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# Adolph Lowe's Paradigm Shift for a Scientific Economics: *An Interpretive Perspective*

By RICHARD X. CHASE\*

**ABSTRACT.** The economist *Adolph Lowe* has developed a methodological alternative, designated *Political Economics*, for the development of *economic theory* and the application of *economic policy*. In totality his system—with a methodology he calls instrumental—makes up a unity that can be seen as a logically derived paradigm shift for economics as a scientific discipline. Under it, by a *democratic political process*, some desired end-state is first consciously and systematically determined. Then economic means are instrumentally employed to bring about the economic and social *behavior* necessary to attain and maintain that end-state. Available knowledge and tools are useful for this model; however, there is no question that the approach raises significant technical, political and philosophical issues. But these are overshadowed by Lowe's paradigmatic vision, and its corollary modular framework of Political Economics.

## I

### Introduction

IN SEVERAL SIGNIFICANT CONTRIBUTIONS to the literature, the economist Adolph Lowe has put forth his methodological alternative for the development of economic theory and the application of economic policy.<sup>1</sup>

The core ideas of Lowe's methodology involve the concepts of instrumental analysis and instrumental inference. In essence, this instrumentalism concerns both the determination and policy application of goal-adequate means suitable for the guidance of a socioeconomic system along a path leading to some predetermined and socially acceptable/desirable end-state. Simply put, in Lowe's schema for economic science, the political process first consciously and systematically determines some sought after end-state and then instrumentally employs economic means to bring about the behavioral responses necessary for the attainment and maintenance of that end-state. For reasons which are obvious from the above, this approach places economics narrowly conceived within a broader disciplinary framework which is called by Lowe Political Economics.<sup>2</sup>

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For our purposes, what is of major significance about the instrumental methodology suggested by Lowe is that it forms the operational mechanism for Lowe's revolutionary reconstruction of economic science, Political Economics. And what is of revolutionary significance about Political Economics is that it is the *logical* outcome of Lowe's rejection of two fundamental postulates concerning the structure and function of the modern affluent industrial-service economy, the latter being the universe of concern for economic science.

A few words on these two postulates and how they relate to the traditional view of economics is now in order as it will enable us to appreciate more fully the revolutionary turn in Lowe's paradigmatic reconstruction for scientific economic theorizing and policy application.

## II

### The Natural Science Postulates

CONVENTIONAL ECONOMICS, whether Keynesian, monetarist or so-called "supply-side," is implicitly premised on the natural science view that the universe for economics' scientific concern—*i.e.*, the sphere of economizing activity directed at the objective of material "provisioning"<sup>3</sup>—has the two essential characteristics of (1) autonomy of existence and (2) inherent orderliness.<sup>4</sup>

Concerning the idea of autonomy of existence, this condition—a necessary prerequisite to focus scientific investigation—relates to the idea that a science's universe of concern is either objective or objectifiable in that it can be taken as existing as a separate and independent entity within the totality of the Universe at large. This does not mean, of course, that outside (or exogenous) factors cannot enter into and affect any science's universe as defined, or even that this universe need actually exist in fact. Even the "hardest" of sciences are subject to *ceteris paribus* conditions and to the invention of "useful fictions." In physics, for example, the law of falling bodies holds that a feather will fall as fast as a brick in a perfect vacuum. But the latter, *i.e.* the absence of any "exogenous" air friction whatsoever, cannot in fact ever exist in the real physical world. What the autonomy postulate does hold, however, is that the object for scientific inquiry can be parametrically defined so that it is at least logically capable of independent function within the given parametric constraints and, further, that so-called exogenous factors will have known or knowable effects on the system as defined.

Inherent orderliness is the second crucial condition of which Lowe takes note as being necessary for the existence of the natural science point-of-view.

Such inherent orderliness, existent within the confines of the defined universe of concern, is obviously necessary to the activity of discovery of constancy of relationship or "laws." And such discovery is fundamental to the single most important objective of modern (natural) scientific endeavor: in a word, reliable (*i.e.* probabilistic) prediction.

Thus, the existence of autonomy and order in a science's universe of concern allows for scientific practice to be positivistic (as opposed to being normative), *i.e.* to be concerned in the first instance with an objective "what is out there" (as opposed to a subjective "what ought to be"). Such positivism allows, in the second instance, for a discovered "what is" to be employed so as to predict reliably "what will be" and to do so within a framework of cause leading to effect. This line of cause  $\rightarrow$  effect allows for what Lowe calls the means  $\rightarrow$  end approach of modern science. In short, positivism and prediction—the hallmarks of the natural science paradigm—are achievable objectives only because the universe of investigative concern is both autonomous and orderly.<sup>5</sup>

### III

#### Is Economics a Science? (The Autonomy Question)

LOWE'S RESPONSE to the question, "Is economics a science?" would be that economics is not and cannot be scientific on the same basis as are the natural sciences, the model after which economics has been patterned since its Smithian-Classical beginnings. Why not? As is almost obvious in the discussion of the preceding section, this is so, simply because the universe of concern for economics—its investigatory object—is neither autonomous nor inherently orderly.

Concerning the problem of lack of autonomy of that which is strictly economic, this comes about essentially because economic agents *per se*—*i.e.*, the fundamental molecular stuff of economizing behavior—are crucial to this autonomy postulate, and such agents simply do not exist as independent entities. It is not that some observable "economic man" is merely a fiction; fictions as we have already noted are not unpermissible in science. It is rather that strict economic agents cannot be parametrically defined as functionally operational entities.

Men and women—the economic actors of the real world who are the basic elements of the universe of concern—are inseparable amalgams of social, cultural and psychological as well as of economic forces which are all of one ball of wax. Simply put, one cannot legitimately abstract strict economic behavior from what must be taken as a totality and which is seen manifest in society in the form of political behavior. The technique of pure mind

experiments suggested by some economic methodologists<sup>6</sup> that assume pure economic motivation can only exist as illusions in the mind; they can never be approximated in the real world of human action and behavior.

## IV

**The Lack of Inherent Orderliness  
in Economizing Behavior**

BECAUSE ECONOMIC ACTORS are affected by a complex amalgam of social, cultural, and psychological factors, as well as by material (*i.e.* economic) forces, it follows that these actors will tend to behave in ways that are unpredictable from a strict economic point-of-view when given the opportunity to do so. This "opportunity" arises in conjunction with a widening of affluence above the margin of subsistence that loosens material constraints so that the satisfaction of the basic needs essential to life and survival are not of overriding existential importance. Such a situation would permit economic actors a widening range of possible choices concerning their use of material resources and the matrix of life goals that they seek to attain.<sup>7</sup>

Thus the argument is that the options for economic actors to behave in economically unpredictable ways is dependent on the increasing room to maneuver provided by affluence and, conversely, that these options tend to diminish the closer these actors live to the margin of material subsistence. On this margin, physical survival would dictate that agents make the most of—*i.e.*, maximize—their existentially scarce economic means. Thus under extreme circumstances of material scarcity, there would be little choice but to behave not only as "economic man" but also in conformance with the law-like and predictable patterns of *rational* economic man—*i.e.*, to act in matters concerning material provisioning in accordance with the principles of benefit maximization and cost minimization.

Lowe refers to such economizing behavior—wherein the illusion of rational economic man does apparently act as a reliable predictor of actual human behavior—as the "*extremum* principle." And it was the widespread existence of material *extremum* circumstances and the operation of the corollary *extremum* principle that once gave economics a fair measure of predictive ability. However, as alluded to above, once such dire scarcity conditions are loosened, so also is loosened the overriding importance of the *extremum* principle and thereby the apparent operationalism of the assumption of law-like and predictable economic behavior. With widening economic affluence, rational economic man becomes shown as the unidimensional and non-substantial caricature of which we have already taken note.

Thus, the essence of Lowe's argument concerning the lack of inherent orderliness in economic behavior is that as *extremum* conditions become loosened by rising material affluence—a situation most marked in the western industrial-service socioeconomic systems—the non-economic factors influencing human behavior are given increasing room for multi-faceted expression. As a result, the ordering effects of a necessary economic rationality become of less and less importance and the apparent predictability of behavior patterns existent under *extremum* circumstances dissolves in the face of a widening range of possible options. Or put another way, widening material affluence diminishes the law-giving power of the *extremum* principle, thereby making cause and effect linkages in economic behavior indeterminate and unpredictable.

## V

## Lowe's Response: A Root-Level Paradigm Switch

THUS ECONOMICS' UNIVERSE of concern does not meet the two essential conditions for scientific endeavor along the lines of the natural science model—*i.e.*, its basic research object is neither autonomous nor inherently orderly. As a result, Lowe saw that any and all attempts to pattern economics and its methodology along natural scientific lines would turn the discipline into a pseudo-science and thereby necessarily doom it to the kind of frustrations and failures so painfully obvious today in both theory and policy. No amount of research, no improvement in technique or data, no change of emphasis within the current framework from, for example, fiscal to monetary tools or from the demand to the supply-side, could possibly alter the problem. *The fundamental reason here is that traditional economics is premised on faulty epistemological foundations.*

From the foregoing it follows that a solution to the core problem could only be possible if it involved a radical paradigmatic switch at the root level of economics' epistemological foundations. The key question now becomes clear: Given the actual nature of the socioeconomic world, what would be a theoretical and methodological approach appropriate to an operational science of economics?

As is so often the case, a clearly and fully stated problem embodies its own answer and the profound comes to appear almost self-evident. Thus, if the economic universe is not autonomous, but is rather inextricably intertwined with socio-cultural-psychological forces (which themselves are made operationally manifest in the arena of politics), then the discipline's universe of concern must incorporate these factors. This is to say, that if the basic research

object is not functionally independent, then it must be redefined, and in this case enlarged, until it becomes so. Thus there follows *logically rather than idiosyncratically*, Lowe's redefinition of economics as Political Economics—the latter being an autonomous construct capable of dealing with questions about how human beings, the most elemental functional entities of economizing behavior, attempt to attain individual and collective goals of material provisioning. It is in this, way, *i.e.* by the proper redefinition of economics' universe of concern, that there is achieved the autonomous object for research necessary to focus true scientific endeavor.

How the two components of economics and politics (the latter being, as already noted, the manifestation of the whole array of existent social, cultural and psychological forces affecting economic agents) sum up into a *systematically* functioning universe of research concern dealing with micro and macro "provisioning" relates to the second difference between the behavior of economic agents and that of the basic (molecular) agents of the natural physical world. This second difference is, of course, the inherent lack of consistent orderliness in economizing behavior. And the answer to this stated problem is again almost self-evident when considered on logical grounds: If orderliness in the universe of concern is necessary for successful *scientific* theory and praxis, and if such order is not inherent and natural, then the requisite order must in some way be imposed. It's as simple as that: bring about the necessary degree of orderliness or give up the pretense to science.

Thus, in Lowe's schema—based, I emphasize, on firm epistemological and logical foundations and not on the quicksand of idiosyncratic and ideological predilection—there devolves a profound and revolutionary reorientation of economics' approach toward its universe of concern from a positivistic science of prediction to a normative science of control. And further, this reorientation necessarily involves the "revolutionary" turn away from positivist methodological procedures of looking to discover existent laws that determine how various causes (means) lead to predictable effects (ends); of turning away from this quest and turning to the more normative approach of inventing in the sense of first determining desired and achievable ends (effects) and then determining and, as necessary, creating, the necessary means to achieve these ends. Put in other terms, at the core of Lowe's revolutionary turn in economics' paradigm is the inversion of what he calls the (causal) means → end approach of traditional economics patterned after the natural sciences to the (instrumental) end → means approach appropriate to an activity, economizing, that in itself lacks orderliness in behavioral patterns within its appropriate universe of research concern.

In the above, we can clearly see the grounds for a synthesis between Lowe's redefinition of economics into Political Economics and his idea of instrumentalism as the appropriate methodology. This is to say that in Political Economics, economic ends are determined in the first instance through the political process (subject, of course, to technical verification for internal consistency and achievability in light of known material and technical constraints). Then, in the second instance, economic and political (*i.e.* legal, institutional, etc.) *means are instrumentally employed* to achieve a path leading to the predetermined end-state. The determination of goal-adequate paths for the socioeconomic system along with the development of any necessary goal-adequate means and the verification of the latter's suitability and potency, are the primary areas for instrumental theory and analysis; while the iterative application and adjustment of these means so as to maintain the goal-adequate path involves what Lowe calls instrumental inference.

## VI

## Main Areas for Inquiry in Lowe's Political Economics

THE MAIN AREAS for further investigation in Lowe's system are essentially twofold: matters of technical economics, and questions of political philosophy.<sup>8</sup>

The technical matters of primary concern involve the instrumental methodology appropriate to the redefined Political Economics. These would include such matters as already alluded to in the preceding section, *viz.* (1) ascertaining the internal consistency and achievability of any politically determined end-state; (2) the choosing of a goal-adequate path for the system coupled with the tracking of the actual path of the system relative to the goal-adequate one(s); and (3) the development and application of the economic stimuli and institutional mechanisms that will induce the behavioral responses necessary to bring and maintain the actual path of the economy into acceptable conformity with some appropriate one.

This interpretative essay is not the place for elaborative and detailed discussion of such technical issues. Suffice it to say at this point, that perhaps the main achievement of traditional economics is that it has developed some of the individual pieces necessary to a Lowe-type Political Economics. For example, there are the modern tools of input-output analysis, linear programming, operations research and activity analysis. Also, current policy experiences, though fraught with much frustration and failure, have significantly enlarged our knowledge concerning fiscal and monetary factors in the modern economy. In addition, computer hardware and software have become more powerful and the fundamental need for more extensive and reliable data is



finally coming to be adequately appreciated by the profession.

In the institution building area, contributions have been less concrete. However a significant background has been laid quite importantly as a result of recent discussion concerning various types of incomes policies employing the incentives of (tax) "punishment" and/or (subsidy) "rewards."<sup>9</sup> This discussion of types of incomes policies has been an outgrowth of the unsuccessful experience with earlier attempts at so-called voluntary wage and price controls, a situation which illustrates the utility of even negative information and experience. Along these same lines and also in the area of institution building, there has been much recent information and experience accumulated as a result of the failures of such public-private advisory bodies as the Business Roundtable and the now defunct Council on Wage and Price Control, to mention but two such attempts.

The purpose of the preceding is certainly not to offer an extensive listing, much less an analysis, concerning available knowledge and tools useful to the promulgation of Lowe's model of Political Economy. It is intended rather to be illustrative and to provide some basis for consideration of the following key point: Recalling the preceding discussion of this paper on the implicit premises of current economic science, it can be plausibly argued that a primary reason for the failure and/or underrealization of the promise of economics' existing technical tools and institutional mechanisms is that these have been, *and currently can only be*, employed within the faulty paradigmatic framework of traditional economic theory and practice. It is curious as well as interesting to note the possibility that "socialism" of the Lowe type could serve actually to potentiate and make operationally effective many of the tools and ideas developed by and for an economics that purports to explain an individualistic capitalism.

Nonetheless, serious problems affecting the fundamental efficacy of any technical tools and institutional mechanisms for economic management yet remain. For example, there are such issues of current note (and notoriety) as the existence of long and indeterminate lags in the response patterns of modern complex economies to policy tools along with the related problem of some irreducible level of (Keynesian) uncertainty concerning futurity and essential unknowability in the realm of economic and social affairs. To be sure the Lowe schema comes about in good measure because of the existence of the preceding two problems in that it specifically aims to reduce, contain and/or correct for such lags and uncertainty. Our primary purpose here is to take explicit note of these two problems as they are of existential importance to operational economic practice and are only now in the beginning stages of

serious theoretical and analytical consideration.

The problem of political philosophy mentioned at the outset of this section is perhaps even thornier than the technical-institutional concerns noted above. The fundamental issue here, of course, is how to make the epistemological necessity for a Lowe-type Political Economics as a science of control compatible with and acceptable to western ideals of freedom and democracy. The key to a solution to this problem appears to lie in a shift of focus from the atomistic individualism of utilitarian philosophy and economics to the level of collective human behavior directed and influenced most importantly by prevailing social, political and economic institutions.

Lowe is currently grappling with this political problem, and consistent with what has been said above concerning the shift in focus from atomistic individualism to institutional collectivism, he is doing so by developing a political model for economic decision making and control that is an outgrowth of recent attempts at so-called "indicative planning." As this work is currently in process, little can be offered here beyond a general idea of the basic nature of the indicative planning model.

Simply put, such a model would involve the participation of all key *groups* of economic actors in the body polity, *e.g.* industry, labor, agriculture, consumers and government. These groups would work to determine a (consistent) matrix of economic goals that would comprise an agreed upon and mutually acceptable end-state for the socioeconomic system. Implicit in such a political process is the necessity for the existence of appropriate mechanisms and means to bring about the trade-offs and compromises fundamental to conflict resolution among groups with divergent goals and points of view.

Also implicit in the idea of indicative planning is that there will be the agreement that once the goals and targets for the end-state are set, each group will take the necessary steps appropriate to its role in the economy. The government would have input into this process in various ways—for example, in reference to questions of national significance and priorities, as a provider of relevant and accurate data and information, as a mediator and arbitrator, and as a developer of appropriate institutional mechanisms that must by definition embody a requisite measure of coercion and control.

The above-mentioned coercion and control embody, of course, the nub of questions involving the compatibility of democratic ideals and practices with collective economic decision-making. But since such coercion and control, in the framework of the indicative planning approach, would be employed to achieve broadly determined ends, they would not be inconsistent with democratic ideals. This would be the case so long as such ideals explicitly rec-

ognized that the basic level of democratic decision-making need *per force* reside with institutional collectivities and not with the atomistic individual.<sup>10</sup>

## VII

### Conclusion

THERE IS NO QUESTION that there are significant technical, political and philosophic problems to be grappled with in developing the operational significance of Lowe's paradigm of Political Economics with its instrumental methodology. But the existence of such problems, irrespective of how more or less serious, is not a concern of overriding importance at this point. What *is* most important involves the *existence per se* of Lowe's paradigmatic vision and its corollary modular framework of Political Economics. This is so because, as Thomas Kuhn argues in his *Structure of Scientific Revolutions*, a paradigm is never complete and never without unsolved problems. Indeed the purpose of a paradigmatic model is to define relevant problems requiring solution and to provide a standard for evaluating those solutions. According to Kuhn, a science's paradigm provides a heuristic for practitioners in the "puzzle-solving" endeavors of so-called "normal science"—*i.e.*, for scientific activity within the (necessarily incomplete) paradigmatic framework.<sup>11</sup>

As already noted, Adolph Lowe has spent and is currently spending much time and energy in coming to grips with various of the technical, political and philosophical issues inherent in his Political Economics paradigm. But these efforts by Lowe are not the primary measure of the significance of his work in the same way that the existence of inherent problems in this work is not of overriding significance in criticizing Lowe's essential contribution. This is to say, that the root-level significance of Adolph Lowe's work rests not on whether he has or has not presented a complete model of Political Economics with all operational details worked out; that will be an ongoing task not only for himself but primarily for others who follow his lead. Rather, the essential significance of Adolph Lowe's work is that he has shown why a paradigmatic switch from the traditional means → end model for economic science to the inverted end → means conception of Political Economics is an epistemological necessity for the existence of an operationally viable science of economics. Any and all remaining problems and issues aside, Lowe has shown, and done so on scientific grounds, why the traditional paradigmatic framework of economics is basically faulty and is so beyond repair. In addition, he has shown the direction of and developed the essential outline for a paradigmatic shift appropriate to a truly scientific discipline, economics. This is his essential contribution.

## Notes

1. Will Lissner, "Adolph Lowe's Methodological Alternative for Economic Research and Policy," *American Journal of Economics and Sociology*, Vol. 40, No. 3 (July 1981), p. 277ff. The most useful recent source for contrasting Lowe's methodological alternative with traditional economic methodology, and its historical roots, is Mark Blaug, *The Methodology of Economics* (Cambridge, London and New York: Cambridge University Press, 1980).

2. Lowe's broadest statement of the nature and necessity of Political Economics is contained in his pathbreaking *On Economic Knowledge* (White Plains, N.Y.: M. E. Sharpe, Inc., 2nd enlarged edition, 1977). A very useful summary by Lowe (of the original 1966 edition) of this book, along with other elaborative and critical essays, is contained in Robert Heilbroner (ed.), *Economic Means and Social Ends* (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1969).

3. Provisioning is Lowe's term describing the end purpose of economic activity.

4. Lowe deals quite concisely with these two axioms in an address delivered on the occasion of his receipt of the Veblen-Commons Award: Adolph Lowe, "What Is Evolutionary Economics? Remarks upon Receipt of the Veblen-Commons Award," *Journal of Economic Issues*, June 1980, pp. 250-52. Also quoted in Lissner, *op. cit.*, pp. 282-83.

5. The Heisenberg principle of uncertainty is an illustration of what happens in natural science when the conditions of autonomy and orderliness are violated in natural scientific practice. That is, when by the very act of observing micro-systems, the observer must enter into and affect the universe of investigation in an indeterminate way, the true underlying nature of that universe becomes, scientifically speaking, unobservable and unknowable.

6. The most prominent names here are, of course, Neville Keynes, Lionel Robbins, and most recently Fritz Machlup and Milton Friedman.

7. This point-of-view is consistent with the Maslowian psychology of the existence of a hierarchy of human needs with elemental material needs lying at the base of the hierarchy. For the application of this idea to economics, see Mark A. Lutz and Kenneth Lux, *The Challenge of Humanistic Economics* (Menlo Park, Calif.: The Benjamin/Cummings Publishing Company, Inc., 1979).

8. Lowe highlights the technical aspects of Political Economics in his *The Path of Economic Growth* (Cambridge, London and New York: Cambridge Univ. Press, 1976). His work now in process highlights the political and philosophical implications of his model of economic management (personal communication).

9. The relationship between the distribution inherent in some given incomes policy and an overall growth path for such key economic factors as investment, real wages and profits is succinctly dealt with by Alfred Eichner, "Reflections on Social Democracy," *Challenge: The Magazine of Economic Affairs*, March/April, 1982, pp. 40, 41.

10. The Eichner discussion referred to above is placed within the context of an indicative planning framework. It is Eichner's chief point that such a framework is a way to avoid excessive government regulation and to achieve what he calls the "minimalist" democratic State. He does not point out, however, the key point that such a minimalist State would involve a democracy operationally built upon a foundation of institutional collectivities as opposed to atomistic individuals.

11. Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: Univ. of Chicago Press, 2nd ed, 1972), particularly section IV, "Normal Science as Puzzle-Solving."