Institutionalism versus Orthodoxy:

The Articulation of Methodological Alternatives

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ABSTRACT. Orthodox *economics* has been quite effective in exploiting *equilibrium* methodology: equilibrium as a heuristic device, as a theoretical norm, and as a prototype of the scientific method. Also, *orthodoxy* has contrived the dichotomy of equilibrium-anti-equilibrium to depict *institutional thought* as being muddled and unscientific. Institutionalists have not successfully countered these attacks, nor have they adequately articulated a comprehensive methodological alternative to orthodoxy. Institutionalists have paid too much attention to the methodological components of institutionalism and have neglected the articulation of a guiding, overall methodology. It is proposed that institutionalists recast the methodological debate by expanding the arena from equilibrium-anti-equilibrium analysis to the broader context of *closed* versus *open systems analysis.* This would both help expose the methodological weaknesses of orthodox economics, and demonstrate the relevance and power of institutionalism for *socioeconomic investigation.*

I

The Status of Institutionalism

ALLEN G. GRUCHY PRESENTED a thought provoking analysis of the status of institutionalism in his "The Current State of Institutional Economics."[1] Gruchy argued that "the institutional movement has not been a major force shaping standard economics" for the following reasons: (1) leading institutionalists have not actively supported the institutional movement, (2) institutionalists have paid too little attention to theory development, (3) institutionalists failed to develop a unified policy position, and (4) there has been too little development of general treatises (like Marc R. Tool's *The Discretionary Economy*).[2] These are important concerns and institutionalists would be well advised to address them. However, there is the problem that the developments observed by Gruchy are symptoms rather than genuine causes of the low status of institutionalism. Unless causes are identified and attacked, the problem of institutionalism's low status is likely to remain.

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In this paper it is argued that part of the cause of institutionalism's limited impact on standard economics is methodological in nature. Institutionalists presently face a comparative disadvantage regarding paradigm articulation and promotion.[3] The nature of this comparative disadvantage will be explored, and a proposal to help counter the problem will be set forth below.

II

Orthodox Methodology: Not Relevant, But "Useful"

LET US BEGIN by examining the comparative marketing advantage orthodoxy enjoys in the debate over alternative methodologies. Orthodox economists have developed an "attractive" set of methodological tools for marketing their discipline under the guise of systematic, cohesive and rigorous economic analysis. The set of tools is essentially the working parts of equilibrium economics.

It is instructive to view the orthodox position on the value of equilibrium economics as it is communicated to students being initiated in the ways of orthodoxy. Martin Bronfenbrenner, Werner Sichel and Wayland Gardner state in their introductory *Economics* that "partial equilibrium analysis can be justified by the need to simplify and handle as few variables as possible at one time."[4] Arthur A. Thompson, Jr., in his *Economics of the Firm,* merely states that "The concept of static general equilibrium has practical importance because it is a useful tool of economic analysis."[5] Similarly, Edgar K. Browning and Jacquelene M. Browning tell students that "partial equilibrium analysis . . . would not have received such emphasis if economists believed that it was an unreliable framework of analysis."[6] Students are told that the equilibrium method is employed because it is useful.

The interesting question is, in what way is the equilibrium method useful? The standard orthodox answer is that it provides a rigorous formulation and quantification of economic processes, and that it enables economists to distill and make understandable a complex economic world. This is basically professional boilerplate; there is a more pragmatic dimension to this issue. That is, the equilibrium method is useful to orthodox economists as a marketing tool. It enables orthodox economists to (artificially) package economic phenomena in terms of mechanical, simplistic, determinate relationships which operate in a well-defined arena ("economics proper"). The packaging of economics in terms of the equilibrium paradigm makes economics relatively easy to learn and to communicate to others. Equilibrium methodology provides orthodox economists a simple analytical toolbox that can be carried around in one's back pocket, so to speak, and easily shared with others.

By contrast, institutional economics has no simple set of tools that operate within determinate, well-defined boundaries to offer students of economics. There is no "shake and bake" way to become an institutionalist. Or to put it differently, there is no place within institutionalism for "parrot supply and demand jokes" about how easy it is to become an economist. On the other hand, orthodoxy is quite vulnerable to such charges.

What about the issue of relevance? Is the equilibrium method suited to the investigation of socioeconomic phenomena? Unfortunately, the importance of this issue has been overshadowed in orthodox economics by a preoccupation with tools. When tools have certain satisfying qualities (for some), they may become valued as an end in and of themselves. The useful application of the tools becomes a lesser or non-existent consideration. Research technique is valued more than research relevance. This is the case of orthodox economists and their equilibrium tools.

III

The Marketing Attributes of Equilibrium Economics

WHAT IS THE ATTRACTION of equilibrium economics for orthodox economists? The general answer is that equilibrium methodology satisfies orthodox economists' desire for "hard" science status. Equilibrium economics enables economists to emulate the determinate, closed mechanical "hard" models of 19th century physics. Also, at the micro level of our question, there are specific promotional features of equilibrium economics which reinforce the attribute of hard science status as well as satisfy other needs. These features include equilibrium as: (1) a heuristic device, (2) a theoretical norm, and (3) a system of logic. While orthodoxy has exploited all of these attributes of equilibrium, the first has received the most attention.

Equilibrium as a heuristic device is said to provide "clarity and precision to our understanding of forces actually operative in the real world."[8] It is claimed that relationships that might otherwise appear as chaos take on a sense of order when analyzed on the presumption of the empirical market system's tendency to approximate the conditions of equilibrium. Order is believed to be manifested in terms of invariant relationships and norms of behavior which characterize a natural state of affairs—equilibrium. Joseph Schumpeter speaks of the concept of equilibrium as the "magna charta of economic theory," providing order and stability to its subject matter:

> It is the rationale of the idea of variables that do not vary, the justification of the skema of a stationary process. The values of prices and quantities which are the only ones, the data being what they are in each case, to satisfy those relations, we call equilibrium values.[9]

Vilfredo Pareto employed the concept of equilibrium not only to simplify the complexities of economic relationships, but to attempt to extend the economic sphere to include human behavior as encompassed within the framework of social equilibrium. Pareto truly recognized equilibrium as a heuristic device: "we have now simplified our problem of deciding to consider certain successive states [of the system] instead of the numberless imperceptible mutations that led up to them."[10]

By the nature of theoretical abstraction, the equilibrium method simplifies economic analysis. The fact that it abstracts from all that is meaningful to the understanding of socioeconomic phenomena is overshadowed by, among other considerations, the heuristic appeal of equilibrium analysis among orthodox economists. The key words and phrases from the above arguments for equilibrium as a useful heurist device are: clarity and precision, order, invariant relationships, norms of behavior, and a natural state of affairs. Such methodological attributes have strong intuitive appeal. The opposite set of attributes include confusion, imprecision, chaos, deviate behavior, and an unnatural state of affairs. This is the nature of the fabricated brand applied by orthodox economists to those who reject equilibrium economics. It is in the context of this contrived dichotomy (order versus chaos, etc.) that orthodoxy has attacked institutionalism.

A second promotional aspect of equilibrium methodology (closely related to the above) is that it provides researchers with a theoretical norm. Equilibrium provides a point of reference for defining actual states by their distance from a state of equilibrium. According to David Easton, "By spelling out the laws governing the interaction of economic variables as if they were in a state of equilibrium, it becomes possible to compare the real economic system against the theoretical norm."[11] Similarly, Schumpeter argued that one only can speak of economic fluctuation in terms of some reference point—the concept of equilibrium. Schumpeter was interested in the time sequence of equilibrium values:

> The first economist to develop this idea consciously . . . was Henry L. Moore. Throughout his work, summed up in his *Synthetic Economics,* was the principle that trends are loci of points, every one of which indicates the ideal equilibrium value corresponding to the actual value taken by each time variable in the same point in time.[12]

These "ideal" equilibrium values provide the researcher with a conceptual guidepost against which the analytical system can be checked and compared with the real world. By analyzing actual divergences from the theoretical norm our interpretation of the empirical system is believed to be enhanced—the divergence is explained in terms of certain factors, which the theory tells us would account for the distance of the system from a position of equilibrium.

Thus, in addition to the methodological attributes associated with equilibrium

as a heuristic device, equilibrium is credited with providing economists a conceptual guidepost, idealized states, and empirical verification. Equilibrium economics offers quite an extensive list of promotional attributes; one can almost appreciate its appeal to orthodox economists. However, behind the facade of equilibrium's attributes are such hard questions as whether socioeconomic systems are self-equilibriating, and whether an equilibrium framework of analysis abstracts from the most critical elements of the socioeconomic system. Institutionalists, of course, would answer "no" and "yes," respectively to these questions, and would call for more meaningful analysis. Those that reject the appeals of institutionalism have perhaps let themselves be fooled by the methodological glitter of standard equilibrium economics.[13]

Last on our list, the concept of equilibrium provides a system of logic, that is, a form of reasoning and argumentation. The logic of equilibrium is the logic of determinateness; equilibrium is the one concept that "goes farthest to establish determinate conditions."[14] Equilibrium is a kind of prototype of scientific method in general; it provides a means for applying the scientific method of classical mechanics in physics to the social science setting of economics.

The English physicist Isaac Newton, in his *Mathematical Principles of Natural Philosophy* (1687), set forth analytical concepts depicting a mechanical universe subject to the operation of basic natural laws concerning motion, conservation of energy, and gravitation which generated a balance of forces, or equilibrium, wherein all heavenly bodies had their proper place. Orthodox economists employed the Newtonian method in an attempt to provide economics with a tight system of logic and "hard" science status.[15]

IV

The Unmet Challenge To Institutionalism

THESE THREE ELEMENTS of equilibrium—equilibrium as a heuristic device, as a theoretical norm, and as a system of logic—comprise the essential "sales features" of the equilibrium paradigm. Equilibrium has sold well among economists. So ingrained is the equilibrium paradigm in orthodox economics that one may accurately describe orthodoxy as being essentially equilibrium economics. The supremacy of the equilibrium paradigm has not gone unchallenged; however, it has gone without a successful challenge.[16] Orthodoxy remains relatively unscathed (at least in terms of number of disciples) by the attacks of institutionalists, and others.

Modifying an old idea, perhaps it takes a methodology to kill a methodology. The problem is that while institutionalists have written many insightful essays

explaining why the equilibrium paradigm is unsuited for meaningful analysis of socioeconomic phenomena, they have not been effective in communicating to the economics profession a comprehensive methodological alternative.

The problem, observed by Gruchy, that institutionalists pay too little attention to theory development is in part a response to the failure of institutionalists to communicate effectively a guiding methodology on which to develop theory. Also troublesome is the failure of institutionalists to synthesize and integrate the rich intellectual works of their major contributors—part of the fragmentation problem observed by Gruchy. It is very difficult, perhaps impossible, to synthesize and integrate individual works without a clearly articulated guiding methodological structure and, closely related, an accepted and precise taxonomic structure in place. Without good methodological and theoretical "glue," the impact of institutionalism on standard economics will fall far short of its tremendous potential.

The methodological challenge facing institutionalists is essentially twofold: (1) to articulate the macro dimension of institutional methodology (as opposed to the present practice of focusing on the individual components of institutionalism),[17] and (2) to counter effectively the halo effect of equilibrium methodology. The notion of open system analysis is suited for addressing the first condition, and the dichotomy of closed versus open systems analysis is suited for achieving the second condition.

The debate over methodological alternatives between orthodox economists and institutionalists has traditionally been cast in terms of equilibrium versus anti-equilibrium. This has not been a productive dichotomy for institutionalists largely for the reasons cited above. It is proposed that the debate be aggressively recast by institutionalists in terms of the dichotomy of closed versus open systems analysis.

V

Types Of Scientific Explanation

PRIOR TO EXAMINING the nature of closed and open systems it is useful to briefly outline the basic types of scientific explanation.

1. The deductive model: a type of explanation which has the formal structure of a deductive argument, in which the explicandum (the fact to be explained) is a logical consequence of the explanatory hypotheses of the model. Concerning the theory of the firm as an example of deductive theory, Sidney Schoeffler states that it is "constructed in such a way that the data determine a unique equilibrium

position."[18] Adolph Lowe holds that "in the choice of its [economics'] research technique—the so-called hypothetico-deductive method—it went furthest in emulating the exact sciences dealing with nature."[19] It is the deductive model and this emulation process which characterize the economic equilibrium paradigm.

2. Functional or teleological explanation: a type of explanation which indicates "one or more functions (or even dysfunctions) that a unit performs in maintaining or realizing certain traits of a system to which the unit belongs, or of stating the instrumental role an action plays in bringing about some *goal*"[20] [italics mine]. This type of explanation is relevant to goal-determined processes, and it is employed particularly in the field of biology and the study of human affairs. It is quite logical that Veblen, in his plea for making economics an "evolutionary science," stressed teleological explanation. Veblen argued that human action is teleological.

3. Genetic explanation: a type of explanation which describes how a particular phenomenon has evolved out of some earlier one. As Ernest Nagel explains: "The task of genetic explanation is to set out the sequence of major events through which some earlier system has been transformed into a later one."[21] This type of explanation is very useful for historical inquiries and may be applied to animate as well as inanimate things. Veblen also stressed this type of explanation: economics must become "a genetic account of the economic life process."[22]

4. Probabilistic explanation: A type of explanation in which the explanatory premises do not formally imply their explicanda—though the premises are logically insufficient to validate the explicandum, they do make the latter "probable." Probabilistic explanations typically deal with statistical assumptions as opposed to the "universal laws" of deductive explanation.

Genetic and probabilistic explanations are quite similar in nature. In developing a genetic explanation, events are selected on the basis of assumptions as to the type of events causally related to the evolution of the phenomenon being investigated. These assumptions may be fairly precise developmental laws or only vague generalizations with a statistical content. Thus, it is reasonable to conclude that genetic explanations are, to a large extent, probabilistic.

VI

Closed and Open Systems: The Need for Open Systems Analysis

IT IS ARGUED that: (1) The deductive model and the element of determinism are associated with closed systems, (2) the elements of genetic explanation,

teleology and probabilism are associated with open systems, and (3) the latter is relevant to the investigation of socioeconomic phenomena. The distinguishing characteristic of a closed system is that interaction with the environment is cut off. The relationship between "intra-systemic" and "extra-systemic" forces in socioeconomic processes is conceived in terms of the isolating method in standard economics which draws upon *ceteris paribus* reasoning. The methodological goal is the "insulation of those forces which are supposed to be necessary and sufficient for the explanation of 'systemic' motion, from the distorting influence of coexisting but 'accidental' forces."[23]

Let us consider the essential fortunes of a mechanically closed system. Such a system contains only a single "nonzero-probable history." The history of a system is a time sequence of states—any logical combination of values of the variables of the system—extending over a given finite or infinite period of time. There are two particularly important properties of a mechanically closed system: (1) its laws are of an "absolute" nature—the probabilities they appoint to an event are either "one" or "zero," and (2) its behavior is not subject to "outside" factors—"the information relating the variables of the system to each other constitutes, in effect, a set of simultaneous equations that have only a single possible solution."[24] For a system to satisfy these requirements—in terms of the set of variables existing in the real world—it must either be isolated effectively from the rest of the universe or exist in a fixed environment.

With the exception of astronomy, natural science predictions are made in effectively closed systems, that is, in controlled laboratory conditions. Effective closure requires that all relevant variables be referred to in the explanans (the sentence which describes what is being offered as an explanation[25]) so that no factor which potentially could affect the predicted event is left unaccounted for.

The distinguishing characteristic of an open system is the near infinite number of variables that are relevant to—that may affect—the events with which the system deals. A large number of relevant variables always must be omitted, preventing the effective closure of the system. The behavior of the system is never determined strictly from within—rather, there is interaction with the environment. No matter how many variables are included in the explanans set (the initial conditions), an indefinitely large number of potentially relevant variables are left out.

Social scientists must work with ill-defined or indeterminate boundaries, that is, open systems. This position will now be explored with respect to economics. Emile Grunberg, in "The Meaning of Scope and External Boundaries of Economics," states:

> there is at least no limit to the number of variables to be explicitly mentioned in economic laws, *i.e.,* to be included in S [observed phenomena], it follows that membership in the class of economic phenomena does not rest on objective criteria alone but to a large measure on arbitrary and *ad hoc* decision. Descriptive definitions of economics are, therefore, more vague than those of the natural sciences and less able to indicate the boundaries of the discipline at any given point in time.[26]

Concern with the definition and the scope of economics in the literature over the years reflects these difficulties.

Relevant to the discussion of the boundaries of a discipline is Lowe's explanation of why economic processes cannot be conceived as "self-contained." In the social economy, "forces from which action springs" largely are socially conditioned by prevailing institutions. Cultural value systems vary with the flux of the institutional setting: "We encounter here a most important difference between social and physical experience, namely the difference between insensitive particles responding blindly though lawfully to blind stimuli, and purposeful actors who 'move' only after they have interpreted their field of action in terms of their goals and their common-sense knowledge."[27] In an attempt to break down the arbitrary boundaries of standard economics, Lowe argues that "Modern dynamic evolution enforces cooperation upon economics and sociology because the real chain of reciprocal causation carries the chain of reasoning across any specialist borders."[28]

Lowe holds that we must consider not only the impact which changes in extrasystemic variables exert on the intrasystemic relationships, but that, *even with no change in the environment,* intrasystemic forces acquire determinancy only if they are continually subjected to a regular pattern of extrasystemic forces. This consideration strongly supports the premise that economic processes cannot be treated effectively as self-contained—as physical processes. The systemic forces of economic processes do not possess the constancy, universality, and, most important, the independence which characterize physical processes:

> Gravity manifesting itself as such a universal constant, and independent force, Newton could well dispense with a study of "causes." Nothing of this is true of the extremum principle ["economic force of gravity"] or of stabilizing expectations, neither of which can claim an exclusive role in the compound of economic motives.[29]

Consequently, it is necessary to search for the explanation of their "diversity and mutability"—even if this extends economics beyond intrasystemic analysis. This emphasizes the relationship between closed systems and mechanical analysis and open systems and causal analysis. Equilibrium economics, which is based on the mechanics of the physical sciences, is misapplied to a range of phenomena not amenable to effective closure.

VI

The Articulation Of Institutional Methodology

ORTHODOX ECONOMIC ANALYSIS is essentially closed system analysis; whereas institutionalism personifies open systems analysis. This methodological dichotomy is certainly more meaningful than the contrived dichotomy of equilibrium-anti-equilibrium espoused by orthodoxy. The articulation of orthodoxy as closed systems analysis by institutionalists would help explicitly expose the methodological and theoretical weaknesses of orthodoxy. On the other side of the coin, the articulation of institutionalism as open systems analysis would provide an avenue for demonstrating the analytical power of institutional analysis for explaining socioeconomic phenomena.[30]

The concept of closed systems analysis not only accurately characterizes orthodox methodology, it does not possess the promotional features of equilibrium analysis. The latter is no small point, for much of the successful selling of orthodoxy has involved the exploitation of the halo effect of equilibrium methodology. The halo effect largely derives from the "hard" science characteristics of Newtonian mechanics and mathematics. Economic equilibrium provided a convenient vehicle for the embodiment of those characteristics in economics. By emulating the "hard" sciences, orthodoxy strove for legitimacy by attaching itself to other disciplines already possessing considerable status and legitimacy.[31]

Institutionalists, in attacking orthodox economic analysis, have had to, in a sense, battle the legitimacy of the natural sciences. This did not prove to be advantageous for institutionalists.

The articulation of orthodoxy as closed systems analysis by institutionalists would help strip away the halo effect of equilibrium methodology which orthodoxy has exploited for so long. Equilibrium methodology would properly be cast in a secondary role, a subset of a more pervasive (macro) methodology—closed systems analysis. The latter is more vulnerable to a focused, penetrating attack by institutionalists. Whereas institutionalists' criticisms of equilibrium economics was necessarily diffused over a wide range of related issues (such as whether the socioeconomic system was an equilibrating system, whether economic processes were determinate, whether the notion of *homo economicus* was valid and whether the *ceteris paribus* reasoning of partial equilibrium analysis was meaningful), attacks on closed system analysis would logically have a sharper focal point—whether socioeconomic causation is amenable to effective closure. This issue is the essence of the distinction between closed and open systems, and it is the essence of the methodological distinction between orthodoxy and institutionalism.

This line of attack on orthodoxy explicitly opens the door to what institutionalism is all about—interaction with a dynamic, indeterminate environment. The articulation of open systems analysis would make explicit the need to integrate "intrasystemic" and "extrasystemic" forces in the analysis of socio-economic phenomena. Therein lies the power of institutionalism.

In addition to providing an effective attack on orthodox methodology and providing a sharp focus for the many positive attributes of institutional methodology, the notion of open systems analysis would facilitate a useful integration of institutional thought. In the literature of institutionalism, too little attention has been given to synthesizing the rich ideas of the great institutionalists. This concern is certainly embedded in Gruchy's call for more general treatises in institutionalism (as mentioned above).

Orthodoxy has benefited from those economists in their ranks who have synthesized and integrated key components of standard economic thought. For example, Adam Smith and John Maynard Keyes were essentially great synthesizers.[32]

Unfortunately, institutional thought has been developed in the literature mainly in terms of its component parts, rather than in terms of an overall methodological perspective. The articulation of institutional economics as open systems analysis would provide a forest view of institutionalism—an integrative, cohesive view of its approach to socioeconomic investigation. This is at least one necessary condition for combatting the current fragmentation of institutionalism.

Finally, it should be noted that the legitimacy of open systems analysis does not center on whether it is a remedy for the shortcomings of equilibrium analysis. Institutionalism has been cast far too long in this defensive posture. Open systems analysis is a viable methodology in and of itself. It has the potential to provide a methodological structure (systematic, cohesive "looking glass") for organizing and communicating the core of institutionalism. The essence of open systems analysis is that *all variables* interact with the environment. It explicitly recognizes that effective closure of the socioeconomic system is not possible. Open systems analysis champions interdisciplinary investigation. These are essential attributes of a methodology for the investigation of socioeconomic phenomena. This is what institutionalism has to offer.

VII

Concluding Perspective

INSTITUTIONALISTS HAVE DEVELOPED and espoused many important methodological principles for socioeconomic investigation, but they have not effectively orga-

nized the components of their methodology into a cohesive macro methodology. The problems observed by Gruchy—particularly the problems of fragmentation and insufficient theory development—are partly due to the failure of institutionalists to articulate a guiding, overall methodology.

In this article, the dichotomy of open systems versus closed systems analysis is offered as a means for both attacking standard equilibrium economics and, most important, for communicating institutionalism's looking glass as well as integrating and synthesizing its great works. Regarding the latter, there may be a better methodological framework than open systems analysis for achieving these goals. However, it seems that some type of methodological glue is needed for the institutional movement to become a major force shaping standard economics.

Notes

1. Allen G. Gruchy, "The Current State of Institutional Economics," *American Journal of Economics and Sociology* 41 (July, 1982) pp. 225–42.

2. *Ibid.,* p. 236. On the other side of this issue, it is interesting to note that Marc Tool has found some reasons to be hopeful about a resurgence of institutionalism. See his "The Compulsive Shift to Institutional Analysis," *Journal of Economic Issues* 15 (September, 1981), pp. 569–92.

3. By paradigm articulation I mean the effective communication of a paradigm, and by paradigm promotion I am referring to the selling or marketing of a paradigm. These factors play an important role in widening and deepening the following of a particular school of thought.

4. Martin Bronfenbrenner, Werner Sichel, and Wayland Gardner, *Economics* (Boston: Houghton Mifflin Co., 1984), p. 31.

5. Arthur A. Thompson, Jr., *Economics of the Firm Theory and Practice* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1981), p. 612.

6. Edgar K. Browning and Jacquelene M. Browning, *Microeconomic Theory and Applications* (Boston: Little, Brown and Co.), p. 506.

7. It appears that there is a "cultural lag" between developments in physics and their emulation in standard economics—the determinate systems of 19th century physics have been largely overshadowed by the influence of modern developments based on quantum mechanics which involve ideas of probability.

8. R. W. Souter, "Equilibrium Economics and Business Cycle Theory: A Commentary," *Quarterly Journal of Economics* 45 (November, 1930), pp. 57–58.

9. Joseph A. Schumpeter, *Business Cycles,* Vol. I (New York: McGraw-Hill Book Co., Inc., 1939), pp. 41–42.

10. Vilfredo Pareto, *The Mind and Society,* trans. by A. Bongiorno and A. Livingston (New York: Harcourt, Brace and Co., 1935), p. 1441.

11. David Easton, "Limits of the Equilibrium Method in Social Research," in *Political Behavior: a Reader in Theory and Research,* ed. by H. Eulau, S. Eldersweld, and M. Janowits (Glencoe, Ill.: Free Press, 1956), p. 401.

12. Schumpeter, *op. cit.,* pp. 69–70.

13. For an interesting and thought provoking discussion of the "purposive function" (P-F) of

economic paradigms see L. E. Johnson's "Economic Paradigms: A Missing Dimension," *Journal of Economic Issues* 17 (December, 1983), pp. 1097–1111.

14. Lawrence Henderson, *Pareto's Sociology* (New York: Russell and Russell Co., 1967), p. 85.

15. Of course, whether it has attained this status is a very different issue. See, for example, Alfred S. Eichner's "Why Economics Is Not Yet a Science," *Journal of Economic Issues* 17 (June, 1983), pp. 507–20.

16. The following works offer an excellent sample of the body of literature critical of equilibrium economics: Douglas F. Dowd, *The Twisted Dream,* 2nd. ed. (Cambridge: Winthrop Publishers, Inc., 1979); Nicholas Georgescu-Roegen, *The Entrophy Law and the Economics Process* (Cambridge: Harvard Univ. Press, 1971); Janos Kornia, *Anti-Equilibrium* (New York: American Elsevier Publishing Company, Inc., 1971); Murray N. Rothbard, *Individualism and the Philosophy of the Social Sciences* (San Francisco: The Cato Institute, 1979); Adolph Lowe, *On Economic Knowledge* (New York: Harper and Row, Publishers, 1965); Sidney Schoeffler, *The Failure of Economics: A Diagnostic Study* (Cambridge: Harvard Univ. Press, 1955); Bruce J. Caldwell, *Beyond Positivism: Economic Methodology in the Twentieth Century* (New York: Allen and Unwin, 1982); Benjamin Ward, *What's Wrong With Economics?* (New York: Basic Books, Inc., Publishers, 1972); Lewis E. Hill, "The Pragmatic Alternative to Positive Economics," *Review of Social Economy* 41 (April, 1983), pp. 1–11; Edgar S. Dunn, "Economics and a New Social Science Threshold," *Southern Economic Journal* 36 (April, 1970), pp. 353–63; David Easton, "Limits of the Equilibrium Method in Social Research," *Political Behavior: a Reader in Theory and Research,* edited by Heinz Eulau, Samuel Eldersveld, and Morris Janowits (Glenco, Illinois: Free Press, 1956); Alfred S. Eichner, "Why Economics Is Not Yet A Science," *Journal of Economic Issues* 17 (June, 1983), pp. 507–20; and of course, Thorstein Vebler, "Why is Economics Not an Evolutionary Science?" *Quarterly Journal of Economics* 21 (July, 1898), pp. 373–97.

17. A good example of the component parts (micro) approach to explaining institutional methodology is provided by Jerry L. Petr's "Fundamentals of an Institutionalist Perspective," *Journal of Economic Literature* 18 (March, 1984), pp. 1–18.

18. Sidney Schoeffler, *The Failure of Economics: A Diagnostic Study* (Cambridge: Harvard Univ. Press, 1955), p. 83.

19. Lowe, *op. cit.,* p. 4.

20. Ernest Nagel, *The Structure of Science* (New York: Harcourt, Brace and World, Inc., 1961), pp. 23–24.

21. *Ibid.,* p. 25.

22. Veblen, *op. cit.,* p. 388.

23. Lowe, *op. cit.,* p. 59.

24. Schoeffler, *op. cit.,* p. 50.

25. Concerning the terminology relevant to the structure of closed systems and the deductive model, the following comments by Baruch A. Brody may prove helpful: "The deductive-nomological model, portrays a type of explanation or prediction where the *explanandum,* the sentence describing the data to be explained, or the *praedicendum,* the sentence describing the predicted occurrence, follows deductively from the *explanans,* the sentence describing that which is being offered as an explanation, or the *praedicens,* the sentence that describes the grounds for the prediction." See Baruch A. Brody, ed., *Readings in the Philosophy of Science* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1980), p. 2.

26. Emile Grunberg, "The Meaning of Scope and External Boundaries of Economics," in *The*

Structure of Economic Science, ed. by S. Krupp (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1966), p. 154.

27. Lowe, *op. cit.,* p. 61.

28. Adolph Lowe, "The Unity of the Social Sciences," in *Economics and Sociology: Towards an Integration,* ed. by T. Kappes (Seider: Martinus Nijhoff Social Sciences Div., 1976), p. 131.

29. Lowe, *On Economic Knowledge,* p. 62.

30. It is true that some institutionalists have utilized the notion of open systems analysis. For example, F. J. Weed states that "Veblen's theory might be considered an open system theory in that as an evolutionary theory which has no utopian historical end to it there is a constant interchange of man's institutions and the environment." See his "Interpreting 'Institutions' in Veblen's Evolutionary Theory," *American Journal of Economics and Sociology* 40 (January, 1981), p. 78. However, the problem is that Weed's analysis and most applications of open systems analysis by institutionalists have been rather narrowly applied only to particular works and particular facets of institutionalism. The discussion of this paper is aimed toward a broad, integrative application of open systems analysis.

31. For an excellent statement of this argument, see Kenneth E. Boulding, "The Legitimacy of Economics," *Western Economic Journal* 5 (September, 1967), pp. 299–307.

32. This is not to suggest that Smith and Keynes did not produce some original and creative insights, for they did. However, the distinguishing feature of much of their work was the effective pulling together of bits and pieces of existing thought. Smith was particularly masterful at this.

A Defense of the Thatcher Program

THE TORIES IN BRITAIN rose to power under Margaret Thatcher in 1979 when the pro-Marxist policies of Labour governments produced inflation without solving the country's economic crisis. Mrs. Thatcher shifted the cost of reconstruction from the affluent and wealthy classes, including the British anachronism, the aristocracy and nobility, to the enterprising and working classes. The program is widely recognized as bankrupt except by its beneficiaries.

Now Sir Alan Walters, who was Mrs. Thatcher's personal economic adviser, has produced a ringing defense of the Thatcher Program in *Britain's Economic Renaissance: Margaret Thatcher's Reforms, 1979–1984* (New York, NY 10016: Oxford University Press, 1986, 200 pp., $29.95). It is good to have a book like this, which presents one's opponent's views fairly fully. To understand a program, one must be able to see it in the way its proponents do, as well as by one's understanding achieved by analytical criticism.

About employment and unemployment Sir Alan "has little or nothing to say that is new," (p. 177), which is a disappointment. "Wage costs were too high," he says, but so were rents and profits and managerial salaries and perquisites, as well as land values and even asset values. It is typical of the reactionary conservatives that they attack wages but not the receipts of the other factors and functionaries of production.

W.L.