INTERNATIONAL
SOCIAL SCIENCE
REVIEW
Volume 58, Number 1

WINTER 1983

Kenneth Boulding's Ecodynamics

Warren J. Samuels
Michigan State University
East Lansing, Michigan, USA

Kenneth Boulding is one of the most widely ranging thinkers in the social sciences. His *Ecodynamics* represents perhaps the major late-twentieth century effort to integrate and synthesize the social sciences and does so in a manner which ties social organization and evolution to physical and, especially, biological evolution. The focus is on knowledge and know-how but encompasses all aspects of the social system as conventionally understood, although with particular interpretive twists. Although his is not a harmony model, and he does treat the subject of power, Boulding does not make conflict and power play a central presence in systemic organization and evolution.

For a genial and gentle soul blessed with a Henny Youngman-like sense of humor, Kenneth Boulding is formidable if not intimidating in the range and depth of his intellectual accomplishment. Perhaps more important, Boulding has assembled, somewhat in the manner of Karl Marx, Max Weber, or Vilfredo Pareto, an architectonic model of society and of history. His unbounded spirit and imagination, tempered by a sense of perspective but further emboldened by the relatively abstract level at which he often theorizes and speculates, have produced *Ecodynamics*,[1] a book of remarkably wide-ranging synthesis, in which his ideas are integrated for the first time.

Dr. Warren J. Samuels is professor of economics at Michigan State University. He is a graduate of the University of Miami and the University of Wisconsin and has been on the faculty of the University of Missouri, Georgia State University, and the University of Miami. He is a specialist in the history of economic thought, law and economics, and public finance. **An early version of this paper was presented at a panel discussion at a joint session of the American Economic Association and the Association for the Study of the Grants Economy, December 29, 1981, Washington, D.C. The author is indebted to numerous discussions with Robert Solo on Boulding's work.**

One theorem derivative from the study of the history of economic thought posits that the ideas of any writer of great substance and complexity are interpretable from a number of different perspectives. The ideas then acquire a different character and focus with each of the various perspectives. It is difficult, accordingly, and premature to predict how Boulding and *Ecodynamics* will be interpreted 50 years from now; the diversity of the elements of Boulding's synthesis will enable quite a few different readings.

Several qualities of Boulding's work are well known: He is prolific and wide-ranging. He often has been seminal, as in his work on systems theory, grants economics, and peace research. He has served as a catalyst of the work of others. He gives holistic and evolutionary turns to his ideas, although these qualities often have been obscured by his concentration on particular topics at the frontiers of the discipline without an apparent immediately felt need to generate explicitly the whole; up to now, the systems approach often is very evident, the system not so.

In *Ecodynamics* Boulding argues that to *physical* and *biological* evolution has been added *social* evolution, specifically the processes of knowledge formation and of bringing that knowledge to bear on social organization and practice. Mankind has the noosphere — the realm of knowledge and know-how — and thereby noogenetic evolution. Human knowledge-based activism is the new evolutionary process. Germs of this, particularly the vision of society as an organizational and evolutionary phenomenon and the importance thereto of knowledge, can be traced back centuries (the well-known conflict between tradition and reason is one consequence, to the dismay of conservatives), but the lack of vitality of that vision, at least among economists, lends an almost heroic aura to *Ecodynamics*.

For well over two centuries economists have believed in the general interconnectedness, and therefore the interdependence, of all economic variables. By extension, as in the later work of Pareto, this belief could be expanded to include all social variables. Boulding has attempted to provide a particular substance and structure to that belief.

Boulding's is a vast and complex paradigm, with elements of a model and with some specific hypotheses regarding structure, interaction, and continuity-change relationships. The distinguishing characteristics of his paradigm and model are multicausality, interaction, and cumulative causation.

There is something of an emphasis on tensions, although not conflict, within his analysis. Moreover, there are tensions within Boulding's work that replicate tensions in the real world.

One tension that marks, but does not mar, Boulding's synthesis is that between the mechanistic neoclassicism which some of this work retains and the open-ended evolutionism which is perhaps its distinguishing characteristic. Similarly, there is tension between his limited but still neoclassical preoccupation with equilibrium and his more overriding emphasis on disequilibrium. As Boulding might put it, everything in its proper place.

There are three principal elements of Boulding's grand paradigm, the elements between which he asserts a general interdependence, and each has three subcategories, triads added to the overarching triad of physical, biological, and social evolution. First, the TOP submodel distinguishes among things, organizations, and people. The words themselves are deceptively simple and perhaps inelegant, but they should elicit memories of quite diverse theories of economics, politics, and sociology which are more or less neatly encompassable therein in neutral and possibly unprepossessing terms. So, too, with the other triads. The KEM taxonomy distinguishes among knowledge, energy, and materials as factors of production. The TIE submodel distinguishes among threat, integrative, and exchange systems. Each of the three triads is comprised of further levels or subelements. Their internal and mutual interaction is complex, kaleidoscopic, evolutionary, and conflictual. Society is, in Boulding's view, a vast system for which he has endeavored to identify

the subsystems, or subprocesses, whose interaction-produced results are so open-ended as to defy deterministic science. Indeed, evolution, to Boulding, is probablilistic and nonteleological. Cumulative multicausation makes for radical indeterminacy. Unlike many of his colleagues in academe, Boulding is not disturbed by this. Inasmuch as he does not make an exclusivist and abrasive issue of this, and his presentation (both in person and in his writing) is delivered with charm and wit, little or no divisiveness results.

One may perhaps single out several key elements of his work. First, he emphasizes the inherently unpredictable, *vis-à-vis* the determinate, events ensuing from the complex interactions and evolutions of the TOP, KEM, and TIE social subsystems, as well as from physical and biological evolution. Second, the dynamics of the realm of knowledge, know-how, and learning — the noosphere — are ensconced in varieties of human activism and comprise the distinctive evolutionary process new with mankind. Third, for individuals and for society, the "image," expounded in an earlier book, defines both reality and values and bounds the horizon of the perceived actual, possible, and desirable. It, too, is evolving. Finally, there is the niche, the opportunities for survival provided by the vagaries of evolutionary interactions.

I cannot resist the obvious: Boulding himself is a noogenetic phenomenon inhabiting and contributing to the noosphere by advancing our image of man and society, attempting to fill a niche with substance in a sense of his own creation, but a niche which his own theory suggests was forged from the contributions of many predecessors and circumstances. The future is a question of whether there is such a niche for his work to fill.

Boulding is a man of peace and love. His work has constrained him to identify and work with conflict and fear, but only at a distance, reflecting distaste if not anxiety.

Boulding devotes a chapter and some passing discussions to power, and conflict is evident throughout the book. But neither is central, which is curious. It seems to me that the interactions within and among threat, integrative, and exchange systems, that is, among the central organizing principles in society, are in fact laden with conflict.

There are those tensions and others: tensions between conflict per se and growth of production; tensions between knowledge per se and the factors governing its genesis and use; tensions between functional and dysfunctional (pathological) evaluations; tensions between considerations of equity, or justice, and efficiency; tensions between increasing entropy and increasing complexity; tensions between mutation and selection and between both of them and human activism with regard to niches; tensions between methodological collectivist and methodological individualist approaches; tensions between interpretations of cooperative and authoritarian (for example, between coercive and noncoercive) behavior and relationships; tensions as to legitimacy; tensions among knowledge, power, and psychology variables.

The genius of Boulding's paradigm or aggregation of models is that it encompasses in principle all of these tensions. But tensions — and the conflict, social structure, power, and power play which they encompass — are not stressed. Boulding's is not a harmony model, but the conflictual quality is muted. For an explanation, one would have to penetrate Boulding's psyche.

Boulding also has not merely a sense of justice but a passionate interest in social justice. But this orientation is constrained by two other features of his mind: a strong desire for detachment and a sense of the existential, evolutionary necessity for compromises found in civilization. Boulding laments, I think, lost innocence.

Boulding seems to focus, not on power, social structure, and conflict, but on knowledge in the human activism which marks social evolution. There are several dimensions to this focus: In the noosphere there are both the several versions of science and the paradigms and ideologies contributing to the formation of the images which form our minds and channel our behavior. There are both deliberative and nondeliberative processes by which learned behavior and belief systems are transmitted and actuated. The role of learning is critical.

Knowledge perhaps can be usefully comprehended as reason (intellect) and will. Above all is the accumulation of knowledge.

But knowledge does not exist, and is neither formed nor used, in a social vacuum. There are questions of power and conflict which apply: What (whose) knowledge? What research and development program? Knowledge for what (whose) purpose or benefit? Knowledge and reason, then, must be seen as part of the TOP, KEM, and TIE subprocesses and their interaction, in which, for example, power, conflict, and social structure must figure, however relatively, and strangely, subdued they are in Boulding's work. Boulding stresses, in his chapter on power in society, both that decision implies power and freedom and that power may be understood as capacity to change the future. Would that those insights had been brought more to bear on the operation of the noosphere.

Perhaps the point is less that Boulding minimizes the presence of conflict and more that he opposes the Darwinian and Marxist idea that conflict is central to evolution. What evolves, according to Boulding, is the ecological system in which species may or may not have a niche. This is especially true of the physical and biological realms but it is true of the social as well. But within the social sphere there are conflict and power play within and among the TOP, KEM, and TIE subprocesses. In certain respects the system has a life of its own, but in many others choice and power are active forces as individuals and subgroups seek to control and change social and institutional structures to their respective advantage. Human activism is conflictual, not the least with regard to control of the image.

Boulding clearly believes that the economy involves more than static resource allocation, although it does include that. He also believes that there is more than one paradigm or model which is deservedly designated "economic." He is unwilling to reject neoclassical economics. He seeks constructively to add to and enrich the larger economics.

I have heard him stress that evolution is interaction under constantly changing parameters, a disequilibrium system; and that society is a historical product but that we now have the truly modern and human problem of controlling it deliberately. Boulding would be the first to acknowledge that the social evolutionary process is one of selection involving implicit valuation. It is well and good to believe, as Boulding may with Leonard Hobhouse and many others, that rational intelligence can replace blind instinct or tradition as a source of evolution. But whose intelligence, or intelligence with what (whose) image?

NOTE

[1]Kenneth Boulding, *Ecodynamics*, Beverly Hills: Sage, 1978.