

Balancing Freedom and Order: On Adolph Lowe's Political Economics*

(12)

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Spontaneous conformity is the only mode of life through which a large-scale society can reconcile the conflict between freedom and order.

—Adolph Lowe, *The Price of Liberty*

ADOLPH LOWE's recent book *Has Freedom a Future?*,¹ is the culmination of a lifetime of thought and teaching. This book is concerned with the conditions under which freedom can be established and maintained vis-à-vis the radical transformation to which contemporary Western society is exposed. This concern with a viable order, both stable and free, in fact permeates Lowe's entire *oeuvre* and gives it that rare impression of coherence and profundity: from his first publication dealing with the relationship between unemployment and criminality;² his plea for cooperation in the social sciences;³ the analysis of "spontaneous collectivism" characteristic of liberal England in his essay *The Price of Liberty*;⁴ his elaboration of "political economics" as the science

¹ Adolph Lowe, *Has Freedom a Future?* (New York: Praeger, 1988).

² Adolph Lowe, *Arbeitslosigkeit und Kriminalität. Eine kriminologische Untersuchung* (Berlin, 1914).

³ Adolph Lowe, *Economics and Sociology* (London: Allen & Unwin, 1935).

⁴ Adolph Lowe, *The Price of Liberty* (London: Hogarth Press, 1937).

of controlled economic systems in *On Economic Knowledge*;⁵ his inquiry into *The Path of Economic Growth*;⁶ to his latest tract, not to mention numerous articles in journals and books.⁷

The purpose of the present paper is to provide an account of Lowe's work and the basic ideas contained therein. We shall concentrate on those aspects of his work which we consider the most original and important and which, in our view, make Adolph Lowe one of the foremost economic philosophers of this century. Given Lowe's wide range of topics and his truly interdisciplinary approach, our assessment will of necessity be incomplete and unbalanced. We hope, however, that the picture which emerges of this great scholar and the major strands of his thought will not be distorted.

Emancipation: Prospects and Risks

According to Lowe, the modern history of mankind can be envisaged as a process of emancipation in the course of which man tried to cast off "the triple fetters of the past forged by a harsh nature, by even harsher human masters, and by the harshest despot of all: ignorance."⁸ Comparing two states of a society, emancipation is taken to be reflected in a higher level of material provision, more equitable interrelations, and a wider range of freedom. While in Lowe's view all contemporary societies share this concern with emancipation, they differ in important ways with respect to the function assigned in this process to the freedom or liberty of individuals and groups,

⁵ Adolph Lowe, *On Economic Knowledge*, 2d ed. (New York: M. E. Sharpe, 1977).

⁶ Adolph Lowe, *The Path of Economic Growth* (Cambridge: Cambridge University Press, 1976).

⁷ For a bibliography of Lowe's works, see Harald Hagemann and Heinz D. Kurz, eds., *Beschäftigung, Verteilung und Konjunktur—Zur Politischen Ökonomik der modernen Gesellschaft, Festschrift für Adolph Lowe* (Bremen: Bremer Universitätsverlag, 1984); reprinted in Adolph Lowe, *Essays in Political Economics: Public Control in a Democratic Society*, ed. Allen Oakley (Brighton: Wheatsheaf Books, 1987).

⁸ Lowe, *Has Freedom a Future?*, p. 3.

where freedom is conceived of as the "power to self-determination" both in the private and the public sphere. It is a characteristic feature of Western societies that the free individual has been raised to the rank of an absolute value. This value judgment, to which Lowe subscribes, is deeply rooted in the Occidental tradition, in which Greek and Roman influences merged with Judeo-Christian ones. Yet, as history demonstrates, each new phase in the process of emancipation bears not only opportunities but also risks:

There we touch on the cardinal problem of this essay: Can we take it for granted that realization of the emancipatory potential of our age and, even more, the efforts required to ward off simultaneous destructive tendencies, will maintain or even strengthen the role of the free individual?⁹

Lowe is skeptical that the existing institutions and the corresponding attitudes of the different social strata are suited to realize the emancipatory potential of the present without falling victim to its adverse tendencies. Hence his plea for institutional reforms and attitudinal changes shaped by a new *communal ethic*.

Economic factors are the dominant destabilizing factors he sees at work.¹⁰ Ironically, it was the very success of liberal capitalism that has jeopardized economic stability. During the liberal era, Lowe's argument reads, the economic system was conditioned by a series of external constraints which tended to generate the uniform motivational and behavioral patterns that accounted to a large extent for the self-correcting movements of the system. The most important of these constraints were "impersonal pressures," such as mass poverty, unbridled competition, and a Puritan work ethic that created a general climate favoring wealth accumulation. These factors, together with the mobility of resources plus substantial opportunities for market expansion stimulated by rapid population growth and continu-

⁹ *Ibid.*, p. 4.

¹⁰ *Ibid.*, ch. 3.

ous technical innovation, were responsible for a well-functioning market and the self-equilibrating tendencies of the economy. Lowe emphasizes that the theoretical postulates of the old "extremum principle" (formalized in the so-called "law of supply and demand") and of stabilizing expectations, on which all classical and neoclassical theory rests, adequately represented the behavioral patterns of its time.

This situation has since changed dramatically. Rising real incomes per capita have loosened the bondage of economic scarcity; concentration and centralization of capital has mitigated the competitive struggle; growing affluence has widened the range of choices open even to the lower social strata and has given rise to the hedonist mores of a mass-consumption society. With a rising fixed capital intensity of production, entrepreneurial expectations have become more and more uncertain, depriving the time-honored directive of profit maximization of its former predictive significance. Put briefly, the transformation of liberal into "organized" capitalism brought with it the gradual erosion of the impersonal stabilizers, which, with behavioral conformity as their fulcrum, had warranted the success of the liberal era.

It is decisive that in Lowe's view these changes in motivational and behavioral patterns also require the abdication of traditional economic theorizing based on the premise of maximizing (or minimizing) behavior. Lowe sees ample empirical evidence in support of his plea for a methodological reorientation of economics. The emergence of organized capitalism with its core element, the institutions of the *welfare state*, cannot be interpreted other than in terms of the system's strategy of survival, necessary to counteract various destabilizing tendencies. Whereas in the early phases of liberal capitalism behavioral conformity was basically enforced by impersonal pressures, in organized capitalism it has to be deliberately generated through various forms of "public control."

Few would doubt that these controls have proved to be effective, at least until recently. The development of most Western

countries after World War II was characterized by unprecedented rates of real per capita growth, high levels of employment, and close-to-stable price levels. It was only from the late sixties and early seventies onward that the previously favorable evaluation of the operation of the welfare state gave way to critical appraisals and eventually to frontal attacks. For a growing number of social scientists and politicians, the welfare state was now considered to be the very cause of the problems to which it had been considered the solution. A series of policy failures and a growing concern with the negative implications of bureaucratization shook the previous confidence in the "etatist" approach to the solution of economic and social problems. What became known as the *neoconservative* counterrevolution was basically a return to an uncontrolled market economy. While for Lowe it cannot be doubted that deregulation and reprivatization were once an effective means to revitalize economic activity and reduce the concentration of economic and political power, the "experience of a past era in no way offers an assurance that social decontrol and economic laissez-faire can cope with the ills that beset us today."¹¹ Therefore, Lowe considers the route advocated by the neoconservatives dangerous, because it will amplify the destabilizing tendencies presently at work and endanger the reached level of emancipation. His latest book is concerned, among other things, with demonstrating the fallacy of this doctrine and the policy based on it.

In Lowe's view, the greatest challenge to stability today comes from the radical technological and social transformation caused by the *microelectronic revolution*. As was the case with earlier forms of technological change, the new form offers both opportunities and risks. With regard to the former Lowe stresses:

Not unlike earlier instances of technological innovations, the microelectronic revolution promises to liberate not only blue-, but now also white-collar workers from traditional drudgery, and it is to this extent an engine of liberation. Moreover, it will help in

¹¹ *Ibid.*, p. 41.

solving a problem that troubles many observers of the contemporary economic scene, the apparent fall in productivity [growth].¹²

The dialectic of the present situation could hardly be more pronounced, for what is on the one hand an opportunity of further emancipation is on the other hand a source of a major threat to socioeconomic stability, in this case persistent and growing structural unemployment. The overwhelming importance Lowe assigns to this problem can be inferred from the fact that he devotes a whole chapter of his latest book to the "Specter of Technological Unemployment."¹³

In the Weimar Republic, Lowe witnessed the destructive tendencies of mass unemployment which culminated in the seizure of power by Hitler and the Nazis. This experience left a lasting impression on Lowe and makes understandable his deep concern with high levels of employment as perhaps the most important precondition of sociopolitical stability.

The question of whether the capitalist system can provide sufficient employment opportunities for those who have nothing to sell but their labor power has occupied a prominent place in economics since the time of the classical economists. This was closely related to the need felt by many authors to assess modern society, with wage labor as its basic institution, from a moral perspective. Adam Smith in *The Wealth of Nations* poignantly expressed this view:

The property which every man has in his own labour, as it is the original foundation of all other property, so it is the most sacred and inviolable. The patrimony of a poor man lies in the strength and dexterity of his hands; and to hinder him from employing this strength and dexterity in what manner he thinks proper without injury to his neighbour, is a plain violation of this most sacred property.¹⁴

¹² *Ibid.*, p. 47.

¹³ *Ibid.*, ch. 6.

¹⁴ Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Chicago: University of Chicago Press, 1976), I: 136.

If the "system of natural liberty" was to be considered ethically superior to other socioeconomic systems, then it must not, *inter alia*, violate this property. Smith was convinced that, despite the rapid growth of labor productivity entailed by the process of the division of labor (the only form of organizational and technological change he contemplated), no problem of technological unemployment could arise. For, he argued, any increase in the division of labor presupposed additional capital accumulation, which in turn was tied to an expansion of markets. Thus the growth of labor productivity was inextricably intertwined with the growth of "effective demand," which rapidly compensated or even overcompensated any labor displacement that might occur.¹⁵

Unfortunately, modern capitalist economy, according to Lowe, is not endowed with a self-regulating mechanism that guarantees harmonious economic dynamics along a full-employment path. In order to prevent or at least mitigate the effects of large, uncompensated unemployment on the stability of the system, effects which tend to weaken the role of the free individual and to endanger the democratic institutions of Western societies, public controls are necessary. Put briefly, while in Smith high levels of employment are taken to be an effect of the "system of natural liberty," in Lowe they are considered an indispensable condition of it.

Few people would doubt that the new microelectronic-based technologies embody an enormous labor-displacing potential. Yet many appear to be optimistic that such an autonomous compensatory mechanism is at work in a capitalist market economy. Scrutiny shows that this optimism is rooted in little else than in a "fetishistic faith in Adam Smith's invisible hand."¹⁶ Lowe does

¹⁵ For a critical assessment of Smith's vision of the long-term development of the capitalist economy, see Adolph Lowe, "The Classical Theory of Economic Growth," *Social Research* 21 (1954): 127-158; reprinted in Lowe, *Essays*; and Adolph Lowe, "Adam Smith's System of Equilibrium Growth," in A. S. Skinner and T. Wilson, eds., *Essays on Adam Smith* (Oxford: Clarendon Press, 1975), pp. 415-425.

¹⁶ This expression is borrowed from Michio Morishima, *Ricardo's Economics* (Cambridge: Cambridge University Press, 1989), p. 189.

not share this faith. What is more, he expresses doubts that in the given sociopsychological and political climate in the Western world the required stabilizing measures will be taken. Generally speaking, he is skeptical that the Western societies in their present condition are able to master the fundamental problems they are confronted with, ranging from structural unemployment via the intra- and international maldistribution of income and wealth to ecological crises. Thus there is the danger that the failures of the market system will be aggravated by failures of the political system.

Lowe's doubts derive from his mistrust in the willingness of the microunits of society to change their attitudes and behavior. In his view a characteristic feature of our time is the spreading of extreme individualism, of "hedonism, if not nihilism."¹⁷ He expounds:

The desire for instant gratification, incompatible as it is with genuine emancipation, is rooted in the awareness of seemingly unredeemable social injustice within and without, and in the loss of metapersonal beliefs under the constant threat of political catastrophe if not physical annihilation. Moreover, the tendency to overrate the rewards of the moment and to blind oneself to the requirements of a viable future, to pursue short-term personal and factional interests at the expense of urgent public needs—in a word, *the absence of communal responsibility*—is not confined to the so-called counterculture. It is encroaching upon the mainstays of society: business and labor, the tillers of the soil and the professions, and not a small number of those who are in charge of the public interest.¹⁸

He adds:

What it all amounts to is the steady erosion of the foundation of genuine freedom,—a macro order supported by the vigilant consensus of an aware citizenry.¹⁹

This erosion, Lowe fears, might eventually lead to a modern

¹⁷ Lowe, *Has Freedom a Future?*, p. 53..

¹⁸ *Ibid.*, p. 53; emphasis added.

¹⁹ *Ibid.*, p. 54.

form of *autocracy*. Lowe does not think likely a return to traditional totalitarianism. The real danger is described in Aldous Huxley's *Brave New World*: an autocratic system which establishes a new and stable social hierarchy based on the rule of "universal pleasure." Lowe explains:

A general mood of shallow happiness is created by the gratification of man's elementary needs, by unlimited sexual freedom and permanent security of status. There, of course, we have the other side of the coin—such status is to be assigned to every human being even before his or her life begins. With the help of genetic control, psychoactive drugs, and all the tricks of subliminal psychology, not only are the overt actions of the "planned" humans determined, but also all aspects of their consciousness: desires, judgment, and choices. The result of an inequalitarian enslavement that establishes a new and stable hierarchy, in which every social function is performed by a preconditioned executant. . . .

One may say that there is no empirical order that even comes near to this weird fantasy. And yet must we not admit that, during the half-century since the publication of Huxley's book, technological and cultural changes have occurred that point in that direction?

Recombinant DNA technology, in vitro fertilization, experiments with cloning, and the subliminal influence that the media and Madison Avenue exert not only on our market behavior but also on our choices in the voting booth, not to forget the revolution in sexual mores—where are the limits to mass production of bodies and minds?²⁰

This ominous threat can only be avoided by revitalizing the Western tradition of individualism properly understood, that is, individualism rooted in social responsibility. What is at stake here is the problem of balancing the private and the public domain, where the latter is conceived as the guardian of the viability of the former. For this purpose Lowe outlines a minimum program of reform focusing on the case of the United States, which to describe here in detail would far exceed the scope of this paper. Its essence consists in a

²⁰ *Ibid.*, pp. 146–147.

"broadening and strengthening of the welfare state."²¹ But he has become quite skeptical that the actual behavior of the micro units can be reversed.

*Economics Means and Social Ends: Toward a Science
of Political Economics*

The Inversion of the Problem. Unlike most contemporary economists, Lowe considers economics to be inseparable from social inquiry in general, a view that permeates all his major books, especially *On Economic Knowledge*. But Lowe's economics is different in a decisive way from that of others. He has in fact chosen to reformulate the object of economic theory, because in his view the validity of its conventional organizing principle, maximizing behavior,²² is limited to a passing phase in capitalist evolution. Erroneously taking this principle as a universal and invariant "economic force of gravity," conventional economics has adopted Newton's methodological position, that is, the hypothetico-deductive method:

In analogy with the movement of the planets, the spontaneous actions of the autonomous bargaining partners in the market were supposed to create a macro order, an order that any attempt at planned interference could only distort.²³

This natural-science view is based on the two axioms: the autonomy of existence of the object of inquiry independent of man's volition, and its inherent orderliness. The two axioms allow economics to be positivistic, that is, to predict reliably what will be the effect of a given cause.

Lowe's contribution is to point out the tacit historical basis

²¹ *Ibid.*, pp. 84-94, 142-144.

²² For a more recent statement, see Paul A. Samuelson, "Maximum Principles in Analytical Economics," *American Economic Review* 62 (1972): 249-262.

²³ Adolph Lowe, "What Is Evolutionary Economics?," *Journal of Economic Issues* 14 (1980): 250; reprinted in Lowe, *Essays*.

for the conventional approach. Certainly, under circumstances of extreme material scarcity there is little choice but to behave in accordance with the extremum principle. Thus the hypothetico-deductive approach worked quite well in the "classical" stage of capitalism, when the pressure of poverty on workers and of competition among capitalists ensured stable maximizing behavioral patterns. But the social forces that once combined to exert a maximizing pressure on behavior have greatly weakened in organized capitalism. According to Lowe, it is a characteristic feature of advanced capitalist economies that profit maximization has lost its classical determinacy, because the periods of production and investment as well as the financial sums invested have vastly increased and vary widely between firms and sectors.²⁴ Analogously, with growing unionization and the increasing room to maneuver provided by affluence, the results of wage bargaining and consumers' demand decisions have become unpredictable. These disorderly tendencies of uncontrolled industrial markets have deprived conventional deductive reasoning of its predictive powers. Even the Keynesian public controls, introduced after the Great Depression, have not restored sufficient orderliness and stability in the behavior of the economic system and of the micro units necessary for a reliable predictive theory.

Lowe regards this lack of an empirically valid theory as the major methodological problem for economics. As a solution he proposes the idea of a political economics whose central theoretical tool is *instrumental analysis*.²⁵ He argues

²⁴ For a more detailed historical and theoretical analysis, see Lowe, *On Economic Knowledge*, chs. 2-3 and "Postscript," pp. 327-331; Adolph Lowe, "Toward a Science of Political Economics," in R. Heilbroner, ed., *Economic Means and Social Ends: Essays in Political Economics* (Englewood Cliffs, N.J.: Prentice-Hall, 1969), pp. 11-14; and Adolph Lowe, "Economic Means and Social Ends: A Rejoinder," *ibid.*, pp. 170-174. The last two essays are reprinted in Lowe, *Essays*.

²⁵ For a critical evaluation of Lowe's political economics, see especially the contributions in Heilbroner, *Economic Means and Social Ends*. See also Robert L. Heilbroner, "Is Economic Theory Possible?," *Social Research* 33 (1966): 272-294, and "On the Possibility of a Political Economics," *Journal of Economic Issues* 4 (1970): 1-22; Arthur Schweitzer, "Goals in Social Economics," *Journal of Economic Issues* 3 (1969):

that, in the absence of the earlier behavioral constraints, a return to anything resembling laissez-faire must bring about the total breakdown of the system. To advocate such a return makes good sense as a subversive plot of revolutionary Marxists, but not as a panacea in the mouth of old-style liberals and neoconservatives.²⁶

A remedy for the inadequacies of orthodox economics can be found in the formulation of what Lowe calls "political economics"—the science of *controlled* economic systems. The conventional procedure of the hypothetico-deductive method predicts an unknown terminal state from the knowledge of an initial state and a behavioral law which is supposed to describe the universal and invariant motions of the microunits involved. Contrariwise, the procedure of Lowe's instrumental analysis treats as "given" (i.e., known) not only the initial state of the economic system but also its terminal state. The latter, of course, is given or known only as a *stipulated goal*, either by fixing numerical values of target variables in Tinbergen's sense or by stipulating qualitative goals like full utilization of resources or a steady rate of growth. What is unknown, and thus the object of economic analysis, are the motions of the structural elements (paths, patterns of microbehavior and motivations, public controls) which will transform the initial state into the stipulated terminal state. In Lowe's words:

[I]nstrumental analysis is, then, a generalization of Keynes' concern with the requirements of the attainment of full employment; it . . . is . . . a procedure by which suitable means are derived from given ends. Under this aspect, instrumental analysis can be called the *logic of economic goal-seeking*.²⁷

147-165; W. Lissner, "Adolph Lowe's Methodological Alternative for Economic Research and Policy: 'Political Economics' as an Experimental Method for Achieving Growth, Stability and Continuity," *American Journal of Economics and Sociology* 40 (1981): 277-286; Richard X. Chase, "Adolph Lowe's Paradigm Shift for a Scientific Economics: An Interpretive Perspective," *American Journal of Economics and Sociology* 42 (1983): 167-178; and Allen Oakley, "Introduction: Adolph Lowe's Contribution to the Development of a Political Economics," in Lowe, *Essays*, pp. 1-24.

²⁶ Lowe, *What is Evolutionary Economics?*, pp. 251-252.

²⁷ Lowe, "Toward a Science of Political Economics," pp. 16-17.

Two points have to be emphasized here. First, Lowe considers Jevons's and his followers' idea of economic theory as a kind of "mechanics of utility and self-interest" as circular and thus as meaningless. Second, Lowe emphasizes that it is not the task of economists to choose society's macroeconomic goals. Despite their expert knowledge on the feasibility and compatibility of goals, economists must face the fact that macroeconomic goals are not autonomously generated by the market system of exchange but are set by the political process. Economics is thus compelled to be political economics. Its role is that of *regressive* inference, deriving from these politically determined ends, the "goal-adequate" behavioral and motivational patterns, and, above all, the public controls needed to achieve those patterns. This *inversion of the problem* is what essentially distinguishes Lowe's instrumental from conventional positivistic analysis.

Quasi-Laws. Lowe's procedure consists of two stages—the first theoretical, the second practical. This means that the instrumental findings discovered at the first stage must then be applied to the actual transformation of the system in the second stage. "Thus analysis and political practice appear as inseparably connected steps in the acquisition of economic knowledge."²⁸ The main task of the practical stage is to fashion a *quasi-law of motion*—"quasi," because it is not an autonomous property of the system like the alleged "economic law of gravitation," but the product of the behavior-shaping, extrasystemic factor "control." Control is the practical step of intervention. It is the use of public measures ranging from fiscal and monetary policy instruments to compensatory public investment and wage, price, profit, and investment controls to transform actual motivational and behavioral patterns into required, goal-adequate behavior. Lowe admits that important work in the field of applied economics still has to be done

²⁸ *Ibid.*, p. 27.

before political economics can serve as a reliable basis for economic policy. Only if it results in achieving goal-adequate behavior do we have a valid theory, in which the quasi-laws of motion serve as a major premise for predictions. As he writes:

Political Economics aims to achieve for economic science as well as for economic practice what classical and neo-classical economics had expected to result from automatic feedback relations within the core process and between the core process and its environment.²⁹

Lowe's process of regressive inference—discovering the unknown economic means through which an initial economic state can be transformed into a desired goal state—falls into the category of *heuristics*, or what Charles Peirce called the “retroductive method.”³⁰ This method does not offer strict rules that guide the scientist from one step of analysis to the next, as in the deductive procedure. Rather, we encounter an interesting correspondence of regressive inference with induction. Whether the positivistic researcher adheres to “induction by enumeration” or, with Einstein, sees in the choice between different hypotheses a “free creation of the mind,” induction as the indispensable preliminary of deductive reasoning is neither a logical procedure nor a blind act.

In the same manner the heuristic researcher “senses” some structural relationship between his findings and his problem, but accepts these findings only as provisional and in need of empirical confirmation. This may be illustrated by Polya's picture of a primitive man who wishes to cross a creek where the water has risen overnight. The crossing of the river becomes the object of a problem or the stipulated goal.

²⁹ Lowe, *On Economic Knowledge*, p. 251.

³⁰ See Norwood R. Hanson, *Patterns of Discovery: An Inquiry into the Conceptual Foundations of Science* (London: Cambridge University Press, 1958), esp. ch. 4; Michael Polanyi, *Personal Knowledge* (Chicago: University of Chicago Press, 1958), esp. chs. 5–6; Francis E. Reilly, *Charles Peirce's Theory of Scientific Method* (New York: Fordham University Press, 1970), esp. chs. 3–5, and the “Postscript” in Lowe, *On Economic Knowledge*, esp. pp. 332–336.

Analysis comes first in anticipatory thoughts, for example, to cut a tree and make it fall across the creek. Synthesis, which consists in carrying through the plan, comes afterward. "Walking across the creek is the first desire from which the analysis starts and it is the last act with which the synthesis ends."³¹ Here we find Lowe's inversion of the problem, in which the major unknown is the means by which the primitive man could cross over the creek.

Some Critical Views. Two principal objections have repeatedly been raised against Lowe's political economics. His plea for interventionism in order to combine political and economic freedom with the goal of collective rationality has frequently been scolded by free-market economists. For example, Boulding argued that "this kind of writing . . . gives aid and comfort to men who [in contrast to Lowe] are neither wise nor gentle,"³² and Machlup complained that Lowe's conception of social engineering makes sense only in connection with the activities of a "super-dictatorship."³³ These fears are unwarranted. Lowe stresses again and again that controls are a means to an end and not an end in itself. They are exclusively designed to serve the purpose to provide economic and social stability, which according to Lowe is a *conditio sine qua non* of the freedom of individual agents. Hence the controls he has in mind "cover a wide range of stabilizing policies that lack any authoritarian flavor."³⁴

The second and more serious objection concerns the question whether instrumental analysis can really dispense with the laws or empirical generalizations of positivistic

³¹ See G. Polya, *How to Solve It: A New Aspect of Mathematical Method* (Princeton: Princeton University Press, 1973), pp. 145-146.

³² Kenneth E. Boulding, "Is Economics Obsolescent?" *Scientific American* 212 (May 1965): 142. Boulding later withdrew this kind of criticism in private correspondence with Lowe.

³³ See Fritz Machlup, "Positive and Normative Economics: An Analysis of the Ideas," in Heilbroner, *Economic Means and Social Ends*, p. 128.

³⁴ Lowe, *Has Freedom a Future?*, p. 7; emphasis added.

economics (and also with normative economics when judgments or choices among alternative adjustment paths have to be made). Since no economic-policy measures can be decided upon unless they are clearly based on a reliable anticipation of the consequences of any of these public controls, does not the dependency on unreliable "laws" of behavior which was thrown out of the front door come in by the back again?³⁵

Lowe admits that here we touch at the weak spot of *every attempt at theorizing about social processes*. It is a fundamental fact that its particles—in contrast with molecules, cells, and even plants—do not respond to stimuli blindly, but deliberately. Thus the effect of public controls depends on *subjective factors*, such as the *understanding* and *approval* of their purpose by those who are to be controlled.³⁶ But it must be understood that this theoretical weakness resides in the *Erkenntnisobjekt* to which the method of heuristics is applied—man in society. Therefore the quasi-laws of motion cannot be as strict as the laws that rule nature, and predictions based on the former have in principle a lower probability than predictions based on the latter.

One might conclude that the predictive capacity of Lowe's instrumental analysis is not superior to that of positivistic economics. However, there remains an important methodological difference. Whereas the laws of positivism are *intrasystemic*, the empirical generalizations of instrumentalism are *extrasystemic*, that is, ad hoc principles. Consequently, instrumental analysis is an ongoing task for the economist or social theorist in general. In this connection the role of *social learning*

³⁵ See Heilbroner, "On the Possibility," p. 19, for a clear discussion of this problem.

³⁶ Without such an understanding and approval, the controls will lose much of their efficacy. In an extreme case the lack of consensus of those controlled with the controllers eventually leads to a revolutionary situation which sweeps away the old elites and enforces substantial changes in the economic and political system. This has recently happened in Eastern Europe. The events we witnessed falsified the Stalinist view that the tighter the controls the more effective they are. As Lowe variously pointed out, in the long run no institution is stronger than the subjective forces that support it.

cannot be overestimated.³⁷ Because of the learning processes the micro units of today, including the policymakers, are different from the micro units in, let us say, the "unenlightened" thirties. An important consequence of such social learning is that less restrictive measures of economic policy, such as fiscal or monetary controls, which manipulate microbehavior without enforcing it, might be sufficient for approaching the macroeconomic goal of stabilization, whereas in the past stricter, more coercive controls (like investment control) would have been required. Compare the measures needed to offset the crash of October 1987 with those required by the 1929 crash!

*The Economy in Traverse: Growth, Technology, and
Structural Change*

One of the most challenging problems for instrumentalism concerns the problem of structural change. Here, for example, we find the analysis of an economy originally in a dynamic equilibrium but disturbed by a change in one of the exogenous determinants of growth, such as technical knowledge or the supply of labor or natural resources. The investigation of the conditions that have to be fulfilled in order to bring the economy back to an equilibrium growth path is at the center of Lowe's second *opus magnum*, his *Path*, in which he applies instrumental analysis to the problems of growth and structural change.

Lowe shows that the existence of an inherited stock of fixed capital goods constitutes the main structural barrier to short-term adjustment when changes in the growth rate occur. The dynamic *traverse* from one steady-growth path to another necessarily involves a change in the whole quantity structure of the economy, especially the rebuilding of the capital stock. The

³⁷ See Lowe, *Has Freedom a Future?*, pp. 116–118.

necessary adjustment path requires both time and costs, and faces difficulties which arise from disproportions between sectors and misleading market signals causing expectational problems. The analysis of traverse processes thus illuminates the key role of the real capital stock which acts as the crucial variable through which all other determinants influence the long-run development of an industrial economy. Consequently, in the analysis of the structural conditions required to achieve the macrogoal of balanced growth, the process of formation, application, and liquidation of real capital is in the center.³⁸

Lowe's main message is that capital formation is a prime condition for a successful compensation of technological unemployment. The derivation of possible adjustment paths is a necessary first step in an attempt to formulate an economic policy designed to achieve the macrogoal of balanced growth. Structural analysis has to be supplemented by what Lowe calls *force analysis*, which studies the behavioral and motivational patterns which will put the economy on a goal-adequate traverse. It is force analysis which has a special significance in market systems and which raises economics above the level of a mere engineering science. Lowe's force analysis reveals the

³⁸ We cannot enter into an historical or technical analysis of Lowe's important contributions to growth theory. See, inter alia, "A Structural Model of Production," *Social Research* 19 (1952): 135-176, and "Structural Analysis of Real Capital Formation," in M. Abramovitz, ed., *Capital Formation and Economic Growth* (Princeton: Princeton University Press, 1955), pp. 581-634, reprinted in Lowe, *Essays*; "Der gegenwärtige Stand der Konjunkturforschung in Deutschland," in M. J. Bonn and M. Palyi, eds., *Die Wirtschaftswissenschaft nach dem Kriege. Festgabe für Lujo Brentano zum 80. Geburtstag* (München and Leipzig: Duncker & Humblot, 1925), 2: 329-377, and "Wie ist Konjunkturtheorie überhaupt möglich?," *Weltwirtschaftliches Archiv* 24 (1926): 165-197. For a recent statement of his methodological position in explaining the business cycle and a retrospective view on the Weimar debate, "Konjunkturtheorie in Deutschland in den Zwanziger Jahren," in Bertram Schefold, ed., *Studien zur Entwicklung der ökonomischen Theorie* (Berlin: Duncker & Humblot, 1989), 8: 75-86. Finally, for a more detailed analysis of Lowe's structural model of production and the development of Lowe's thinking on real capital formation over the last six decades, see Harald Hagemann, "The Structural Theory of Economic Growth," in Mauro Baranzini and Robert Scazzieri, eds., *The Economic Theory of Structure and Change* (Cambridge: Cambridge University Press, 1990).

crucial role of expectations and the significance of a functioning price mechanism. It also demonstrates decisive differences between the stimulus of an increase in the growth rate of labor supply and that of labor-saving innovations.

In the case of cost-reducing innovations, the pioneer has reason to expect that investment in the new technology will yield him extra profits and thus an advantage in the competitive struggle. Investment will therefore be undertaken largely independently of what other firms do. Moreover, other firms are forced to follow suit and introduce the new technology in order not to be driven out of the market. In contradistinction, in the case of an increase in the rate of growth of labor supply, a single investor who speeds up accumulation runs the risk of making subnormal profits or even losses, since a part of the income generated by the installment of additional capacities will be used for buying commodities supplied by other producers.

Lowe concludes that the expectations which are *required* to assure an increase of capital formation differ from the expectations which are *likely* to be formed in the prevailing situation. Hence public controls are once again needed to transform actual behavior into goal-adequate behavior. As we saw, Lowe argues that the success of compensating public policy depends upon the understanding and approval by those controlled of the macrogoals pursued and the policy measures applied. Therefore, the generation of optimistic expectations must be a principal aim.

Summarizing Lowe's views, the impression emerges that the case of labor-displacing innovations generally involves a somewhat less serious challenge to the stability of the system than the case of an autonomous increase in labor supply. In seeming contradiction to this, Lowe's attention has been focused upon technological change as the mainspring of destabilizing tendencies in industrial economies.³⁹ One of the

³⁹ Besides his *Path of Economic Growth* and ch. 6 of *Has Freedom A Future?*, see Adolph

reasons for this is that innovations are an ever-present feature of capitalist economies and are endogenously generated by the competitive process, whereas significant changes in labor supply are restricted to particular historical periods and are of a more exogenous nature. As we have seen, Lowe is particularly concerned with the present dominant form of technological change, the so-called microelectronic revolution, because labor displacement is no longer confined to the production of goods but also affects services. Hence his plea for a reduction in the average working time and especially for a "planned domestic colonization" as an effective policy of compensation. The strengthening of the public infrastructure (e.g., the rebuilding of the inner cities in the United States), environmental protection, and a shift of employment to labor-intensive social activities like health and education could offer compensatory employment possibilities.

Conclusion

Lowe has always been very explicit in emphasizing that the main function of public control is to expand and secure economic, political, and social freedom rather than to restrict it. He never left any doubt that microautonomy is a goal in itself. He goes so far as to favor an *incremental* procedure which might exclude radical goals of income redistribution. This cautious attitude might induce criticism from the left, but it makes clear that reproaches of "favoring" dictatorial systems are far off the mark.

Lowe, "The Social Productivity of Technical Improvements," *Manchester School* 8 (1937): 109-124, and his paper "Technological Unemployment Reconsidered," in G. Eisermann, ed., *Wirtschaft und Kultursystem. Festschrift für Alexander Rüstow* (Stuttgart und Zürich: Eugen Rentsch Verlag, 1955), pp. 229-254. Lowe's position appears to be similar to Ricardo's in the famous chapter "On Machinery" in the third edition of the *Principles*. On this see Heinz D. Kurz, "Ricardo and Lowe on Machinery," *Eastern Economic Journal* 10 (1984): 211-229.

Obviously, no democracy can function unless the behavior of its participants is somehow constrained. The emphasis already put in his *Price of Liberty* on the role of spontaneous conformity, that is, self-restraint on the part of the microunits, is taken up again and deepened in his recent work. Behavioral controls thus should balance individual freedom and macro-economic order. Flexibility of behavior and motivation play crucial roles in instrumental analysis. This is perfectly consistent with the demonstration "that the persistence of the micro-units and their enduring freedom crucially depend on the quasi stability of the macro order to which they belong. Thus we arrive at the conclusion that *the true private interest is identical with the public interest.*"⁴⁰

What a political economics proposes is to substitute for the irrational constraints of an anonymous environment the rational constraints of an effective welfare state—constraints that are themselves subject to the checks and balances of the democratic process.⁴¹

Therefore in a democratic society the maximum degree of decentralization and individual self-determination compatible with overall stability should be regarded as an essential aspect of welfare. So it might be said that Lowe, and not the free-market partisan, is the "true liberal."

⁴⁰ Lowe, *Has Freedom a Future?*, p. 114.

⁴¹ Lowe, "What Is Evolutionary Economics?," p. 253.

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