually the whole of it; and not only in agreement with it, but in a deeply moved agreement. . . . what we need is the restoration of right moral thinking – a return of proper moral values in our social philosophy. If only you could turn your crusade in that direction you would not look or feel quite so much like Don Quixote. I accuse you of perhaps confusing a little bit the moral and the material issues. Dan-

> gerous acts can be done safely in a community which thinks and feels rightly, which would be the way to hell if they were executed by those who think and feel wrongly (Keynes, 1980, 27: 385–388).

Hayek read the criticism that he was not rough enough on the motives of his opponents. And here is his response to Schumpeter:

> If we still think him wrong we must recognize that it may be genuine error which leads the well-meaning and intelligent people who occupy those key positions in our society to spread views which to us appear a threat to our civilization. [Hayek's note] It was therefore not (as has been suggested by one reviewer of *The Road to Serfdom*, Professor J. Schumpeter) 'politeness to a fault' but profound conviction of the importance of this which made me, in Professor Schumpeter's words, 'hardly ever attribute to opponents anything beyond intellectual error.' (Hayek, 1949: 184).

Perhaps, in this instance, the requirements to which one must adhere in order to heard, the rhetorical dimension, are antithetical to what must be said to solve the problem. Reflecting from our comfortable vantage on the terrible price that von Mises and Hayek paid to say as much as they did, it would be cretinish to chide them for not saying more.[9]

We who live now and have been taught by experience to laugh at the illusions which cloud the central planning debacle, might well take Schumpeter's point. It seems to me that he too knew more than he would say.[10] Perhaps, we could find out what that was.

## Notes

1. This is Buchanan's (1969) judgement also.
2. Becker (1976) demonstrates how consumer theory can be transformed into a theory of household production without loss of generality; hence, we can work with consumer goods as inputs to household production functions.
3. Hayek (1935: 208): "But what is practically relevant here is not the formal structure of this system, but the nature and amount of concrete information required if a numerical solution is to be attempted and the magnitude of the task which this numerical solution must involve in any modern community. The problem here is, of course, not how detailed this information and how exact the calculation would have to be in order to make the solution perfectly exact, but only how far one would have to go to make the result at least comparable with that which the competitive system provides.
4. Barone (1935: 271–272) encourages this possible formulation: "... in the first approximate solution the Ministry of Production had assumed a series of technical coefficients *at random* (though satisfying their technical equations) ..." Indeed, an explicitly stochastic procedure is part of Barone's solution (1935: 288): "The determination of the coefficients economically most advantageous can only be done in an *experimental* way: and not on a *small scale*, as could

be done in a laboratory; but with experiments on a *very large scale*, because often the advantage of the variation has its origin precisely in a new and greater dimension of the undertaking. Experiments may be successful in the sense that they may lead to a lower cost combination of factors; or they may be unsuccessful, in which case that particular organization may not be copied and repeated and other will be preferred, which *experimentally* have given a better result."

5. Buchanan (1969: 26): "... this concentration on equilibrium, of which Hayek, Robbins, and to a lesser extent Mises, all are guilty, left the way open for Lerner to drop all references to general equilibrium in his derivation of the policy rules that explicitly require the introduction of objectively measurable costs." Caldwell (1988: 535–536) argues that because Hayek lost on equilibrium grounds that he was forced to develop his profound non-equilibrium discussions.
6. Hayek's last word on the subject assumes a competitive market to compare with socialism, Hayek (1988: 7): "For there is no known way, other than by the distribution of products in a competitive market, to inform individuals in what direction their several efforts must aim so as to contribute as much as possible to the total product."
7. Perhaps this stipulation is responsible for the following claim in Finer (1946: 143–144): "Government equivalents to competitive pricing are demonstrated, however, by the manipulation of ration values according to changing supply and demand and by the supply of government capital to the river and hydroelectric authorities. The only difference between the indices of Hayek and planned prices is that the former are freely distortable by economic individualists without public responsibilities while the latter would be decided by responsible 'public-business-men,' with clear instructions and clear lines of responsibility for the use and abuse of their authority." Perhaps some responsible organization might establish a Herman Finer Memorial Prize for that year's single stupidest published paragraph.
8. Even economists publishing their research in University of Chicago journals, who are thinking about Western economic practices, characteristically assume that price controls are set by authorities who have no interest in buying below market price (Cheung, 1974; and Barzel, 1974).
9. Milton Friedman has written, in a reference I have lost, about the especially shameful manner in which von Mises was treated by United States universities. Can anyone think of a decent man who made such a contribution to economic theory who was treated as shabbily?
10. Strauss (1980: 36): "Exoteric literature presupposes that there are basic truths which would not be pronounced in public by any decent man, because they would do harm to many people who, having been hurt, would naturally be inclined to hurt him who pronounces the unpleasant truths." Art Diamond saw this connection first.

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