

The Bolshevik Revolution and the Socialist Calculation Debate

Vladimir Lenin sent warm greetings in April 1919 to the socialist revolutionaries who had just seized power in Munich and declared a Bavarian Soviet Republic. Drawing on his experience eighteen months earlier leading the Bolshevik Revolution that gave Russia a Soviet Socialist government, he asked them about a checklist of concrete measures they might take, urging their “most urgent and most extensive implementation”:

[H]ave councils of workers and servants been formed in the different sections of the city; have the workers been armed; have the bourgeoisie been disarmed; has use been made of the stocks of clothing and other items for immediate and extensive aid to the workers, and especially to the farm labourers and small peasants; have the capitalist factories and wealth in Munich and the capitalist farms in its environs been confiscated; have mortgage and rent payments by small peasants been cancelled; have the wages of farm labourers and unskilled workers been doubled or trebled; have all paper stocks and all printing-presses been confiscated so as to enable popular leaflets and newspapers to be printed for the masses; has the six-hour working day with two or three-hour instruction in state administration been introduced; have the bourgeoisie in Munich been made to give up surplus housing so that workers may be immediately moved into comfortable flats; have you taken over all the banks; have you taken hostages from the ranks of the bourgeoisie; have you introduced higher rations for the workers than for the bourgeoisie; have all the workers been mobilised for defence and for ideological propaganda in the neighbouring villages?¹

The list concisely summarizes Lenin’s immediate agenda for consolidating power by winning over the workers. The absence of any suggestions for longer-range economic strategy hints at the problem Lenin himself faced in

¹ V. I. Lenin, “Message of Greetings to the Bavarian Soviet Republic,” in *Collected Works*, 4th English ed., vol. 29 (Moscow: Progress, 1972), pp. 325–6. Available online at <http://www.marxists.org/archive/lenin/works/1919/apr/27.htm>.

Moscow: because there were no concrete guidelines from Marx and Engels, economic policy had to be improvised.

THE BOLSHEVIKS MAKE ECONOMIC POLICY

Lenin imagined that in the communism of the ultimate future, the state would wither away. In the socialist transition between capitalism and communism, however, far-reaching state control of the economy would be necessary to advance the interests of the workers. As Lenin's contemporary the Russian agricultural economist Boris Brutzkus noted, the Bolsheviks found in Marx's critique of capitalism a rejection of the capitalist system of regulating production through market prices and the suggestion of replacing it with "a unitary state plan."²

After taking power, the Bolsheviks quickly established a central planning agency known as the Supreme Economic Council. The Council nationalized the banking system in December 1917, putting all banks under the control of the State Bank left over from the tsarist regime. The Soviet government nationalized large industrial firms and put worker committees in control of the factories. In the spring of 1918 foreign trade became a state monopoly. By fall, the government had nationalized even small businesses. It completely outlawed private trade, private hiring, and private leasing of land. There was even an attempt to do away with money. An August 1918 decree, as described by Peter Boettke in his economic history of the period, "declared that all transactions had to be carried out by accounting operations without using money."³ All goods were to be distributed by government rationing. In agriculture, the Soviet government confiscated all food grown by peasant farmers (beyond what the farmers were allowed for their own consumption) for distribution in the cities. It was, as the economist Jack Hirshleifer put it, "the most extreme effort in modern times to do away with the system of private property and voluntary exchange."⁴

The results were disastrous. Without a price system to coordinate economic plans, in Leon Trotsky's apt metaphor, "Each factory resembled a telephone whose wires had been cut."⁵ By 1920 Russia's industrial output

² As quoted by Peter J. Boettke, *The Political Economy of Soviet Socialism: The Formative Years, 1918-1928* (Boston: Kluwer Academic, 1990), p. 31.

³ *Ibid.*, p. 65.

⁴ Jack Hirshleifer, *Economic Behavior in Adversity* (Chicago: University of Chicago Press, 1987), p. 15.

⁵ As quoted by Paul Gregory, *Before Command: An Economic History of Russia from Emancipation to the First Five-year Plan* (Princeton, NJ: Princeton University Press, 1994), p. 99.

had plummeted to less than one-fifth of its 1916 level. In the countryside, peasants rebelled against the crop confiscations. They began to grow less and to hide what they did grow. In the cities, shortages of food and other goods were so severe that many people fled to the countryside to avoid starvation. Famine and mass exodus halved the populations of Petrograd and Moscow in the two years following the Bolshevik takeover. Workers began protest strikes. Hungry soldiers and sailors rebelled.⁶

In 1921, Lenin retreated from the policies that he now called “war communism” and characterized as mere emergency measures necessitated by the civil war of the Reds against counterrevolutionary White resistance. Lenin’s relabeling masked the fact that the policies had not been driven entirely by expediency or necessity. The Bolsheviks had been seriously trying to implement a marketless economy. The market-abolishing measures continued to multiply, eliminating the last pockets of private enterprise, even after the resistance had been defeated in 1920. The complete collapse of the economy followed the elimination of these pockets that had previously escaped control.

With starvation the alternative, Lenin’s “New Economic Policy” of 1921 readmitted market exchange, allowing peasants to sell their produce and substituting a lower percentage tax for the previous confiscations. Small businesses and services were denationalized, and private trading was once again allowed. With his government still in control of banking, large industry, and foreign trade, Lenin described the NEP as a strategic retreat to the “commanding heights of the economy.” The Russian economy improved. The NEP would later be abandoned in 1928 with Stalin’s attacks on private traders, the “Nepmen,”⁷ and his introduction of Five-Year Plans for industrialization. Two years later Stalin would collectivize agriculture.

VIENNA 1920

Marxist-Leninist ideas were not confined to Russia in the years following the First World War. They also captured minds and governments in central Europe. Bolsheviks held power in Budapest from March 1919 to August 1919, declaring the country a Hungarian Soviet Republic. As noted, communists seized power in Munich in April 1919 and proclaimed a Bavarian

⁶ For overviews of the period see Boettke, *The Political Economy of Soviet Socialism*, pp. 63–111, and Hirshliefer, *Economic Behavior in Adversity*, pp. 15–23.

⁷ On the NEP period see Alan M. Ball, *Russia’s Last Capitalists: The Nepmen, 1921–1929* (Berkeley: University of California Press, 1990).

Soviet Republic. It lasted for about a month before the German army intervened. Marxists dominated local government in “Red Vienna.” Among the new city-owned housing projects was the *Karl Marx Hof*. Vienna was impoverished not only by the War and by the dissolution of the Austro-Hungarian Empire, but also by its own price controls on food and fuel. In Austria as a whole, the Social Democrats finished first in the 1919 elections and formed a coalition government. Its Socialization Commission called for the nationalization of coal, iron, steel, and later other sectors of the economy. The head of the Commission, Otto Bauer, advocated “guild” socialism.⁸ The Viennese philosopher and economist Otto Neurath, who was involved in making economic policy for the Bavarian Soviet Republic in 1919, published a book in the same year proposing that the centralized allocation or “war socialism” of the First World War could serve as the first step toward a moneyless “natural” economy.⁹

Ludwig von Mises stepped forward as the leading critic of socialist ideas in Vienna. Provoked especially by Neurath’s argument, Mises in 1920 published a soon-to-be famous article on “Economic Calculation in the Socialist Commonwealth,” followed two years later by his book *Socialism* (1922).¹⁰ Mises’s book shook Hayek out of his early inclination toward socialist ideas. In a 1978 foreword to a reprint of Mises’s 1922 book, Hayek wrote that

when *Socialism* first appeared, its impact was profound. It gradually but fundamentally altered the outlook of many of the young idealists returning to their university studies after World War I. I know, for I was one of them. . . . We were determined to build a better world, and it was this desire to reconstruct society that led many of us to the study of economics. Socialism promised to fulfill our hopes for a more rational, more just world. And then came this book. Our hopes were dashed. *Socialism* told us that we had been looking for improvement in the wrong direction.¹¹

LUDWIG VON MISES

Ludwig von Mises (1881–1973) received his doctorate in 1906 from the University of Vienna, where he had attended Eugen von Böhm-Bawerk’s

⁸ Kari Polanyi-Levitt and Marguerite Mendell, “The Origins of Market Fetishism – Critique of Friedrich Hayek’s Economic Theory,” *Monthly Review* 41 (June 1989), pp. 11–32.

⁹ See Bruce Caldwell, *Hayek’s Challenge* (Chicago: University of Chicago Press, 2004), p. 116.

¹⁰ Ludwig von Mises, “Economic Calculation in the Socialist Commonwealth” [1920], trans. S. Adler, in F. A. Hayek, ed., *Collectivist Economic Planning* (London: Routledge, 1935), pp. 87–130; Mises, *Socialism: An Economic and Sociological Analysis* [1922], trans. J. Kahane [1936] (Indianapolis: Liberty Fund, 1981).

¹¹ F. A. Hayek, “Foreword,” in Mises, *Socialism*, p. xix.

seminar. He became the chief economist for the Austrian Chamber of Commerce in the following year. The first of his many noteworthy books was *The Theory of Money and Credit*, published in 1912. After serving in the First World War, Mises returned to the Chamber, where he was an official adviser to the Austrian government. He was also an unpaid external lecturer (*privatdozent*) at the University of Vienna. From 1920 to 1934 he ran a private seminar that was Vienna's leading discussion venue for advanced economics.¹² Hayek joined the Mises Circle in 1924, after taking a job in a temporary postwar government office headed by Mises. Mises and the other members of Circle developed the "Austrian" approach to economics that had been pioneered by Carl Menger and then advanced by Eugen Böhm-Bawerk and Friedrich Wieser at the University of Vienna.¹³ In economic policy, Mises argued strongly for free markets based on their beneficial practical results.

Mises founded the Austrian Institute for Business Cycle Research in 1927, giving Hayek the job of running it. Seven years later, endangered by his outspokenness and Jewish ancestry, Mises left the country ahead of Nazi Germany's takeover of Austria, and became a professor in Geneva, Switzerland. In 1940 at the age of 59, concerned about the Nazi threat to Geneva, he and his wife fled to New York (they had married in 1938, soon after his mother had died). He finished out his long career as a visiting professor at New York University from 1945 to 1969. His best known work, the wide-ranging treatise *Human Action*, was published in 1949.¹⁴

MISES'S CRITIQUE OF THE SOCIALIST ECONOMY

Mises issued a forceful challenge to socialist thinking in his 1920 article. The socialists, he said, had not addressed a basic problem imposed by

¹² On the basis of the importance of his books and articles, Mises was an obvious candidate for appointment to the chair in economics at the university when it became vacant in 1922. Hayek, in *Hayek on Hayek: An Autobiographical Dialogue*, ed. Stephen Kresge and Leif Wenar (Chicago: University of Chicago Press, 1994), p. 59, attributes Mises's nonappointment principally to his being an antisocialist when most faculty were socialists.

¹³ For more on Menger, see [Chapter 8](#).

¹⁴ For a brief overview of Mises's thought see David Hart, "Ludwig von Mises, Money, and the Fall and Rise of Classical Liberalism in the 20th Century," *Literature of Liberty* 5 (Autumn 1982), pp. 3-6, available online at <http://www.econlib.org/library/Essays/LtrLbrty/msEd-Bib1.html>. For a detailed account of the interwar period in Mises's career, see Richard M. Ebeling, "The Economist as the Historian of Decline: Ludwig von Mises and Austria between the Two World Wars," in Richard M. Ebeling, ed., *Globalization: Will Freedom or World Government Dominate the International Marketplace?* (Hillsdale, Mich.: Hillsdale College Press, 2002), pp. 1-68. For a comprehensive biography see Jörg Guido Hülsmann, *Mises: The Last Knight of Liberalism* (Auburn, AL: Mises Institute, 2007).

scarcity: choosing *how* to produce. Having abolished markets and thereby prices for the means of production, the directors of a socialist economy would not know how to combine resources to produce goods economically. Unable to calculate profit and loss, they would be at sea without a compass. Socialism would generate waste and privation, not prosperity. Socialist economists naturally tried to answer Mises, and the “socialist calculation debate” ensued.¹⁵

The defining feature of a socialist economy, for both Mises and the socialists of the day, was the abolition of private property in the means of production (labor, land, raw materials, machines, factory buildings). For Mises any economy with a stock market, where controlling shares in firms (which themselves own and hire means of production) are freely exchanged among private investors, is not a socialist economy. By this definition, Sweden today (for example) does not count as a socialist economy. It is a market economy with high taxes and a large welfare state.¹⁶ Mises wrote: “Production goods in a socialist commonwealth are exclusively communal; they are an inalienable property of the community, and thus *res extra commercium* [things outside the market].”¹⁷ The socialist economist Oskar Lange (discussed later in this chapter) accepted the same definition, contrasting a “socialist economy” to “any system with private ownership of the means of production.” With government rather than private owners or capitalist investors responsible for directing the farms and factories, any coordination of production planning among the factories and farms would fall to a central planning board.

Mises argued that a centrally planned socialist economy, like the new Soviet Russian economy (he was writing *before* Lenin had conceded the need to reintroduce markets), was bound to run poorly. To abolish private property in the means of production is to abolish competitive bidding by capitalists, the market process by which cost-revealing prices for inputs are formed. How do we know, for example, the economic cost – the value of its

¹⁵ For a book-length review of the debate see Don Lavoie, *Rivalry and Central Planning: The Socialist Calculation Debate Reconsidered* (Cambridge: Cambridge University Press, 1985); for a shorter overview, see David M. Levy and Sandra J. Peart, “Socialist Calculation Debate,” in Steven N. Durlauf and Lawrence E. Blume, eds., *New Palgrave Dictionary of Economics*, 2nd ed. (New York: Palgrave Macmillan, 2008).

¹⁶ During the period spanning 1980 to 2007 Sweden’s composite ranking varied between 18th and 40th of 140-plus nations in the Economic Freedom of the World Index. It ranked higher in legal structure and security of property rights, sound money, and freedom to trade, but lower in size of government and regulation. James Gwartney, Robert Lawson, et al., *Economic Freedom of the World: 2009 Annual Report* (Economic Freedom Network, 2009), p. 171. Available online at <http://www.freetheworld.com/release.html>.

¹⁷ Mises, “Economic Calculation,” p. 91.

next-best alternative use – of using a particular plot of land (or a particular tractor) to grow yellow corn? Only by seeing what profit-seeking soybean farmers (and others) will bid for its use in growing soybeans (or other crops) that grow in the same season.

SOVIET SHORTAGES

For the sake of argument, Mises was willing to grant that a socialist economy could have free markets for *consumer* goods. Consumer goods, once produced, could be sold on markets. On these markets, accurate relative prices for consumer goods could in principle arise even in a socialist economy. We should note, however, that the Soviet Union in practice failed to get consumer goods prices right. Historian Sheila Fitzpatrick has described how Russian life in the 1930s suffered from the failure to accurately price (and to allow markets to supply) food, clothing, and housing:

With the transition to a centrally planned economy at the end of the 1920s, goods shortages became endemic in the Soviet economy. . . . A worker from the Urals wrote that to get bread in his town you had to stand in line from 1 or 2 o'clock at night, sometimes earlier, and wait for almost 12 hours. . . . Bread was not the only thing in short supply. The situation was no better with other basic foodstuffs like meat, milk, butter, and vegetables, not to mention necessities like salt, soap, kerosene, and matches. Fish disappeared too, even from regions with substantial fishing industries. . . . Clothing, shoes, and all kinds of consumer goods were in even shorter supply than basic foodstuffs, often being completely unobtainable. . . . Meanwhile, people lived in communal apartments, usually one family to a room, and in dormitories and barracks. . . . So acute was the housing crisis in Moscow and Leningrad that even the best connections and official status often failed to secure a separate apartment.¹⁸

David Levy has importantly pointed out that it was *not in the interest* of a Soviet official or store manager, in charge of pricing and allocating a particular good, to seek its market-clearing price when she did not personally benefit from greater store sales. Instead, by setting prices so low as to create shortages in the stores, and by having the de facto right to allocate goods in short supply before they reached retail shelves, she could unofficially trade the favor of access to an otherwise-unavailable good in exchange for the favor of access to otherwise-unavailable goods of other sorts. The Soviet humor magazine *Krokodil* illustrated the system at the retail level by imagining the following announcement in a department store: “Dear customer,

¹⁸ Sheila Fitzpatrick, *Everyday Stalinism* (Oxford: Oxford University Press, 1999), pp. 42–7.

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." Other diversions took place earlier in the supply chain. Thus when Mises and Hayek assumed for the sake of argument that the socialist economy's price-setters would be disinterested, they diverted attention from a key problem.¹⁹

THE NEED FOR INPUT PRICES

Even if central planners sincerely and disinterestedly *wanted* to meet consumer demands, and even if socialist factory managers could consult genuine consumer prices to know what mix of goods consumers were demanding, Mises argued, they would still need guidance from market prices in *producer* goods to know *how best to produce* consumer goods. Suppose that output Z can be produced by various quantities and combinations of the inputs {U, W, X, Y}. Which of the many possible recipes minimizes the cost of Z (avoids waste)? When a lumber yard manager faces the simple decision of whether to use plastic or canvas tarpaulins, his is not purely an engineering problem. The relative prices of the two materials matter. When a farmer decides how much of each type of fertilizer to use per acre, the relative prices of different fertilizers matter. When a railroad company decides where to build a rail line, the prices of various land parcels, and of labor and machines for building bridges and tunnels, matter.

Mises described the problem facing an industrialized "future socialist society," without market prices for inputs, in these terms:

There will be hundreds and thousands of factories in operation.... 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?²⁰

Mises noted that the abolition of market prices is complete only when socialism embraces the entire globe. As of 1920, "the extent to which

¹⁹ David Levy, "The Bias in Centrally Planned Prices," *Public Choice* 67, no. 3 (1990), pp. 213–26.

²⁰ Mises, "Economic Calculation," p. 106.

socialism is in evidence among us constitutes only a socialistic oasis in a society with monetary exchange.” A city-owned bus company in a market economy *can* be evaluated for profitability: we can compare its dollar revenues to its dollar expenses. By extension, an entire socialist country, like the USSR, can use world prices for rough guidance. It is like a large (no doubt overly large) vertically integrated and conglomerate firm in the world market economy. But using world prices will of course be impossible “in the case of socialist concerns operating in a purely socialistic environment,” that is, if socialism covers the globe.²¹

“CRUSOE” PRODUCTION VERSUS SPECIALIZED PRODUCTION AND TRADE

Socialist planners face the problems of how to divide tasks among specialized production units, how to allocate resources among them, and how to direct them to best advantage. Mises noted that an isolated individual, producing only for himself and not trading with others, can (indeed must) decide without prices what production plans are worth pursuing. The fictional character Robinson Crusoe, who finds himself shipwrecked and alone on a tropical island, can rationally choose whether to use a plot of land for hunting or for farming by directly comparing the benefits (net of “pain-cost”) that he expects from the alternative courses of action.²² Crusoe can personally evaluate meat and farm crops, the effort of hunting and the effort of farmwork, to decide what foods he prefers to produce on the plot.

A nonisolated producer in a social economy, by contrast, needs input prices to decide what is worth doing. Even if there are markets to price consumer goods, a market for producer goods or inputs is needed to communicate to each producer the other producers’ valuations for alternate uses of those inputs. Only a market for producer goods “enables us to extend to all goods of a higher order the judgment of value” of producers. Without market prices for labor, machines, raw materials, and a market-determined interest rate, “all the longer roundabout processes of capitalistic production would be gropings in the dark.”²³ Crusoe-type personal evaluation, without prices, is no longer enough. In a world of multiple producers, “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.”

²¹ *Ibid.*, pp. 104–5.

²² *Ibid.*, p. 97.

²³ *Ibid.*, p. 101.

Because money prices for higher-order goods come from competitive bidding by private business owners, Mises adds: “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.”²⁴

WHICH PRODUCTION PROJECTS ARE WORTH IT?

An important premise of Mises’s argument is that there are many *possible* ways to produce any given consumer good. Profit and loss calculation using market prices “affords us a guide through the oppressive plenitude of economic potentialities.” For example: Should power be generated by building a hydroelectric dam, or by digging coal to burn in a power plant? Either project is “roundabout” (involves many stages from blueprint to construction to operation) and complex. In such cases “one cannot apply merely vague valuations, but requires rather more exact estimates and some judgment of the economic issues actually involved.” Only a profitability calculation using market input prices makes more exact estimates and judgment possible.

Explaining how input prices allow an accurate profit-or-loss test, Mises spelled out an important principle in the operation of a market economy:

[C]alculation 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 . . . 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.²⁵

For example, the price of concrete, which the builder of a hydroelectric dam must pay to bid concrete away from other potential users, signals the value of concrete in alternative uses. Likewise for the other inputs. If the dam-builder’s project can’t make a profit, it’s because his use of the inputs doesn’t promise to produce as much output value as other bidders’ uses.

Consider two rival entrepreneurs, Barton and Jones. Each borrows \$20,000 from a bank, buys \$10,000 worth of concrete, and hires \$10,000 worth of labor. Each plans to combine the inputs and sell the resulting output. From the proceeds each then will repay his bank \$21,000 (loan principal plus interest) and keep any remainder as profit. Barton builds a swimming pool, for which he is paid \$20,000. Result: \$1000 loss. Jones builds a tennis

²⁴ Ibid., p. 104.

²⁵ Ibid., pp. 97–8.

court, for which he is paid \$22,000. Result: \$1000 profit. Why did Barton have to pay \$10,000 for the concrete in the first place? Because at any lower price Jones and others would have outbid him for the available concrete. Jones and others are willing to bid the market price up to \$10,000 because they estimate that *their* uses for the concrete will add at least \$10,000 in output value, yielding them a profit. Barton's use, as it turns out, adds less value – so he makes a loss. The fact that Barton can't make a profit while paying the market prices for concrete and labor shows that Jones and others understand how to make better uses of the concrete and labor.

The market pricing process, driven by bidding from profit-seeking entrepreneurs, assigns prices to inputs according to their anticipated value-added in producing consumer goods. Guided by prices, the profit-seeking entrepreneur, Mises wrote,

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.²⁶

THE PROFIT TEST MAKES “INTELLECTUAL DIVISION OF LABOR” POSSIBLE

Profit calculations allow an economy to have, instead of a single central planner, many decentralized production decision-makers. Letting just anybody decide how to use some of society's scarce productive resources is a socially viable approach only if there is some system in place that identifies and discourages wasteful decisions. As Mises put it, decentralization in a world of scarcity “entails a kind of intellectual division of labor, which would not be possible without some system of calculating production and without economy.”²⁷ Hayek would later underscore the point that the price system allows society to utilize bits of specialized production knowledge dispersed across many minds.

A sports analogy may help make the point clear, at least for those familiar with American football. Should a football team, assuming they want to win, allow the quarterback to call plays on offense, or should a coach call them from the sideline? The answer depends entirely on whether the quarterback's play-calling *works*. The team can evaluate whether it works

²⁶ Ibid., p. 107.

²⁷ Ibid., p. 102.

by consulting a rather direct profitability test: does the quarterback's play-calling result in the team scoring more points?

WHY NOT VALUATION BY LABOR INPUT?

Mises's argument embodied the neoclassical *marginal productivity theory* of factor prices, which teaches that the price of a productive input (raw material, machine-hour, labor-hour), in a market where entrepreneurs competitively bid for it, reflects the value of the input's marginal contribution to the revenue from output sales. Marxian socialists of 1920 embraced an earlier theory of price: the classical labor theory of value. According to the labor theory, a good's appropriate price is proportional to the necessary amount of labor time it embodies. If one embraces the labor theory, and thinks that experts in the central planning ministry can determine the number of labor hours technically necessary, then entrepreneurial bidding for inputs becomes superfluous. The planners simply assign appropriate prices in proportion to necessary labor time.

Mises pointed to two problems with "valuation in terms of labor." First, it fails to account for the value of natural resources. Weekly and seasonal variations in the market price of crude oil are not explained by variations in the labor time needed to find and pump out oil from the ground. Second, labor is not uniform, but comes in different qualities. For these and other reasons embodied labor-time poorly matches actual price in a market economy, making labor-time valuation a poor substitute for market pricing. The "labor theory of value" is a false theory of price.²⁸

THE LABOR THEORY OF VALUE AND ITS PROBLEMS

The labor theory of value, as economist David Prychitko has noted, forms "a major pillar of traditional Marxian economics" as explicated in Marx's major work *Capital* (1867). To explain relative prices the theory asserts, in Prychitko's words, the following: "If a pair of shoes usually takes twice as long to produce as a pair of pants, for example, then . . . the competitive price of shoes will be twice the price of pants."²⁹ Marx borrowed the theory from the classical economists, whose leading figures were Adam Smith, David Ricardo, and John Stuart Mill. Smith's example in *The Wealth of Nations*

²⁸ Ibid., pp. 112–16.

²⁹ David L. Prychitko, "Marxism," in David R. Henderson, ed., *The Concise Encyclopedia of Economics* (Indianapolis: Liberty Fund, 2008), p. 337.

(1776) was not two pairs of pants for one pair of shoes, but two deer for one beaver.³⁰ David Ricardo opened the first chapter of his *The Principles of Political Economy* (1817) with the statement: “The value of a commodity, or the quantity of any other commodity for which it will exchange, depends on the relative quantity of labour which is necessary for its production.”³¹ John Stuart Mill, in his own *Principles of Political Economy* (1848, plus many later editions) advanced essentially the same theory. In many ways Marx’s *Capital* was the last gasp of classical price theory.

The appeal of the labor theory of value was that it seemed to explain the tendency for price to equal cost. The classical economists rejected the alternative, a theory deriving value from consumer preference or demand, in part because it seemed to create the following paradox: a diamond is much less vital than a gallon of water (if you had to give up all diamonds or all water, which would you choose to keep?), and yet the diamond has a much greater market price.

On closer examination, the labor theory of value unravels. One way to unravel it is to note that the theory is inconsistent with the core economic principle – accepted by Marx – that competition equalizes rates of return across investments. Suppose a pint of berries is produced by applying ten manhours today (to find the seeds and plant them; for simplicity assume that labor is the only input), then waiting one year. Suppose a bushel of apples is produced by applying ten manhours today (no other inputs), then waiting *two* years. Labor input is the same, but the two product prices *can’t* be the same in equilibrium, because that would imply a lower annual rate of return on producing apples. Nobody would invest in a two-year process that yields no more revenue from a given expense than a one-year process. In equilibrium, given a positive interest rate, the apples have to sell for more, despite the same labor-time input, or no apples will be grown. Ricardo recognized this problem, but shrugged it off, saying that the labor theory of value was still *approximately* accurate. Marx promised to resolve the contradiction in the third volume of *Capital*, but never did. The Austrian economist Eugen von Böhm-Bawerk, in an essay on *Karl Marx and the Close of His System* (1896), took Marx to task for this failing.

³⁰ Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, ed. R. H. Campbell, A. S. Skinner, and W. B. Todd (Indianapolis: Liberty Classics, 1981), p. 65. Available online at oll.libertyfund.org/title/220. Smith proposed the pure labor theory for an “early and rude state of society” without capital or scarce land.

³¹ David Ricardo, *The Principles of Political Economy* (London: John Murray, 1817). Available online at <http://www.econlib.org/library/Ricardo/ricP1.html#Ch.1>, On Value.

Another example illustrates the inability of the labor theory of value to accommodate the influence of interest (or waiting) on price. A casual survey of online prices for various types of Glenlivet single-malt Scotch turns up the following:

- 12-year, 86 proof, 750 ml, \$30
- 15-year, 86 proof, 750 ml, \$45
- 18-year, 86 proof, 750 ml, \$62

If we can reasonably assume that equal manhours are needed in preparation, distilling, and barreling, so that the only production difference is how long the Scotch is left in the barrel, then these price differences are inconsistent with a pure labor theory of value. (The obviousness of price differences in Scotches of different ages makes one wonder how the Scotsman Adam Smith could have embraced a labor theory of value.) Differences of this sort are not only consistent with but are *required* for equal rates of return.

The most fundamental flaw of the labor theory of value (and of the generalized cost-of-production theory of value that Smith and others also advanced) is its supposition that the price of a good reflects an *intrinsic* feature of the good, something infused during its production, rather than something in the minds of its buyers. It supposes that input cost determines selling price, rather than *vice-versa*. Early critics of the theory like Samuel Bailey (1825) noted that demand and scarcity together were necessary and sufficient to explain a positive price (and resolved the diamond-water paradox), but labor input was neither necessary nor sufficient. Naturally fertile plots of land have no labor input yet high value. Bad works of art may embody many hours of labor input yet have little or no market value. But the critics hadn't fully spelled out an alternative theory.

The labor theory of value continued to dominate economics texts, despite its known problems, until the elaboration of a better theory: the subjective or marginal-utility theory of value. The marginalist revolution was independently but simultaneously launched in 1871 by Carl Menger, William Stanley Jevons, and Léon Walras. Menger wrote: "Goods always have value to certain economizing individuals and this value is also determined only by these individuals." Jevons added that the value of labor "must be determined by the value of the produce, not the value of the produce by that of the labour."³² That is, consumer goods are valuable regardless of what it took

³² Carl Menger, *Principles of Economics* (New York: New York University Press, 1976), p. 146; William Stanley Jevons, *The Theory of Political Economy* (London: Macmillan, 1871), pp. 160–1.

to produce them. Labor does not infuse value into consumer goods. The value of the labor is instead derived from the contribution it is expected to make to the independently valued consumer goods.

THE PROBLEM OF INCENTIVE UNDER SOCIALISM

Experience shows that lack of incentive for workers and managers is *also* a major problem in a centrally planned economy. The Soviet workers' unofficial motto was: "They pretend to pay us, and we pretend to work." Factory managers who do not keep any profits have little incentive to think creatively or even to work hard at reducing waste in routine tasks. Mises argued that the calculation problem is more fundamental, because it would remain even if the incentive problems were solved:

But even if we for the moment grant 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.³³

Such an argument doesn't really show that the calculation problem is *more* fundamental, however. One could equally for the moment grant that the central planners could arrive at the right prices, and note that there still remains the problem of getting workers and managers to exert themselves. *Both* calculation and incentive are fundamental problems.

OSKAR LANGE'S RESPONSE TO MISES'S CHALLENGE

As Mises summarized his argument, "Where there is no free market, there is no pricing mechanism; without a pricing mechanism, there is no economic calculation."³⁴ The socialist economist Oscar Lange would accept the second proposition, but reject the first.

Lange, a Polish economist at that time working in the United States, replied to Mises in an important two-part article "On the Economic Theory of Socialism" (1936-7), which advocated what came to be known as "market socialism."³⁵ Lange began by acknowledging the importance

³³ Mises, "Economic Calculation," p. 120.

³⁴ *Ibid.*, p. 111.

³⁵ Oskar Lange, "On the Economic Theory of Socialism: Part One," *Review of Economic Studies* 4 (October 1936), pp. 53-71; Lange, "On the Economic Theory of Socialism: Part

of Mises's challenge to socialist theory. He wryly suggested that the new Socialist ministry should honor Mises with a statue for his contribution to the socialist cause:

Socialists have certainly good reason to be grateful to Professor Mises, the great *advocatus diaboli* [devil's advocate] 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. . . . 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 honourable place in the great hall of the Ministry of Socialisation or of the Central Planning Board of the socialist state.³⁶

Lange agreed with Mises that the labor theory of value won't do for guiding producers to supply economically what consumers want. Marx, he noted, "seems to have thought of labour as the only kind of scarce resource to be distributed between different uses and wanted to solve the problem by the labour theory of value. . . . Professor Pierson and Professor Mises have certainly merited the gratitude of the student of the problem by exposing the inadequacy of this simplicist solution." Lange proposed to guide a socialist economy using modern marginalist economic theory, not Marxian or other classical economics: "The limitations of Marx and Engels are those of the classical economists."³⁷ Where Marxians promised to overthrow the logic of market relations, Lange promised to apply the logic more rigorously. A market-socialist economy would outdo any actual capitalist economy in achieving the efficiency of the neoclassical model of perfect competition.

The anti-Marxian part of Lange's market-socialist position naturally attracted criticism by contemporary Marxian economists, most notably

Two," *Review of Economic Studies* 4 (February 1937), pp. 123–42. Other important contributions to market-socialist theory included Fred M. Taylor, "The Guidance of Production in a Socialist State," *American Economic Review* 19 (March 1929), pp. 1–8; H. D. Dickinson, "Price Formation in a Socialist Community," *Economic Journal* 43 (June 1933), pp. 237–50; Abba P. Lerner, "Economic Theory and Socialist Economy," *Review of Economic Studies* 2 (1934); and Lerner, *The Economics of Control* (New York: Macmillan, 1940). Lange's and Taylor's essays were reprinted together in Benjamin E. Lippincott, ed., *On the Economic Theory of Socialism* (Minneapolis: University of Minnesota Press, 1938).

³⁶ Lange, "Socialism: Part One," p. 53.

³⁷ Lange, "Socialism: Part Two," p. 138. "Prof. Pierson" refers to Nicolaas Gerard Pierson (1839–1909), who anticipated some of Mises' arguments in a 1902 article (in Dutch), translated as "The Problem of Value in the Socialist Community" in Hayek, ed., *Collectivist Economic Planning*, pp. 41–86.

Maurice Dobb of Cambridge. Dobb rejected what he saw as Lange's needless concessions to capitalist principles, like producing what consumers want rather than what experts determine is good for them. Citing a leading state-owned monopoly enterprise in prewar Britain, Dobb asked with complete sincerity: "Few, surely, could seriously maintain that the amount and sort of music to be played by the B. B. C. should be decided by a market mechanism?"³⁸

OSKAR LANGE

Oskar Lange (1904–65) received his doctorate in economics in 1928 from the University of Krakow in Poland. He taught statistics at Krakow from 1931 to 1934, and was active in the Socialist Party. He published a Party tract, "The Road to Socialist Planned Economy" in 1934. For the next two years he was a Rockefeller Foundation Fellow in United States. He then had a series of short teaching appointments at the University of Michigan, University of California – Berkeley, and Stanford University. In 1939 he became a professor of economics at the University of Chicago, where he remained until he left academia in 1945 to become the newly communist Poland's ambassador to the United States and then its representative to the United Nations. He returned to Poland in 1948 and remained until his death in 1965, becoming a member of parliament and an official in Poland's central planning efforts.

LANGE'S ANSWER TO MISES

Lange rejected Mises's claim that "Where there is no free market, there is no pricing mechanism." Lange argued that a socialist system can set and use prices, too. He charged that "Professor Mises' contention that a socialist economy cannot solve the problem of rational allocation of its resources is based on a confusion concerning the nature of prices." Prices are merely trade-off ratios, the "terms on which alternatives are offered." Prices are certainly needed, but they need not originate in markets: a Socialist ministry can set them, and set them even better. Lange characterized the general logic of resource allocation as a mathematics problem:

The economic problem is a problem of choice between different alternatives. To solve the problem three data are needed: (1) a preference scale . . . ;

³⁸ Maurice Dobb, *On Economic Theory and Socialism: Collected Papers* (London: Routledge, 1953), p. 73.

(2) knowledge of the “terms on which alternatives are offered,” and finally (3) knowledge of the amount of resources available. Those three data given, the problem of choice is solvable.³⁹

HOW DOES THE SOCIALIST PLANNING MINISTRY GAIN THE KNOWLEDGE IT NEEDS?

Mises had in effect denied that knowledge of the appropriate trade-offs, the “terms on which alternatives are offered” by market prices, can exist without markets. Lange replied:

Professor Mises denies this. However, a careful study of price theory and of the theory of productions convinces us that, the data under (1) and under (3) being given, the “terms on which alternatives are given” are determined ultimately by the technical possibilities of transformation of one commodity into another, i.e. by the production functions. 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.⁴⁰

Given the set of least-cost production functions, we can mathematically solve for the appropriate trade-off ratios among commodities, which gives us the appropriate relative prices. Hayek would later argue that Lange was simply assuming what needed to be shown, because least-cost production functions are not “given” and are systematically uncovered only in competitive markets.

DETERMINING PRICES FOR INPUTS WITHOUT MARKETS

Lange proposed that the Central Planning Board could set the right prices in the same way that he supposed that a market does it – by trial and error. The Board could begin with a random price for (say) cement. If a shortage results at that price, the Board would raise the price. If a surplus results, lower the price. Eventually the Board would home in on the equilibrium price. In Lange’s words: “The Central Planning Board would fix this price so as to satisfy the objective equilibrium conditions, just as a competitive market does.” The Swiss economist Léon Walras in his theory of general equilibrium had shown, Lange noted, that a consistent set of equilibrium prices can in principle be found through a trial-and-error or *tatonnement*

³⁹ Lange, “Socialism: Part One,” p. 54. The mathematics needed is the calculus of constrained maximization.

⁴⁰ *Ibid.*, p. 55.

process.⁴¹ Factory managers would passively accept the Central Planning Board's prices in Lange's socialist economy, just as producers passively accept market prices in the perfectly competitive market economy of the Walrasian model.

Does it follow from the Walrasian analysis of equation-solving that a Central Planning Board can find the right prices? Lange and other market socialists claimed, but Mises and Hayek disputed, that equation-solving captures what markets do, and that a Board *could know* in real time the right set of equations to be solved, fully incorporating all of the economy's tastes, least-cost production functions, and resource endowments.

WHY PREFER SOCIALISM, IF IT MERELY REPLICATES COMPETITIVE MARKETS?

To this point, Lange seemed to be arguing merely that a socialist regime could replicate what a competitive market economy already does. So why did he prefer socialism? Posing this question to himself, Lange answered by citing what he saw as four advantages to the socialist system. (1) It can redistribute endowments, namely toward greater equality, "so as to attain the maximum social welfare."⁴² (2) It can modify prices to correct for external effects and (3) eliminate monopoly pricing, in both ways approaching the ideal of perfect competition more closely than a market economy. (4) Socialism is better able to foster technological progress.⁴³

In his case for redistribution, Lange assumed that an economist can measure "social welfare" by measuring each person's "utility" and then adding up all the scores. To maximize the social utility derived from income, central planners are to equate the "marginal utility of income" across people. If Jane gets more "utility" out her last dollar than Jill out of hers, take a dollar from Jill and give it to Jane, and repeat as necessary. Total social utility rises to its maximum.

Lange here disregarded the arguments of the British economist Lionel Robbins, who in his book *The Nature and Significance of Economic Science*, published just three years earlier, had denied that utility measurement or interpersonal utility comparison was meaningful. The "marginal utility" of consumer demand theory in economics is merely an individual's personal preference-ranking indicator. As such, an individual's marginal utility of

⁴¹ Lange cited a 1926 French edition of Léon Walras, *Elements of Pure Economics* (London: Routledge, 2003). *Tatonnement* means "groping."

⁴² Lange, "Socialism: Part One," p. 55.

⁴³ Lange, "Socialism: Part Two," p. 123.

income is his preference-ranking in a choice between “an extra dollar of income” or “additional leisure” for himself. It has no measurable magnitude, and comparing a personal preference-ranking indicator across individuals is meaningless. The hedonic or pleasure-net-of-pain “utility” of utilitarianism, which supposedly can be measured and aggregated across individuals, is something else again, something not grounded in economic theory.⁴⁴

To use prices to correct external effects (or “internalize externalities”), that is, to raise the price facing an actor wherever it falls short of the social cost of his action (or to lower the price wherever the marginal private benefit falls short of the marginal social benefit), was a prescription that Lange had borrowed from the British economist Arthur C. Pigou. Pigou had envisioned that external effects could be corrected in a market economy via taxes and subsidies, but did not explain how to measure the magnitude of the effects so as to compute the right sizes for taxes and subsidies. (This is a serious problem, as explained in [Chapter 13](#).) Lange likewise did not explain how the Central Planning Board would know, or could use trial-and-error to discover, the precise magnitude of external effects so as to adjust prices appropriately.

Eliminating external effects implied, for Lange, that “a socialist economy would not be subjected to the fluctuations of the business cycle.” Any spillover effects of closing a factory on aggregate output, for example, would be taken into account by the Central Planning Board.⁴⁵

Regarding monopoly, Lange argued that:

... the actual capitalist system is not one of perfect competition; it is one where oligopoly and monopolistic competition prevail... The actual capitalist system is much better described by the analysis of Mrs. Robinson and Professor Chamberlin than by that of Walras and of Marshall. But the work of the latter two will be more useful in solving the problems of a socialist system.⁴⁶

Here he referred to Joan Robinson and Edward H. Chamberlin, who had developed theories of “imperfect” or “monopolistic” competition, in contrast to Walras’s theory of perfectly competitive general equilibrium and Marshall’s theory of competitive partial equilibrium. Thus, although the socialist state will have a legal monopoly of every industry, Lange imagined that the managers of state-owned factories would receive and follow instructions to act like perfect competitors.

⁴⁴ Lionel Robbins, *The Nature and Significance of Economic Science* (London: Macmillan, 1932). We will discuss utilitarianism at length in [Chapter 7](#).

⁴⁵ Lange, “Socialism: Part Two,” p. 126.

⁴⁶ *Ibid.*, p. 127.

Capitalism in its younger days, Lange granted, had made great technological advances. But henceforth socialism would be better able to foster progress, because mature capitalism resists any innovation that makes old capital equipment obsolete. It is “the contention of the socialists,” he wrote, that “the institutions of private property of the means of production and of private enterprise . . . at a certain stage of technical development, . . . turn, from being promoters, into becoming shackles of further advance” because of their “tendency to maintain the value of old investment.” The only solution is “the abolition of private enterprise [*sic*] and of the private ownership of capital and natural resources, at least in those industries where such tendency prevails.”⁴⁷

Lange’s contention that capitalism retards technological progress echoed a similar argument by the American institutionalist economist Thorstein Veblen (discussed in [Chapter 4](#)). The contention that socialism better fosters technical progress is hard to take seriously for anyone who has observed, for example, the complete stagnation of automobile design under state ownership of the auto factories. When Argentina nationalized its Ford factories, the latest model was the 1963 Ford Falcon. An American visiting Buenos Aires in 1988, twenty-five years later, was astounded to find that the majority of cars on the streets still had the body of a 1963 Ford Falcon. A state-owned factory facing no competitive rivals has little or no incentive to go out on a limb by undertaking risky technological innovation.

MISES’S RESPONSE TO LANGE

In his treatise *Human Action* (1949), Mises responded to Lange’s proposal. Where Lange had imagined factory managers acting *as if* they were profit-seeking entrepreneurs when bidding for inputs, Mises argued that finding prices through decentralized bidding only works where profit-making bidders *really are* profit-seekers, that is, receive material rewards for bidding more wisely than others and face material losses and weeding-out otherwise. Without personal profits and losses at stake, the “bidding” would not be genuine: “One cannot *play* speculation and investment.”⁴⁸ Of course a socialist economy could not allow industrialists or speculators to keep their profits (or to have personal wealth great enough to cover losses on money borrowed), because that would be capitalism, not socialism. Completely taxing profits away would completely suppress entrepreneurial activity.⁴⁹

⁴⁷ *Ibid.*, pp. 128, 130–1.

⁴⁸ Ludwig von Mises, *Human Action*, 3rd rev. ed. (Chicago: Henry Regnery, 1966), p. 709.

⁴⁹ *Ibid.*, pp. 708–9.

Market socialists, Mises charged, were focusing on the minor managerial decisions of existing firms, overlooking the big entrepreneurial decisions that create and destroy firms. It is the latter “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.”⁵⁰ In Mises’s view, Lange had missed the importance of speculative financial markets for allocating investment among new enterprises because he did not step outside the Walrasian general equilibrium framework where the list of possible production activities is “given” and the technical production possibilities – the mappings from inputs to outputs – are also “given.”

HAYEK’S INITIAL CRITIQUE OF MARKET SOCIALISM AND LANGE’S LETTER IN REPLY

Hayek responded to Lange’s case for market socialism in two articles. The first, “Socialist Calculation: The Competitive Solution” (1940), recognized Lange’s work as an improvement over the earlier view that a socialist economy could plan production without reference to economic values or relative prices, and over the view that “the object of planning is largely to overcome the results of competition.” It offered a much more sophisticated proposal, namely to have a Central Planning Board periodically set relative prices through a quasi-market mechanism of feedback from surpluses and shortages. Hayek found Lange’s proposed price-setting mechanism slower and clunkier than a free market, where prices adjust daily. More importantly, instructing producers to treat output and input prices as “given” and “constant” would actually block efficient production by eliminating rivalry among producers, that is, the underbidding for customers and outbidding for inputs by lower-cost producers who seek to expand operations and attract more customers. Such rivalry is the main force by which “a truly competitive economy brings about the reduction of costs to the minimum discoverable.”⁵¹

Hayek’s second article in response to the idea of market socialism, “The Use of Knowledge in Society” (1945), became Hayek’s best-known article among academic economists. The market socialists like Lange assumed, Hayek noted, that the cost curves for supplying any consumer good or intermediate good are uniquely determined by the prices of the output and

⁵⁰ Ibid., pp. 707–8.

⁵¹ F. A. Hayek, “Socialist Calculation: The Competitive Solution,” *Economica* 7 (May 1940), pp. 125–49; also reprinted in Hayek, *Individualism and Economic Order* (Chicago: Gateway, 1972).

of the inputs used to produce it, together with “given” production functions (the known best recipes for transforming inputs into outputs). Hayek amplified an objection that he had briefly raised in his 1940 article, that Lange was begging the question of how least-cost production functions became known. The best recipes are not simply “given” – there is no best recipe book to be consulted – but are discovered in a market economy through the rivalry of profit-seeking entrepreneurs. Competing entrepreneurs will experiment with various manufacturing, distribution, and organizational techniques that they hope will prove more profitable. (Nor are the consumer goods to be produced given: entrepreneurs will also experiment with changes in the product in hopes that consumers will reward them with greater sales revenue.) The bottom line, profit or loss, will tell them whether their innovations have succeeded.

Lange’s account, Hayek argued, assumed that the Central Planning Board already has all the information it needs to choose the right production techniques. The Board’s only problem is the mathematical problem of solving a Walrasian system of equations for the optimum set of prices and output quantities, a set at which “the marginal rates of substitution between any two commodities or factors must be the same in all their different uses.” Hayek granted that a math problem of this kind can be solved: “*If* we possess all the relevant information, *if* we can start out from a given system of preferences, and *if* we command complete knowledge of available means, the problem which remains is purely one of logic.” But this kind of equation-solving, whether by computation or trial-and-error, “is emphatically *not* the economic problem which society faces” because “the ‘data’ from which the economic calculus starts are never for the whole society ‘given’ to a single mind which could work out the implications and can never be so given.”⁵² Bits of knowledge and hunches about lower-cost production techniques are scattered across many minds, waiting for the market process to assemble and test them. The Central Planning Board *can’t* know all that it would need to know to match the market’s use of knowledge, because central planning rules out the process of entrepreneurial discovery.

KEY INFORMATION IS DISPERSED

The market economy makes better use of the relevant knowledge we have about resources and technologies, Hayek argued, because it better mobilizes

⁵² Friedrich A. Hayek, “The Use of Knowledge in Society,” in *Individualism and Economic Order*, p. 77. Reprinted from *American Economic Review* 35 (September 1945).

distributed information from many minds. Each business owner knows “particular circumstances of time and place” that others do not know:

The economic problem of society is thus not merely a problem of how to allocate “given” resources – if “given” is taken to mean given to a single mind which deliberately solves the problem set by these “data.” It is rather a problem of how to secure the best use of resources known to any of the members of society, for ends whose relative importance only these individuals know. Or, to put it briefly, it is a problem of the utilization of knowledge which is not given to anyone in its totality.⁵³

Lange’s claim 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” assumed that *the* production functions can be found in an engineering manual available to the central administrators. But, Hayek countered, the relevant knowledge is not purely a matter of engineering. One production function does not fit all firms in an industry even if they use the same machines, because they differ in location, available raw materials, and available labor skills. To produce profitably, the producer on the spot must know how to modify production along many dimensions in response to a host of changing local factors: prices and characteristics of inputs, depreciation of his particular plant and equipment, the weather, and so on.⁵⁴ Ours is a world where “the economic problem of society is mainly one of rapid adaptation to changes in the particular circumstances of time and place.”⁵⁵ There is much more to producing efficiently than following an engineering manual and solving an optimization equation.

WHO PLANS FOR WHOM?

Socialists appealed to the idea that planning is better than no planning. Hayek replied that the debate was not over planning as such, but over the *centralization* of planning. The question actually under discussion was: *Who* is to do the planning?

Planning in the specific sense in which the term is used in contemporary controversy necessarily means central planning – direction of the whole

⁵³ Ibid., pp. 77–8. *Data* is Latin for “things given.” For interesting reflections on the importance of Hayek’s dispersed knowledge concept see Edmund S. Phelps, “Macroeconomics for a Modern Economy,” *American Economic Review* 97 (June 2007), pp. 543–561.

⁵⁴ Ibid., p. 82

⁵⁵ Ibid., p. 83.

economic system according to one unified plan. Competition, on the other hand, means decentralized planning by many separate persons.⁵⁶

The choice between them boiled down, in Hayek's view, to which system would make better use of the knowledge dispersed among producers and would-be producers:

Which of these systems is likely to be more efficient ... depends on whether we are more likely to succeed in putting at the disposal of a single central authority all the knowledge which ought to be used but which is initially dispersed among many different individuals, or in conveying to the individuals such additional knowledge as they need in order to enable them to fit their plans with those of others.⁵⁷

MARKETS COORDINATE DECENTRALIZED PLANS THROUGH PRICE SIGNALS

Market prices and profit-or-loss feedback enable decentralized production planners to coordinate their plans with the plans of their input providers and their customers. Hayek famously offered the market for tin as an example. Suppose a tin mine collapses or, alternatively, a new use for tin is discovered. There is no longer, at the previous price, enough tin to go around. If society wants to limit the use of tin to what are now its most valuable uses, how do we get current users to cut back on the least valuable uses? The competitive market approach is to let the price of tin be bid up to the new market-clearing level, and let each tin user decide which uses are no longer worth the now-higher price. Producers will to some extent reduce the output of goods requiring tin, and where substitution is possible will switch to producing with substitute metals where that has become the more profitable option. The remarkable outcome, in Hayek's words, is that:

without an order being issued, without more than perhaps a handful of people knowing the cause, tens of thousands of people whose identity could not be ascertained by months of investigation, are made to use the material or its products more sparingly; i.e., they move in the right direction.⁵⁸

The cutbacks in use continue – because the price continues rising – until the quantity demanded once again equals the quantity supplied. Without any overall plan, decentralized producers sacrifice exactly the least valuable

⁵⁶ *Ibid.*, p. 79.

⁵⁷ *Ibid.*

⁵⁸ *Ibid.*, p. 87.

uses of tin. Producers forego those uses of tin that they consider not worthwhile at the higher price, and only those uses.

Hayek emphasized the economy of information with which the adjustments come about. To know that conditions now call on them to use less tin, users only need to know that the price of tin has risen. Thus prices act as *signals*: “We must look at the price system as such a mechanism for communicating information if we want to understand its real function.”⁵⁹ Coordination by price signals, rather than by commands, leaves each individual free to pursue any occupation or enterprise provided he or she is prepared to accept the prices the market offers for services in that area. The spontaneous division of labor into specialized occupations, and thus our modern civilization, has arisen only because we “happened to stumble upon a method which made it possible,” namely coordination through a market price system. Central planning, by contrast, restricts “the extent to which the individual can choose his pursuits and consequently freely use his own knowledge and skill.” In later work Hayek would expand upon the implications of central planning for personal liberty (see [Chapter 6](#)).

THE CORRECT PRICES FOR INPUTS DO NOT FOLLOW FROM OUTPUT PRICES ALONE

Lange was not the only economists to think that the existence of a mathematical solution to the Walrasian general equilibrium model showed the feasibility of central planning. The well-known Harvard economist Joseph Schumpeter, trained like Hayek at the University of Vienna, but uninfluenced by Mises, took it for granted that Walrasian theory solved the calculation problem. Hayek commented that Schumpeter, in his popular book *Capitalism, Socialism, and Democracy* (1942),

argues that the possibility of a rational calculation in the absence of markets for the factors of production follows for the theorist “from the elementary proposition that consumers in evaluating (‘demanding’) consumers’s goods *ipso facto* also evaluate the means of production which enter into the production of these goods.”

Taken literally, this statement is simply untrue.⁶⁰

Output prices are *not* enough to determine input prices, Hayek insisted, because there are many ways to produce any output. Knowledge of local supply conditions is dispersed. Competing entrepreneurs in light of their

⁵⁹ Ibid., p. 86.

⁶⁰ Ibid., p. 90.

knowledge and hunches, not consumers, evaluate the means of production. The best techniques are not fixed but must be continually rediscovered, and competitive markets are needed for that discovery.

LANGE AS A CENTRAL PLANNER IN PRACTICE

Lange's views evolved over time. In the decade after 1936 his position moderated. Hayek sent Lange a copy of his 1940 article, and Lange wrote back to Hayek in a letter dated July 1940. He registered a surprising dissent from Hayek's characterization of his position:

I do not propose price fixing by a real central planning board, as a practical solution. It was used, in my paper, only as a methodological device to show how equilibrium prices can be determined by trial and error even in the absence of a market in the institutional sense of the word. Practically, I should, of course recommend the determination of the prices by a thorough market process wherever this is feasible, i.e. wherever the number of selling and purchasing units is sufficiently large. Only where the number of these units is so small that a situation of oligopoly, oligopsony, or bilateral monopoly would obtain, would I advocate price fixing by public agency. . . . I should also like to add that, as pointed out in the last part of my booklet, only in these fields where the automatic process of a competitive market does not function, do I advocate, practically, socialization of industries.⁶¹

Lange's analysis of an economy in which *all* industries are socialized was a "methodological device of analysis" that "quite a number of readers" had misunderstood as "actual political proposals."⁶² Lange promised to write up a piece for publication making this clarification, but never followed through.

The moderate reformist tone of Lange's letter was surprising. Although in the second part of his article Lange had indeed acknowledged that "This does not imply the necessity, or wisdom, of abolishing private enterprise and private property of the means of production in those fields where real competition still prevails, that is, in small-scale industry and farming," these fields were portrayed as exceptions to the rule. The prevalence of "monopoly and restrictionism" meant that "the most important part of modern economic life is just as far removed from free competition as it is from socialism."⁶³ A return to small-scale production and free competition

⁶¹ Oskar Lange, "Oskar Lange's Letter to Hayek (31 July 1940)," in Lange, *Economic Theory and Market Socialism: Selected Essays of Oskar Lange*, ed. Tadeusz Kowalik (Aldershot, UK: Edward Elgar, 1994), p. 298.

⁶² *Ibid.*, pp. 298–9.

⁶³ Lange, "Socialism: Part Two," p. 132.

was economically impossible, and any government antimonopoly regulation was doomed to be captured by big business, so the only way “to have successful public control of enterprise and of investment” was “taking them out of private hands.” State ownership of industry was “the only solution available,” and to make the transition to socialism required not gradualism but “wholesale attack on the capitalist system.”⁶⁴

Now his position was less radical, more reformist. In a 1942 lecture to a socialist student group at the University of Chicago, Lange emphasized, much more clearly than in his essay, but in conformity with his letter to Hayek, that the goal of socialists should be social welfare, and that this meant a more thorough application of competitive market principles. He told them: “we need not abolish the market because capitalism distorts it, but rather have to readapt our system so that the market will actually perform the functions it can and should perform.”⁶⁵ In a 1943 essay proposing reforms for Poland, according to Tadeusz Kowalik, Lange proposed nationalizing the banks and key industries, but “emphasized that the state sector should permanently co-exist with a large private sector, including medium-sized enterprises.” The economy, in Lange’s words, needed to retain the “pliability and flexibility as well as an adaptive capability that private initiative alone can give.”⁶⁶ A further indication of a change of heart toward a more reformist position came in 1945, when the publisher in book form of his 1936–7 article asked him to revise it for a new edition of the book. Lange declined on the grounds that “The essay is so far removed from what I would write on the subject today that I am afraid that any revision would produce a very poor compromise.”⁶⁷

Events then pushed Lange in another direction. In 1945 he left his professorship at the University of Chicago to join Poland’s postwar Soviet-dominated communist government as its ambassador to the United States, and soon became its representative to the United Nations. In 1947 he declared that the newly planned economies behind the Iron Curtain, including Poland’s, “undoubtedly are an economic success.”⁶⁸ He returned to Poland in 1948, where he became chairman of the Polish Economic Council. It appears from his published statements that he pushed for

⁶⁴ Ibid., pp. 133, 136.

⁶⁵ Oskar Lange, “The Economic Operation of a Socialist Society: I” [1942], in Lange, *Economic Theory and Market Socialism*, p. 306.

⁶⁶ Tadeusz Kowalik, “Introduction,” in Lange, *Economic Theory and Market Socialism*, p. xxi.

⁶⁷ Ibid., p. xxii.

⁶⁸ Lange, “The Practice of Economic Planning and the Optimum Allocation of Resources” [1947], in Lange, *Economic Theory and Market Socialism*, p. 170.

somewhat greater reliance on price incentives, but not for a full market-socialist regime. Of course, he may have feared for his life should he oppose the ruling regime too strongly.

“One of the strangest of Lange’s acts, and one of the hardest to explain,” Kowalik has commented, “was his apologetic writing about Stalin’s pamphlet, *On the Economic Problems of Socialism in the USSR*.” But after Khrushchev denounced Stalin, Kowalik noted:

Lange began to play a major role in the reform movement. He became the revisionists’ idol, proclaiming the need for democratization and economic decentralization. It is interesting that he did not, however, return to his idea of market socialism. In renouncing his earlier work, he went so far as to forbid its publication in Polish. In private conversations he justified this on the grounds that he did not want to lend his support to proponents of “socialist laissez-faire.”⁶⁹

In a 1956 essay, in contrast to his position in the letter to Hayek favoring “the determination of the prices by a thorough market process wherever this is feasible,” Lange now emphasized that it was rarely feasible: “Only in exceptional cases, in small-scale industry, either social or private, in which there is a large number of enterprises effectively competing with each other can prices be freely determined by the market mechanism,” and even there “a certain measure of control by the State authorities is necessary.”⁷⁰

In a 1957 address Lange defended the necessity of the Stalinist model of production quotas over the market-socialist model of guidance by prices during the transition to socialism: “It seems to me 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.” The need for rapid industrialization reinforces the need for “the allocation of resources by means of administrative establishment of priorities.” After transition the authorities will be able to substitute for centralized control “new methods based on the utilization of economic laws.”⁷¹ But Lange no longer spoke of socialism as a means to realize competitive market principles more effectively. Even after the transition, central planning will continue to

⁶⁹ Tadeusz Kowalik, “Oskar Lange’s Market Socialism: The Story of an Intellectual-Political Career,” in Frank Roosevelt and David Belkin, eds., *Why Market Socialism? Voices from Dissent* (Armonk, NY: M. E. Sharpe, 1994), pp. 150–1.

⁷⁰ Lange, “How I See the Polish Economic Model,” in *Economic Theory and Market Socialism*, p. 330.

⁷¹ Lange, “Role of Planning in Socialist Economy,” in *Economic Theory and Market Socialism*, pp. 342–4.

provide “an active determination of the main lines of development of the national economy,” including “the distribution of investments among the different branches of the economy.” To insure “an effective planning of a socialist economy,” both quantity commands and price incentives “have to be used,” though the proportions should shift toward more of the latter. The incentives under socialism, unlike in a capitalist economy, were not to be established by consumer demands but were to be “consciously established by organized society in such a way as to produce the desired result.”⁷²

In a posthumously published 1967 article, Lange returned to defending part of his argument of 1936–7. Observing the development of electronic computing, he proposed that the Central Planning Board could now set prices without the cumbersome trial-and-error method, by using a computer to directly solve a Walrasian model of the economy:

Were I to rewrite my essay 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 *tâtonnements* appears old-fashioned. Indeed, it may be considered as a computing device of the pre-electronic age.⁷³

The key trouble with Lange’s argument from Hayek’s perspective was not, however, the computing problem of quickly solving a given set of simultaneous equations. It was the problem of there being no given set of equations. Knowledge of least-cost production techniques in any complex economy is not “given” but must be discovered and continually rediscovered through a rivalrous market process in which entrepreneurs test their hunches about the best ways to produce.

THE VARIED INFLUENCE OF HAYEK’S ARGUMENT

Hayek’s critique of Lange led him to the view that *general equilibrium theory* à la Walras, in which all plans (represented by simultaneous equations) are prereconciled, is not enough to appreciate how markets actually work. Hayek suggested that Lange’s proposal was “born out of an excessive preoccupation with problems of the pure theory of stationary equilibrium,” with too little consideration of how the workings of actual markets “secure the more rapid and complete adjustment to the daily changing conditions” than

⁷² Ibid., pp. 344–8.

⁷³ Oskar Lange, “The Computer and the Market,” in *Economic Theory and Market Socialism*, p. 361.

would prices “decreed from above.”⁷⁴ Economists cannot just focus on the equilibrium endpoint where all adjustments has been made, but must study how people learn and adjust to new information “if the formal apparatus of equilibrium analysis is to serve for an explanation of the real world.”⁷⁵ In the later essay “Competition as a Discovery Procedure” (1968) Hayek added that we rely on the competitive market process precisely because no single observer knows enough to prescribe exactly what adjustments are needed, or exactly where the new equilibrium lies. The economist Israel M. Kirzner, influenced by Mises and Hayek, has elaborated on the theme of market competition as a discovery process in his book *Competition and Entrepreneurship* (1973) and subsequent writings.

An interviewer from *The New Yorker* magazine (31 July 2006) asked Wikipedia founder Jimbo Wales about his influences. Wales cited Hayek in his answer:

“I’m very much an Enlightenment kind of guy,” Wales told me. The promise of the Internet is free knowledge for everyone, he recalls thinking. How do we make that happen? As an undergraduate, he had read Friedrich Hayek’s 1945 free-market manifesto, “The Use of Knowledge in Society,” which argues that a person’s knowledge is by definition partial, and that truth is established only when people pool their wisdom.⁷⁶

Somewhat like a market, Wikipedia is decentralized, with nobody in charge. Over time, Wikipedia management has modified the rules governing interaction among contributors to make the system behave more like a market, namely to promote convergence rather than endless cycling among contributors with divergent views.

The economist Thomas Sowell elaborated on the themes of Hayek’s “The Use of Knowledge in Society” in his book *Knowledge and Decisions* (1980). In a more recent syndicated column, Sowell distilled his take on the policy implications of the dispersal of relevant knowledge:

If you start from a belief that the most knowledgeable person on earth does not have even one percent of the total knowledge on earth, that shoots down social engineering, economic central planning, judicial activism and innumerable other ambitious notions . . . If no one has even one percent of all the knowledge in a society, then it is crucial that the other 99 percent of knowledge – scattered in tiny and individually unimpressive amounts among the population at large – be allowed the freedom to be used in working out

⁷⁴ Hayek, “Socialist Calculation: The Competitive ‘Solution,’” pp. 131–2.

⁷⁵ Hayek, “Economics and Knowledge,” in *Individualism and Economic Order*, p. 55.

⁷⁶ Stacy Schiff, “Know It All,” *New Yorker* (24 July 2006). http://www.newyorker.com/fact/content/articles/060731fa_fact.

mutual accommodations among the people themselves. These innumerable mutual interactions are what bring the other 99 percent of knowledge into play – and generate new knowledge.⁷⁷

DID THE COLLAPSE OF THE SOVIET ECONOMY SHOW THAT MISES WAS RIGHT?

After the collapse of the USSR in 1989, the economist Robert Heilbroner, author of popular history-of-economic-thought text *The Worldly Philosophers* and a self-described socialist, wrote: “It turns out, of course, that Mises was right.” But the USSR had been a mixed economy, and an “island” in a sea of world markets, not a pure or isolated socialist system. It had openly allowed some markets, for example for produce grown in private gardens, and tolerated many black markets. Soviet planners borrowed Western prices and technologies. The calculation problems they faced did not suddenly grow more severe in 1989. What had changed were incentive and political problems.⁷⁸

The collapse of Lenin’s marketless economy in 1920, on the other hand, testifies to the cogency of Mises’s critique. Lenin’s attempt to abolish the price system resulted in massive shortages, especially in food production. The New Economic Policy of 1921, allowing small private businesses and agricultural wage labor, conceded the necessity of guidance by market prices.

CHANGING VIEWS OF THE SOCIALIST CALCULATION DEBATE

Most economists once thought that Lange and the other market socialists were right about the feasibility of economic calculation under socialism and that they had refuted Mises and Hayek. Abram Bergson’s survey article “Socialist Economics” (1948) became the conventional account of the debate. According to Bergson, Lange and earlier writers had effectively answered Mises’s theoretical argument, after which Hayek had retreated to practical objections. In theory, the planners only need to solve a system

⁷⁷ Thomas Sowell, “Presumptions of the Left,” *Townhall.com* (16 May 2007), http://townhall.com/columnists/ThomasSowell/2007/05/16/presumptions_of_the_left.

⁷⁸ See Bryan Caplan, “Is Socialism Really ‘Impossible?’” *Critical Review* 16 (2004), pp. 33–52, and Peter J. Boettke and Peter T. Leeson, “Still Impossible after All These Years: Reply to Caplan,” *Critical Review* 17 (Winter 2005), pp. 155–70. See also the other comments in the latter issue and Caplan’s reply.

of Walrasian general equilibrium equations, which we know is a soluable mathematical problem:

[O]nce 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 [Central Planning] Board ... could decide readily how to allocate resources so as to assure the optimum welfare. It would simply have to solve the equations.⁷⁹

As to the practical workability of socialism (its ability to avoid breakdown or vast starvation), Bergson concluded that “there can hardly be any room for debate: of course, socialism can work. On this, Lange certainly is convincing.” Bergson left it to the reader to judge how closely a socialist economy could approximate the prosperity of a capitalist economy.

Bergson later had second thoughts. In a 1966 postscript to his survey article, he noted that studies of Soviet socialism indicated that

the critics of this system have turned out to be nearer the mark than its proponents. At any rate, if we may judge from the experience of the USSR, there are reasons to doubt that socialism is especially efficient economically.⁸⁰

In a 1967 article entitled “Market Socialism Revisited” he expressed doubt that socialist managers, even under instructions to produce the efficient quantity at minimum cost, could ever come close to efficiency. Even if the socialist system had an accurate test of success (profit or loss), it would face the problem of creating appropriate managerial incentives to grasp profit and avoid loss. Recalling the calculation debate, Bergson remarked:

Hayek argued that such a result might not be easy to achieve. In practice, managers very likely would be reluctant to take risks. This is perhaps not inevitable, but the construction of a satisfactory incentive system now appears more difficult than I envisaged it to be previously.⁸¹

Studying the planning practices of the USSR, Bergson had found that the Soviet system did not approximate the Lange model. Planners lacked an accurate test of success because Soviet prices were uninformative, making profit and loss accounting unreliable. As the USSR actually operated,

Soviet project appraisal continues to have its limitations, and for these the labor theory [of value] is partly responsible.... Almost inevitably, then, the

⁷⁹ Abram Bergson, “Socialist Economics” [1948], reprinted in Bergson, *Essays in Normative Economics* (Cambridge, MA: Harvard University Press, 1966), p. 234.

⁸⁰ Bergson, “Socialist Calculation: A Further Word,” in Bergson, *Essays*, p. 238.

⁸¹ Abram Bergson, “Market Socialism Revisited,” *Journal of Political Economy* 75 (October 1967), p. 658.

very concept of an economic optimum that is integral to economic rationality has been understood only imperfectly. . . . [E]conomic decision making has been notably centralized. . . . [I]n seeking to carry out the onerous responsibilities which they bear, superior agencies at all levels have often found themselves without the information needed for adequate and timely appraisal of alternatives, or if such information is at their disposal, without the capacity to process and digest it sufficiently for such appraisal. . . . In sum, the ruble price system fails to perform the function which, the primers teach, a good price system should – to convey reliable information on prevailing scarcities.⁸²

The late Paul Samuelson, author (and then coauthor) of the long-running best-selling textbook *Economics* (1st edition 1948; 19th edition 2009), also had first and second thoughts about Soviet socialism. In a recent paper, historians of economic thought David M. Levy and Sandra J. Peart show that Samuelson and other American economics textbook authors of the 1960s and 1970s kept forecasting rapid Soviet growth through their books' successive editions, even while their own updated numbers clearly showed that the growth forecasts in previous editions had been too high. In the seven editions of his textbook published from 1961 to 1980, Samuelson kept including a chart indicating that Soviet output was growing faster than U.S. output, and predicting a catch-up in about twenty-five years. He repeatedly had to move the predicted catch-up date forward from the previous edition because the gap had never actually begun to close. In several editions he blamed low realized Soviet growth on bad weather. As late as the 1989 edition of his textbook, he and coauthor William Nordhaus wrote: "The Soviet economy is proof that, contrary to what many skeptics had earlier believed, a socialist command economy can function and even thrive." The "proof" was apparently based on official Soviet output numbers, which are now known to have been seriously exaggerated. After the Berlin Wall fell and the Soviet Union dissolved, the 1995 edition of the Samuelson-Nordhaus text changed its tune, and referred to Soviet central planning as "the failed model."⁸³

The fall of the Berlin Wall and the dissolution of the Soviet Union prompted second thoughts by other economists. Looking back on the

⁸² Abram Bergson, *The Economics of Soviet Planning* (New Haven, CT: Yale University Press, 1964).

⁸³ David M. Levy and Sandra J. Peart, "Soviet Growth and American Textbooks: An Endogenous Past," *Journal of Economic Behavior & Organization* 78 (April 2011), pp. 110–25; Paul A. Samuelson and William D. Nordhaus, *Economics*, 13th ed. (New York: McGraw-Hill, 1989), p. 837; 15th ed. (New York: McGraw-Hill, 1995), p. 714. The change in the Samuelson-Nordhaus text after the collapse of the Soviet system is highlighted by Mark Skousen, "The Perseverance of Paul Samuelson's *Economics*," *Journal of Economic Perspectives* 11 (Spring 1997), p. 148.

socialist calculation debate, Robert Heilbroner observed: “Lange’s answer was so simple and clear that many believed the Mises-Hayek argument had been demolished. In fact, we now know that their argument was all too prescient.” Drawing on a book by two Soviet economists,⁸⁴ Heilbroner cited the example of the Soviet production of moleskins (used to make gloves), which were in severely short supply until the administered price was dramatically raised, after which a large surplus accumulated. Moleskins were rotting in warehouses, but the central planners took their time in pondering whether to adjust the price back down somewhat. Heilbroner emphasized the problem of motivating the planning board to adjust prices in the manner Lange had imagined:

The crucial missing element is not so much “information,” as Mises and Hayek argued, as it is the motivation to act on information. After all, the inventories of moleskins did tell the planners that their production was at first too low and then too high. What was missing was the willingness – better yet, the necessity – to respond to the signals of changing inventories. A capitalist firm responds to changing prices because failure to do so will cause it to lose money. A socialist ministry ignores changing inventories because bureaucrats learn that doing something is more likely to get them in trouble than doing nothing, unless doing nothing results in absolute disaster.⁸⁵

A new consensus view – that Mises’s and Hayek’s case for the infeasibility of central planning was right and had won the debate – was evident in the statement by the economic historian J. Bradford DeLong that “within economics even liberal Keynesian social democrats acknowledge that the Austrians won victory in their intellectual debate with the central planners long ago.”⁸⁶

WITH ITS THEORY IN TATTERS, WHERE DOES SOCIALISM GO?

The collapse of the Soviet model led the Marxian economist John Roemer to make the remarkable admission that socialists today lack a model of their ideal economy:

The major problem for the left today is a lack of theory. Where do we go from here? What kind of society do we wish to fight for? If we socialist intellectuals can provide some direction that will be of inestimable value.⁸⁷

⁸⁴ Nikolai Smelev and Vladimir Popov, *The Turning Point* (New York: Doubleday, 1989).

⁸⁵ Robert Heilbroner, “Socialism,” in Henderson, *Concise Encyclopedia*, p. 468.

⁸⁶ J. Bradford DeLong, “Seeing One’s Intellectual Roots: A Review Essay on James Scott’s *Seeing like a State*,” *Review of Austrian Economics* 12 (November 1999), pp. 257–64.

⁸⁷ John Roemer, “Socialism’s Future: An Interview with John Roemer,” *Imprints* 3 (1998), p. 23; quoted by David Schmidtz, “When Justice Matters,” *Ethics* 117 (April 2007), p. 437.

Roemer's statement seemed to assume an audience committed to socialism even though they don't quite know what kind of economy or society it implies. If the complete abolition of private property and markets has led to disaster, as under Lenin, and the Soviet Union under Lenin's successors failed to deliver and finally collapsed, what form of socialism remained to be advocated? Is there any form of government control over the commanding heights that enhances rather than suppresses prosperity? We will pick up this thread in [Chapters 7 and 8](#) with discussions of Fabian socialism and fascism.