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STILL IMPOSSIBLE AFTER ALL THESE YEARS:  
REPLY TO CAPLAN

ABSTRACT: *Socialism is strictly “impossible.” Its impracticability is not, as Bryan Caplan has suggested, a “quantitative” matter, nor does he show that real-world socialism’s incentive problems outweighed its informational ones. Caplan’s criticism of Ludwig von Mises’s critique of the “possibility” of socialism fails to appreciate what he meant by “socialism” and misunderstands Mises’s argument about economic calculation. History, too, suggests that socialism’s informational deficiency was the most significant problem facing those who tried to implement socialism.*

In his recent article in these pages, Bryan Caplan (2004) questions the long-standing claim of Austrian-school economists that socialism is impossible. Caplan fundamentally misunderstands the Austrians’ impossibility claim, however, and fails to appreciate the traditional socialist argument that the Austrian economist Ludwig von Mises was addressing.

*What “Socialism” Meant*

To put these issues into perspective we need to make a brief excursion into the state of the debate over socialism when, in 1920, Ludwig von Mises first offered his impossibility claim.

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We agree with Caplan that socialism is characterized by state ownership of the means of production. This is necessary but not sufficient, however, to describe the economic system advocated by Marx and others, and opposed by Mises. In addition to describing a particular set of means (collective ownership), “socialism” was also defined by a particular set of ends.

The ultimate aim of socialism, inspired by Marx, was the “end of history,” in which perfect social harmony would be permanently established. Social harmony was to be achieved by the abolition of exploitation, by the transcendence of alienation, and above all, by the transformation of society from the “kingdom of necessity” into the “kingdom of freedom.”

Collective ownership was not an end in itself. By rationalizing material production and thus advancing it beyond the bounds reachable under capitalism, collective ownership was to usher mankind into a post-scarcity world.

The writings of Marx and his followers<sup>1</sup> thus include critiques of capitalism on the grounds that its production is “irrational,” that it tends towards increasing monopolization and the immiseration of a growing proportion of the populace, and that it produces a business cycle that makes it inherently unstable. Marx and other socialists thus sought to demonstrate the productive inferiority of the capitalist system relative to what socialism could achieve.<sup>2</sup>

The socialist project to which Mises responded therefore proceeded in two interrelated stages. First, by rationalizing production, socialism would eliminate the waste inherent in capitalism owing to its “anarchy of production,” eliminate capitalism’s tendency towards greater monopolization, and do away with capitalism’s inevitable crises; all of this would bring about unprecedented increases in material wealth. Second, these productivity gains would usher in a post-scarcity era, which in turn would provide the material preconditions for lasting social harmony.

### *Why Socialism Is “Impossible”*

We emphasize the facts that “socialism” referred to particular ends as well as means, and that one of these ends was advanced material production, because Caplan ignores them. This mistake leads him to reject Mises’s claim about the impossibility of socialism.

If socialism could not achieve the intermediate objective of advanced material production, then it could not attain its ultimate objec-

tive—social harmony. Mises’s argument proved that it was impossible for socialist means to achieve the socialist end of advanced material production, because of the inability of socialist central planners to engage in rational economic calculation. This is what Mises meant by saying that socialism is “impossible.”

His argument to that conclusion begins with the premise that socialism requires the complete abolition of private (i.e., non-collective) ownership of the means of production—capital goods. Without private ownership of capital goods, however, there can be no exchange in them. Without the exchange of them, there can emerge no market prices for them. And without market prices for them, socialism cannot rationally allocate them. Rationality—in the sense of instrumental or means-end rationality—requires that there is at least a tendency for resources to be allocated in such a way that no more urgently felt consumer demand goes unsatisfied because the resources required for its satisfaction have been devoted to some less highly valued use.

In other words, as long as resources are scarce, they need to be *economized* if they are to serve human needs effectively. Under capitalism, market prices for the means of production enable economic calculation, which ensures a tendency toward the rational allocation of capital goods. Without capital-goods prices, however, no such allocation is possible. In abolishing market prices for capital goods, socialism does away with the very mechanism that enables societal economizing behavior.

Thus, a socialist *economy* is impossible. This is what Mises meant in saying that the relevant choice in deciding among economic systems is not a matter of capitalism versus socialism: socialism’s inability to allocate resources rationally precludes the possibility of a socialist economy by definition. QED.<sup>3</sup>

Without a mechanism to allocate the means of production economically, it would be impossible for socialism to generate advanced material production, let alone for it to achieve the level of material abundance required to move society from the “kingdom of necessity” to the “kingdom of freedom.” Stage one of the socialist project therefore remains impossible to fulfill, making stage two impossible as well. If it could not achieve the end of scarcity, then socialism would not be able to usher in the new age of social harmony (the “end” of history) that was its stated goal.

Note how straightforward this whole argument is when we acknowledge that socialism refers both to particular means *and* to particular ends.<sup>4</sup> Overlooking socialism’s ends, as Caplan does, can make

Mises's argument seem confusing. For instance, if "impossibility" does not refer to means-ends coherence, then to what does it refer? Does Mises mean that it is literally impossible to socialize the means of production? Does he mean something else? If one fails to recognize that socialism has as much to do with its economic goals as it has to do with its collectivist means, one can easily fall into such perplexities.

### *Theoretical vs. Quantitative Issues*

For the sake of argument, Mises assumed away any potential problems socialism might face regarding workers' incentives and central planners' motivations. This is not because he thought socialism would be free of incentive problems. Rather, in bracketing incentive issues, Mises took the rhetorical high ground and assumed the best of intentions on the part of planners, so as not to divert the argument from substance to name-calling. Even under the best-case motivational scenario, he showed, the information problem socialist planners would necessarily confront was sufficient, all by itself, to make the ends of socialism unattainable—i.e., impossible.<sup>5</sup>

Mises's decision to take incentives off the table seems to have confused Caplan about the substance of Mises's impossibility claim. Caplan mistakenly understands Mises to be arguing that (a) socialism's inability to calculate results in chaos and catastrophe; and (b) the magnitude of the information problem created by the inability to economically calculate trumps, as far as the practicality of socialism, the magnitude of the incentives problem. Both of these claims are quantitative, and both involve establishing the extent of the damage that socialism's calculation problem creates in the real world. This is why Caplan is led to erroneously conclude that Mises's impossibility argument is a quantitative one. Caplan would be right if, in fact, (a) or (b) was part of Mises's impossibility argument. But neither was.<sup>6</sup>

Caplan's confusion regarding (a) is not entirely his fault. Mises's colorful use of language throughout his discussion of socialism, which Caplan liberally quotes, may itself be confusing in one respect. Mises does suggest that socializing the means of production on the scale of a national economy would result in catastrophe. And, in fact, the millions who starved under socialist planning suggest that Mises was not too far off the mark. However, Mises's predictions about the effects of real-

world socialism must not be conflated with his theoretical argument regarding socialism's practicability.

Mises's *predictions* do constitute empirical claims. How much of a problem socialism's inability to perform economic calculation creates in reality is, indeed, a quantitative question. But Mises's impossibility claim is separate. It has to do with the ability of socialist means to achieve socialist ends, a priori. It boils down to saying that collective ownership cannot possibly prepare the ground for the leap into the kingdom of freedom by creating the hoped-for advancement of material production. This is all that the impossibility claim consists of. There is no question here about how much damage socialism will do. There are also no quantities involved—in judging, for instance, just how hard it is for socialism to create advanced material production.

Using the insights of his theory, Mises does go on to make empirical and quantitative claims about the economic calamity that would occur under socialism. But this does not make his *theory* quantitative, any more than predictions based on the law of demand make the law of demand quantitative.

The law of demand is purely theoretical and may be deduced a priori. This law can then be used to make predictions about consumer behavior in the real world. For instance, using the law of demand, one could predict that a rise in the price of shoes will lead to a large drop in the quantity of shoes demanded. Whether or not this is true, of course, depends upon one's definition of "large" and the price-elasticity of the demand for shoes. But the quantitative predictions one might make about its effects in a given time and place do not make the law of demand quantitative. The law is entirely aprioristic.

The same is true of Mises's argument about the impossibility of socialism. The impossibility claim is aprioristic; the applications of this claim to the real world, in the form of Mises's prediction about the effects of trying to implement socialism, is quantitative. Such a prediction cannot, however, refer to the "pure" socialism advanced by socialism's proponents, which the impossibility argument attacks. There is nothing wrong with questioning the accuracy of Mises's empirical prediction, as Caplan does. But he should not construe this questioning as impugning Mises's claim about the impossibility of socialism.

Caplan also argues that Mises's impossibility claim is quantitative because Mises points out that collective ownership within a household, for instance, would not result in catastrophe (even though it would be

catastrophic if the scale of organization to which collective ownership were applied were sufficiently large). But here, too, Caplan is mistaken.

Mises does admit that a household could collectivize its means of production without impoverishing the family. But this does not establish what Caplan thinks it does.

First, when evaluating the impossibility of an economic arrangement, we must remember again to consider its ends as well as its means. The first question to ask, then, is: what are the household's ends? It seems clear that families are *not* organized so as to advance material production in a way that will move them to the kingdom of freedom. Therefore, collectivizing ownership inside a family is not necessarily an incoherent means toward the family's ends. Scaling up a step, much the same can be said of a small commune. If a small commune sought advanced material production, then collective ownership would be an incoherent means with respect to this end. Indeed, remaining small would itself be an incoherent means to that end, because small size necessarily limits the extent of the division of labor.

So to recognize, as Mises did, that families, small communes, and the like can be organized collectively but without creating catastrophe doesn't mean that socialism is "possible" in some situations.<sup>7</sup> For these institutions to constitute socialism, they must first have advanced material production as their goal, which they do not. These forms of collectivism are not socialist because, unlike "socialism," they do not aim at advanced material production. That is, they do not have socialist ends.

Moreover, the term *socialism*, at least as used by socialists themselves, referred to a global arrangement, not to families or villages.<sup>8</sup> Notions of communal socialism are appealing to those who want to jettison the "rat race" of the modern economy, and they were particularly prevalent among religious advocates of socialism and, later, among some participants in the counterculture in the Western democracies in the 1960s—but not to the leading socialist theorists and activists in Europe and Russia at the beginning of the twentieth century, to whom Mises addressed his argument.

If socialism did not refer to a global arrangement, then how would one explain the rancorous early twentieth-century debate among socialists over the issue of "socialism in one country"? Trotsky's notion of permanent revolution, and Bukharin's rhetoric about how revolution in Russia would shake the tree of Europe, are just two examples of the animating idea of a worldwide socialist state. The slogan of

this movement was “Workers of the world, unite!”—not “Let’s join a small commune and live the simple life.”

### *Socialism and Incentives*

It is clear from reading Mises that he assumes away the incentive and motivation problems of socialism for rhetorical purposes, not because he thinks the calculation problem would be more severe, empirically, than the incentive or motivation problem. His predictive comments regarding the trouble real-world socialism would confront do emphasize the calculation problem identified in the impossibility argument. However, this is likely a consequence of the fact that he is using his theory—in which incentive issues are assumed away for the sake of argument and for the purpose of highlighting the calculation problem—to think about the issues real-world socialism will face. Otherwise, he might have focused on incentive problems and assumed away informational ones.

Below, we argue that the calculation problem may in fact be the dominant one for real-world socialism. But for now, it suffices to point out that Mises’s impossibility claim contains nothing about the magnitude of the calculation problem relative to the incentive problem under real-world socialism. It merely establishes that collective ownership cannot create advanced material production.

### *What about the Historical Evidence?*

In discussing real-world socialism, we are necessarily dealing with a degree of collectivization less than is put forward in socialist theory. The appearance of black markets, for instance, is already enough to make real-world socialism less than complete. In this situation, the extent of the problem caused by an attenuated ability to calculate will of course be diminished relative to other problems socialism faces, which are not tempered by the less-than-complete nature of collectivization.<sup>9</sup>

Unfortunately, it is almost impossible to isolate the extent to which the various problems that plagued real-world socialism can be held accountable for the overall performance of real-world socialist economies. Calculational and incentive problems are closely related; and

even if they were not, we can think of no way to determine the relative magnitudes of the two problems individually.

The historical record is of some value in attaining general impressions in this matter, but even there, significant problems remain. One can find ample evidence pointing to the trouble caused by both the calculation problem and the incentive problem. But which problem trumps the other? We find in the historical record no definitive answer.<sup>10</sup>

In what follows, then, we do not claim to be offering incontrovertible proof that in reality, the calculation problem was greater than the incentive problem. Instead, we will try to balance Caplan's one-sided presentation of evidence for incentive problems, in order to show that it is equally plausible that the calculation problem was significant, and possibly that it was supremely significant.

The strongest evidence that economic calculation was the most important problem confronted by real-world socialism comes from the War Communist period of Soviet Russia, between 1918 and 1921. In these years, Lenin imposed the closest example of full-blown theoretical socialism the world has ever seen. To preempt any disagreements that might emerge regarding the extent of socialism under War Communism, Table 1 presents a summary timeline of the steps taken by Lenin under War Communism.<sup>11</sup>

*Table 1: Major Economic Decrees and Institutions under the Bolsheviks, 1917–1921*

Dates (Western Calendar)	Decrees and Resolutions
8 November 1917	Council of the People's Commissars is formed.
8 November 1917	Decree on Land abolishes landlords' property rights and calls for the confiscation of landed estates.
27 November 1917	Decree on Workers' Control over Production is issued.
15 December 1917	Supreme Economic Council is established.
27 December 1917	Declaration on the Nationalization of Banks is issued.
15 January 1918	Dividend and interest payments, and all dealings in stocks and bonds, are declared illegal.
16 January 1918	Declaration of the Rights of the Working and



	Exploited People, intended to abolish the exploitation of man by man, is promulgated.
10 February 1918	All foreign debt is repudiated.
22 April 1918	All foreign trade is nationalized.
1 May 1918	Inheritance is abolished.
9 May 1918	Decree gives the Food Commissariat extraordinary powers to combat members of the village bourgeoisie, who were concealing and speculating on grain.
9 June 1918	Labor mobilization for the Red Army occurs.
28 June 1918	Large-scale industry and railway transportation is nationalized.
2 November 1918	Decree on the Extraordinary Revolutionary Tax to Support the Red Army and the International Socialist Revolution is issued.
22 March 1919	Party Program of the Eighth Party Congress calls for increased centralization of economic administration.
29 March to 4 April 1920	Outstanding Resolution on Economic Reconstruction calls for increased centralization of economic administration to ensure the unity of the plan necessary for economic reconstruction following the civil war and foreign intervention.
29 November 1920	Decree of the Supreme Economic Council nationalizes small industrial enterprises and all enterprises without mechanical power that employ ten or more workers.
March 1921	Kronstadt Rebellion is suppressed.
8–16 March 1921	Resolution on Party Unity, aimed at abolishing factionalism within the Party, is accepted.
23 March 1921	The Tax in Kind is established and the New Economic Policy, retreating from War Communism toward a heavily interventionist market economy, is introduced.

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One way of empirically tackling the issue of the magnitude of the calculation problem as opposed to the problem of incentives is to consider which one the planners themselves thought was more pressing. This is the approach we will take here, by considering words of Lenin and others concerning War Communism.

In establishing unprecedented state control over the economy in these years, Lenin repeatedly noted the importance of creating a system of accounting to ensure that production was being correctly channeled. According to Lenin (1977, vol. 27, 245), the decisive aspect of organizing socialist production was “the strictest and country-wide accounting and control of production and distribution of goods.” The successful implementation of accounting and control, alongside the amalgamation of all banks into a single state bank, would transform the credit allocation system into a network of “nodal points of public accounting under socialism” (*ibid.*, 252). These nodal points were required to enable calculation in the absence of money prices—which performed this role under capitalism, but would necessarily be absent under socialism.

In identifying the importance of establishing an alternative accounting network, Lenin makes it clear that the problem of calculation was central to the ability of socialism to function effectively. Yuri Larin, who was commissioned by Lenin as an economic advisor, recognized this as well. At the plenary session of the Supreme Economic Council in April of 1918, he said: “We have made up our minds to establish commodity exchange on new bases, as far as possible without paper money, preparing conditions for the time when money will only be an accounting unit” (as quoted in Malle 1985, 165).

The emphasis on following strict accounting and control methods as a substitute for monetary calculation under capitalism was echoed by Trotsky, who in his speech to the Central Executive Committee on February 14, 1918, emphasized the necessity of rationalizing the economic life of Russia through strict conformity to the plan. As he put it, “Only a systematic organization of production, that is, one based on a universal plan—only a rational and economic distribution of all products can save the country. And that means socialism” (as quoted in Shagwell 1927, 24). The comments of the first chairman of the Supreme Economic Committee, who was also a manager of the state bank, similarly suggest that the planners under War Communism understood the disastrous effects that the absence of money calculation could bring if there were not some other form of calculation: “Our financial policy has been aimed recently at building up a financial system based on the emission of paper money, the ultimate objective of which is the natural transition to distribution of goods without using money and to transform the money tokens into accounting units” (as quoted in Szmauely 1974, 34). The intent of this system was to abolish money

while creating a “system of cashless clearing” to allow for calculation and accounting.

Bukharin also emphasized the importance of calculation for socialism’s success in his popular exposition of the Program of the Communist Party that was adopted at the Eighth Party Congress in March, 1919. As he put it:

If all the factories and workshops together with the whole of agricultural production are combined to form an immense cooperative enterprise, it is obvious that everything must be precisely calculated. We must know in advance how much labour to assign to the various branches of industry; what products are required and how much of each it is necessary to produce; how and where machines must be provided. These and similar details must be thought out beforehand, with approximate accuracy at least; and the work must be guided in conformity with our calculations. (Bukharin and Preobrazhensky [1919] 1966, 70.)

This quotation is so clear on the importance of calculation for the information problem socialism confronts that it sounds as if it could have been taken from Mises himself. According to Bukharin, the planning process was to be entrusted to “various kinds of bookkeeping offices and statistical bureau.” “Just as in an orchestra all the performers watch the conductor’s baton and act accordingly, so here will all consult the statistical reports and will direct their work accordingly” (*ibid.*, 74).

Part of the urgency of establishing a system of public accounting had to do with the fact that socialism was to encompass a massive population—not tiny communes. Socialism “is inconceivable without planned state organization which keeps tens of millions of people to the strictest observation of a unified standard in production and distribution. We Marxists have always spoken of this, and it is not worth while wasting two seconds talking to people who do not understand even this” (Lenin 1977, vol. 27, 339).

In attempting to reorganize the economy on a grand scale so as to achieve the leap to the kingdom of freedom, the planners of War Communism emphasized the importance of calculation, not incentives. The fact that the planners recognized this, of course, does not definitively establish the calculation problem was the foremost problem confronting War Communism. It does, however, establish that in their minds there was a significant calculation problem; by contrast, incentives do not appear to enter the concerns of the War Communist planners.

While the planners under War Communism realized the importance of at least creating some kind of a crude replacement for monetary calculation under capitalism, these substitutes failed; as Mises argued, there is no substitute for money prices in the capitalist economy.<sup>12</sup> Thus, the result of War Communism was the disaster recorded by one of the first contemporary historians of Soviet Russia: “War Communism may fairly be considered one of the greatest and most overwhelming failures in history. Every branch of economic life, industry, agriculture, transportation, experienced conspicuous deterioration and fell far below the pre-War levels of output” (Chamberlin 1935, vol. 2, 105). Similar appraisals were offered by H. G. Wells (1921, 137), Moshe Lewin (1985, 211), and others.

Why this tremendous failure? If we are to take the quotations from Lenin, Bukharin, and other Soviet leaders seriously, the issue of calculation—not incentives—stood at the center of socialism’s ability to deliver on its promises. As another historian of War Communism, Lancelot Lawton, pointed out, War Communism’s failure stemmed from its “disregard of economic calculation” (1932, vol. I, 107); the “attempts of the Bolsheviks to establish moneyless accounting ended with no accounting at all.” In striving “to make all men wealthy, the Soviet state had made it impossible for any man to be otherwise than poor” (*ibid.*, 111).

This reason for War Communism’s failure was reiterated by the Russian economist Boris Brutzkus ([1920] 1987, 37) as well. Near the end of the War Communist period, he wrote that the attempt to substitute a central plan for the spontaneous process of market evaluation led to the “atrophy of economic calculation” in the Soviet Union. The failure of War Communism resulted from the fact that it “no longer possesses the sensitive barometer provided by the market prices.”

In the aftermath of the failure of War Communism, Nikolai Bukharin (1925, 188) himself stated that Mises was “one of the most learned critics of communism” and that the economic catastrophe that was evident in 1921 did resemble the picture “predicted” by Mises.<sup>13</sup>

Before concluding, however, we should point out again that it is not our intention here to deny that there were incentive problems under socialism. Rather, we desire merely to point out that socialist leaders, contemporary economists, and the first historians of the socialist experience in Soviet Russia seemed to have given priority to the calculation problem in considering the feasibility of the socialist project under War Communism.

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Caplan's discussion is wrongheaded on several fronts. First and foremost, his failure to understand what the proponents of socialism were after prevents him from fully appreciating Mises's argument. "Socialism" referred to specific ends (advanced material production being among them) in addition to specific means (collective ownership). Recognition of this fact makes Mises's impossibility argument as clear as day. We have provided some evidence to suggest that the historical record supports the possibility that economic calculation played at least as large a role as incentives in accounting for the failures of real-world socialism. Indeed, if we are to take seriously the concerns expressed by planners themselves under War Communism, it appears that the calculation problem played the more significant role.

## NOTES

1. Boettke has collected the main documents in the debate over socialism in the twentieth century in *Socialism and the Market: The Socialist Calculation Debate Revisited*, 9 vols. (2000). The first volume in this collection—*The Natural Economy*—compiles the crucial excerpts from the writings of Marx, Engels, Lenin, Bukharin, Preobrazhensky, and Neurath. What emerges in these writings is a shared vision of a social organization that would eradicate the ills of capitalism by abolishing commodity production. Production for exchange would be replaced by production for direct use and a "natural economy" would be established. The problem with private property and the capitalist system is, in their view, that it leads to exploitation of man by other men (which requires justice as a corrective) and to the alienation of man from his true being (which requires that we transcend our artificially induced selfishness). The revolutionary lure of Marxism over Progressive-Era reformism was the claim that justice could only be achieved through transcendence. Revolution, not reformism, would usher in the new age of social harmony. As even Mises (1992, 41) had to admit:

Socialism is at once grandiose and simple. Even its most determined opponents will not be able to deny it a detailed examination. We may say, in fact, that it is one of the most ambitious creations of the human spirit. The attempt to erect society on a new basis while breaking with all traditional forms of social organization, to conceive a new world plan and foresee the form which all human affairs must assume in the future—this is so magnificent, so daring, that it has rightly aroused the greatest admiration." (1922, 41).

2. See Walicki 1995.

3. “Without economic calculation,” Mises (1920, 105) wrote in his first article on the subject, “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.”
4. Mises’s emphasis on means/ends analysis is what he referred to as “value-free” social science. He cautioned against ever engaging in a debate about ends; the social scientist must limit his analysis to assessing the relationship between the means adopted and the ends sought by those who propose the policy or institutional arrangement in question.
5. In showing this, Mises solidified the calculation argument as the linchpin theoretical argument against socialism. That is, he demonstrated the impossibility of socialism even under the most favorable incentive and motivational assumptions for socialism. For more on this see, Boettke and Leeson 2004a.
6. Mises’s methodological position is that there is an epistemological distinction between theory (conception) and history (understanding). The argument about the impossibility of socialism is in the realm of theory, whereas the question of magnitudes is one of history. Both theory and history are essential in the study of man, but their epistemological status is distinct. We follow Mises in this methodological and epistemological approach to the sciences of man; see Boettke and Leeson 2004b.
7. Household economies and “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.” (Mises 1920, 103). The problems Mises highlighted do not pertain, he readily admits, in situations of simple production, nor do they present a problem under static conditions. He states these points clearly in his 1920 article and his 1922 book on socialism, and in his treatise, *Human Action* (1949).
8. To put it another way, it is important to remember that the social organization of production under socialism was not to be based on a rudimentary division of labor in a simple economy, but instead to be so rationalized through a settled plan as to generate a burst of productivity such that the division of labor can be done away with in the post-scarcity of world of the “kingdom of freedom.” Marx (1867, 92) wrote: “The life-process of society, which is based on the process of material production, does not strip off its mystical veil until it is treated as production by freely associated men, and is consciously regulated by them in accordance with a settled plan.”
9. Boettke (1990, 1993, 2000, 2001) has pointed out that you cannot say something is logically impossible and then condemn people (such as the Bolsheviks) for practicing the impossible badly. The calculation argument suggests why the extreme ambitions of the revolution met with such utter disaster and did so almost immediately, leading to the abandonment of the original aims of socialism in the Soviet Union. The calculation argument thus serves to *frame the historical account and leads to the analysis of the real—de facto—organizing principles of Soviet economic life, and the difficulties this set of arrangements had in coordinating the affairs of economic actors.*

10. Paul Gregory's recently published work, *The Political Economy of Stalinism* (2004)—which makes extensive use of the recently opened archives — within a few pages provides evidence that the leaders were worried about both incentive issues (labor discipline and effort, 94) and calculation issues (the allocation and coordination of labor and materials in a cost-effective manner, 101).
11. An important matter to keep in mind in looking at this table is the relationship of the civil war to the timing of policy. The extreme centralization policies that attempted to eradicate the market economy were pursued prior to the outbreak of civil war in June 1918, and continued after the armistice was signed in October 1920. For a discussion of the implications for the debate on War Communism, see Boettke 1990.
12. Mises warned in 1920 (124) that many socialists did not realize that “the bases of economic calculation are removed by 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.” Mises's argument, as we have seen, is that no such substitute is consistent with socialism in terms of means and ends.
13. Bukharin didn't abandon his socialist aspirations, but maintained instead that as long as the Bolsheviks retained the “commanding heights” of the economy, they would be able to build socialism in the future more successfully. But in the short run, he argued that the workers should enrich themselves and that entrepreneurs must be secure in their investments so as to fuel economic growth. This argument, made in the heat of the debate over the New Economic Policy, would later be used against Bukharin as evidence of his “right-wing deviationism,” leading to his execution.

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