
REVIEWS

SOFT ENERGY PATHS: TOWARD A DURABLE PEACE

By Amory B. Lovins

Friends of the Earth International, 1977. 231 pages. \$15.
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Reviewed by Charles H. Percy*

The quantity of attention given to energy today should not overwhelm us. We must remember that until recently energy, as a subject unto itself, was neglected. The social science of energy policy is still in its infancy.

Characteristic of its immaturity is the widespread belief that energy policy means only energy supply policy. Among some of my Senate colleagues there is a feeling that total decontrol of energy prices and subsidies for synthetic fuels and new nuclear technologies would solve our problems. It is felt that only this strategy would avoid great lifestyle changes. I disagree with this view.

To consume our domestic and gas supplies even faster than we are now is a policy of "strength through exhaustion" or "drain America first." We would need to discover a new Alaskan North Slope every several years just to stay even with rising demand and declining production from existing fields. Growth in consumption of these nonrenewable supplies is just a sophisticated way of stealing from our children. Total depletion of fossil fuels is the inevitable result of continuously rising demand.

We need instead to recognize a most fundamental principle: energy is a means, and not an end in itself. We should define the energy problem more accurately as the challenge of meeting our social and economic goals with the minimum amount of energy necessary. We must dispel the myth that increased use of energy means a better life, and that less energy means a lower standard of living.

In the fight to dispel such myths, a new spokesman is gaining prominence. Through the work of Amory B. Lovins, the science of energy policy has taken a quantum leap forward. His new book, *Soft Energy Paths: Toward a Durable Peace*, lays aside the myths and superficial analyses that have been so prevalent. In their place, he presents the complex web of interdependencies that influence, and are influenced by, energy choices. What he calls "hard" and "soft" energy paths differ not only in their energy generating techniques, but in their approaches toward energy and toward fundamental factors affecting the quality of people's lives. Where we are heading in energy use and where we are heading as a society are bound inseparably together. Whether or not one agrees with his conclusions, Lovins's approach to energy policy is sophisticated and illuminating. It should be mandatory reading for anyone who wants to participate constructively in the national energy debate.

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Lovins sees the hard path as an extrapolation of the recent past. "It relies on rapid expansion of centralized high technologies to increase supplies of energy, especially in the form of electricity." The soft path "combines a prompt and serious commitment to efficient use of energy, rapid development of renewable energy sources matched in scale and in energy quality to end use needs, and special transitional fossil fuel technologies." Examples of hard technologies include oil and coal burning power plants, nuclear reactors, and even centralized renewable resource devices such as orbiting solar collectors. Soft technologies encompass solar collectors on an individual or community scale, small wind turbines, local converters of waste products into alcohol fuels, hydro-powered air compressors, and others.

In any new science, most important advances are achieved by asking the most fundamental questions. "How can we expand energy supply to meet growing demand?" is a naive question with hidden assumptions that tend to bias the answer. As Lovins notes, the more effective question is "Who is going to require how much of what kinds of energy for what purposes and how long?" By asking first about end uses, energy assumes its rightful place as a means to those ends.

Lovins claims that soft path technologies can be used to satisfy all our end use needs. If that is true, and there is yet some question about it, then the choice between paths must be based on a comparison of their economic and social effects.

Lovins argues that the soft path is the more economical of the two. He attempts to calculate the lifetime costs of energy units produced per end use need satisfied. He concludes that soft path energy costs less than energy from power plants and large scale fuel distribution systems. He admits that his numbers are far from exact because he is trying to calculate very far-reaching effects. But at the very least, his economic theories raise provocative questions about the depth, scope and adequacy of current economic analyses of energy.

"It is not the technical or economic but the sociopolitical implications of energy paths that are paramount both in moral importance and in practical impact on political acceptability," Lovins claims. In other words, the complex implications of energy choices – until now never fully considered – should be the most important factors in determining energy policy. These implications could perhaps be summarized by the term "life-style changes." The soft path, based on diversity and localization, would have multiple benefits. Lovins claims it "simultaneously offers jobs for the unemployed, capital for business people, environmental protection for conservationists, enhanced national security for the military, opportunities for small business to innovate and big business to recycle itself, exciting technologies for the secular, a rebirth of spiritual values for the religious, traditional virtues for the old, radical reforms for the young, world order and equity for globalists, energy independence for isolationists, civil rights for liberals, and states' rights for conservatives." The broadest implication of the soft path is a "durable peace" within and among nations.

Lovins sees very different implications for the hard path. By necessitating large capital outlays, extensive security measures, and dependence by consumers on systems they can neither understand nor control, the hard path "bypasses traditional market mechanisms, concentrates political and economic power, persistently distorts political structures and social priorities, increases alienation, is probably inimical to greater distributional equity within and among nations, enhances vulnerability and the paramilitarization of civilian life, and nurtures – even requires – elitist technocracy whose exercise erodes the legitimacy of democratic government."

Whether these implications are certainties and to what degree they depend on energy policy alone involves much more discussion than Lovins gives them. But the strength of his underlying principles assures they will be discussed. Never again will energy policy be a simple question of supply and demand.

Lovins' most doubtful contention is that hard and soft energy paths are mutually exclusive. A commitment to the hard path will soon foreclose the option of pursuing the soft, he maintains. In the sense that a commitment to the hard path perpetuates a wasteful attitude that in turn perpetuates the hard path, Lovins is correct. But his arguments supporting an either/or energy choice are never fully developed.

Instituting a coherent energy policy is never going to be easy. Lovins' ideas are not going to make it any easier, because he is asking us to discard deeply-rooted beliefs and assumptions. But he has made clear just how basic and far-reaching energy issues are. His insights have changed the nature and content of the current energy debate for the better. *Soft Energy Paths* is an outstanding book and deserves to be studied widely.

It signals the coming of age of the science of energy policy.

THE VAST MAJORITY: A Journey to the World's Poor

By Michael Harrington

Simon & Schuster, Inc., New York, 1977. 281 pages. \$9.95.
ISBN 0-671-22529-4

Reviewed by James P. Grant*

Michael Harrington is best known for his seminal observations of American poverty in "The Other America." In his newest book entitled "The Vast Majority," Harrington analyzes international poverty, how the United States contributes to it, and what Americans might do to advance the lot of the world's poor. Like his earlier books, this is directed at the American people and, as one particular, at depriving Americans of the "cruel innocence which prevents us from seeing the wrongs we perpetrate" on the poor nations and peoples who comprise the "vast majority" on this planet.

His shock treatment includes the accusation that most Americans are "inexcusably unaware of the evil that is done in our name" through a "cruel innocence" in espousing an international system of free trade and global growth which makes the rich richer and keeps the poor poor. For Harrington, many Americans are similar to the "good Germans" of Hitler's time, and their white counterparts in South Africa today. Robert S. McNamara, president of the World Bank, and James Spain, the career diplomat who is U.S. ambassador to Tanzania, are cited as symbols of America's cruel innocence. McNamara's

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participation "in our international wrongdoing, like that of the nation itself, is unwitting and even dedicated to effecting results that are nearly the opposite of those that are in fact achieved." He later softens his stance by saying "my task would be emotionally easier if those whom I criticize were evil; they are not. But then, that is why one is permitted to hope."

One can disagree with many of Michael Harrington's arguments, as I do, and still find this book both compelling reading and impressive in its wide-ranging and historically perceptive analysis. His synthesis of development literature and the inevitable litany of statistics are interspersed with notes taken on three continents recording Harrington's intensely personal reactions to his encounters with international poverty.

Harrington conveys a sense of urgency and indignation over the still-growing disparity in income between the advanced countries and the developing countries of the Third World. He notes the emergence of a Fourth World of more than a billion people—one quarter of mankind—who live a daily agony and whose numbers are still increasing. Yet Americans, who are so generous in responding to natural and localized disasters, have become bored "with the tedious details of degradation . . . let a billion men and women and children rot day after day, and the very enormity of their reality tends to dull the moral sense."

Harrington also argues that "the first powers to benefit from free trade saw to it that no other economies would duplicate their good luck"; that poorer countries and regions within countries are so underdeveloped through lack of infrastructure, education, and even physical nourishment that they are unable to take advantage of existing systems; and that the current workings of the multinational corporations perpetuate the relative inferiority of the developing countries.

Specifics of Harrington's analysis can be challenged, including his blanket characterization of foreign investment and multinationals as leeches on the foreign exchange earnings of developing countries, without disagreeing with his conclusion that the existing system is not working adequately for world development. Many Fourth World countries, most analysts would agree, are so underdeveloped that they will need far more than a revival of the present international trading system if they are to develop at a satisfactory rate for the rest of this century. Major increases in development assistance will also be required for these countries.

Some of the most interesting and illuminating parts of the book are those in which Harrington struggles with the remedies for the exploitative system he describes. He frankly admits that "when one shifts from what is wrong to how to make it right there are enormous difficulties," and notes, "I am painfully aware of how meager their (the critics') practical proposals are." He specifically rejects the radical view that global chaos would advance the well-being of the poor, stating that "the worst thing that could happen to the Third World during the next 25 years would be a catastrophic collapse of Western capitalism." He fears that such a collapse would lead to control either by the totalitarian right, as in Germany in the 1930s, or by a Communist bureaucratic ruling class. He believes that a return to global prosperity and fuller employment in the industrial countries of the northern hemisphere is a precondition for the important northern working-class support of industrialization in the developing countries to their south. This leading American socialist also

believes that democratic socialism has its greatest opportunity only if literacy, productivity, and political development attain certain minimal levels—and he notes that all Fourth World countries are still well below the per capita income levels of the United States and the United Kingdom in 1776.

This leads logically to his agenda for action—proposals which are surprisingly similar to those of Robert McNamara and others of alleged “cruel innocence”: “The President of the United States should solemnly commit this country to the abolition of absolute poverty throughout the globe. That is the plight of 650 million people who live on incomes of \$50 or less.” He would do this largely through measures which are under active consideration by the very Carter Administration in which he confides so little hope: commodity agreements, increased aid, debt relief and support of increased industrialization in the international south with accompanying measures to provide employment for displaced workers in the north.

Harrington notes, quite correctly, that American capitalism could make money from a moderate increase in world justice. The same result has come about within the industrial democracies as a result of New Deal measures such as Social Security and collective bargaining. Certainly the United States would be far less prosperous today if it had not shared its economic power with, and opened its markets to, Western Europe and Japan after World War II.

I wish Harrington had devoted more attention to the positive benefits for the northern industrial countries that might result from increased cooperation with the developing countries, and less to his allegations of American economic exploitation. It is also surprising that Harrington explicitly assumes a return to economic prosperity in the northern hemisphere independent of southern actions. He omits the major self-interest argument—manifested by rapidly growing evidence—that an indispensable if not sufficient condition for a return toward the high growth with low unemployment and inflation rates of the 1960s is cooperation between the developed and developing market economy countries. Greater proof will be needed to convince the American public that such a program is in their interest before Harrington and others can achieve the objective of this timely and challenging book: “to persuade a decent people to turn toward the wretched of the earth and to cooperate with them in the work of justice.”

BANKRUPTCY REFORM**Legislative Analysis No. 19, 95th Congress**

American Enterprise Institute for Public Policy Research,
Washington, D.C., January 30, 1978. 83 pages. \$2 (paper).
ISBN 0-8447-0201-3

Reviewed by Thomas E. Harvey*

In 1970, following a study by the Brookings Institution¹ of the practical workings of the Bankruptcy Act which noted the increase in the number of bankruptcy cases filed each year and detailed the difficulties encountered by those passing through the bankruptcy process, the Commission on Bankruptcy Laws of the United States was established to "study, analyze, evaluate, and recommend changes" in the Bankruptcy Act and in the system of bankruptcy administration.²

In 1973, the commission submitted its two-volume report³ to Congress, recommending a complete new bankruptcy code and commenting extensively on bankruptcy practice within the United States and the ameliorating effects of its proposed legislation. The commission's bill, then known as the Bankruptcy Act of 1973, was introduced in Congress as H.R. 10792 and S. 2565. An alternative bill, introduced at the request of the National Conference of Bankruptcy Judges, known as the "Judges' Bill," was introduced as S. 4046. Both bills were reintroduced in the 94th Congress as H.R. 31 and H.R. 32 and as S. 235 and S. 236, and hearings were held on them.

While this complete overhaul of the bankruptcy system was being considered, the Supreme Court promulgated Rules of Bankruptcy Procedure,⁴ bringing about a comprehensive revision of bankruptcy practice, bringing it more in line with the practice followed throughout the federal courts. In effect, these procedural rules repealed a substantial portion of the Bankruptcy Act, albeit leaving the courts to determine which substantive provisions remained operative.

As new bankruptcy legislation has been introduced and discussed, a consensus has been reached among most serious observers of the bankruptcy scene that the American bankruptcy system is in need of reform. In the main, it was a system enacted for a simpler time. The number of cases generated by today's

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1. Stanley, Girth, et al., *Bankruptcy: Problem, Process, Reform* (The Brookings Institution, 1971).
2. The commission, consisting of nine members, three appointed by the President and two each by and from the Senate, House and Judiciary, was created by Public Law 91-354, 84 Stat 468 (1970).
3. *Report of the Commission on the Bankruptcy Laws of the United States*, H.R. Doc. No. 93-137, Parts I and II, 93rd Cong., 1st Sess. (1973).
4. 28 U.S.C. Sec. 2075 provides that "[t]he Supreme Court shall have the power to prescribe by general rules the form of process, writs, pleadings and motions, and the practice and procedure under the Bankruptcy Act." Such rules shall not modify any substantive rights, and all laws in conflict with such rules shall be of no further force and effect after such rules take effect. Rules of Bankruptcy Procedure became effective at various times throughout the 1970's, the most recent being those operative in Chapter IX cases which took effect August 1, 1976.

credit economy have taxed the courts to the breaking point.⁵ Much of the cost of the system is devoted to cases producing little or no benefit to creditors. Only the most hidebound counsel, fearing to see the repeal of his hard-gained expertise, could object to bankruptcy reform.

Yet the bankruptcy bar is rigidly divided based upon the type of client generally represented, each camp constantly on the alert to ensure that its ox is not the first to be gored. Lawyers representing institutional creditors are ever vigilant to ensure protection of benefits such as the right of setoff enjoyed by their banking clients.⁶ Lawyers representing non-bank creditors are equally focused in their effort to eliminate such perceived preferences to ensure the availability of assets for their creditor clients. Even bankruptcy judges, now appointed by U.S. district judges for a six-year term, are actively concerned about the elevation of their status under proposed reform legislation.

On January 4, 1977, Rep. Don Edwards introduced a new and completely revised bankruptcy act in Congress, drawing upon, yet differing in significant respects from, previously introduced legislation. Following subcommittee markup and amendments, the bill was re-introduced on July 11, 1977 as H.R. 8200. H.R. 8200 was passed by the House of Representatives February 1, 1978.

On October 31, 1977, S. 2266 was introduced by Senators DeConcini and Wallop. S. 2266 differs from the House bill in several respects, including the method of appointment, tenure and authority of bankruptcy judges, court appointment of trustees rather than the U.S. trustee system under Attorney General supervision, and reliance on state exemptions for debtors. That bill is presently before the Senate Judiciary Committee's Subcommittee on Improvement in Judicial Machinery.

Bankruptcy Reform, an 83-page pamphlet published by the American Enterprise Institute as its Legislative Analysis No. 19, 95th Congress, analyzes the House and Senate bills in detail, considering how each treats fairly broad bankruptcy issues. The analysis then discussed arguments for and against each position with reference to current law, the Brookings Institution study⁷ and the report of the commission.⁸

As anyone knows who has attempted to compare proposed statutes covering the same subject matter, such an analysis can be immensely helpful. The form of this analysis is especially useful, treating issues in fairly broad terms, rather than pointing particular semantic distinctions between parallel sections.

5. "In fiscal 1948, 18,510 bankruptcies were filed, as against 214,399 for the year ending June 30, 1977. The all time high for filings was 254,484 in fiscal 1975. The number of business 1 (1978) bankruptcies has increased for the last seven years." American Enterprise Institute, *Bankruptcy Reform*, Legislative Analysis No. 19, 95th Congress, at 1 (1978).

6. Bankruptcy Act, Sec. 68a (11 U.S.C. Sec. 108) provides that "[i]n all cases of mutual debts or mutual credits between the estate of a bankrupt and a creditor the account shall be stated and one debt shall be set off against the other and the balance only shall be allowed or paid." Bank deposits constitute a debt owing by a bank to its depositor. Upon the filing of a bankruptcy petition, a bank invariably sets off the bankrupt's deposits against any amount owed to the bank by the bankrupt, claiming the net amount due it in the bankruptcy proceeding.

Representatives of the banking industry wax poetic in defending a bank's right of set off. In testimony on H.R. 31 and H. R. 32 before the Subcommittee on Civil and Constitutional Rights of the Committee on the Judiciary of the House of Representatives, Robert J. Grinnig, testifying on behalf of the American Bankers Association, referred to the proposed changes to the right of set off as being "morally and commercially wrong." *Hearings, Bankruptcy Act Revision*, Part 3, at 1750, 94th Cong., 2d Sess. (1976). Discussion of the quality of the wrong this change would effect may better be left to philosophers. In fact, however, elimination of setoff would have an effect on a borrower's cost of money.

7. *Supra* note 1.

8. *Supra* note 3.

Yet, in legislation, semantic distinctions are important, and attention must be paid them as this bankruptcy reform legislation wends its way through the legislative process. Various interest groups can be expected to make their case forcefully before Congress, giving rise to extensive amendment of this legislation before it reaches the Conference Committee stage. Because the opposing forces with an interest in this legislation are powerful, the pull between them on different issues will be hard, and other legislative analyses such as this will be essential to enable both bankruptcy practitioners and attorneys with only peripheral dealings with the bankruptcy system to follow the further legislative development in this important area.

THE ROLE OF THE SUPREME COURT IN AMERICAN GOVERNMENT

By Archibald Cox

Oxford University Press, New York, 1976. 118 pages. \$6.95.
ISBN 0-19-827411-4

Reviewed by Kenneth F. Ripple*

On initial encounter, this book presents several psychological barriers for the American scholar or lawyer. In an era of post-Watergate memoirs, there is an immediate impulse, upon seeing the colorful jacket with the now familiar photograph of the victim of the "Saturday night massacre," to dismiss this volume as just another of the many "war stories" on today's market. Second, upon scanning the preface and discovering that the book is based on the four Chichele Lectures delivered at All Souls College, Oxford, it is all too easy to accept uncritically the author's prefatory comment that the work is geared to a "general university audience . . . for the most part lacking professional legal training or specialized knowledge of American history and institutions".

The persistent reader need wait only several pages for his reward in overcoming these initial barriers. Long before completing the first chapter, he will become quite aware that he is experiencing a significant contribution to American constitutional literature. Certainly, as the author readily admits, the general topical outline is well-trodden ground (p. 1). Yet, this book crystalizes, with a rare sharpness, the theory and practice of modern constitutional policy-making at the Supreme Court.

In his introductory remarks, Professor Cox sets forth a threefold objective: (1) to set out the kind of issues which come before the Court and the extent of constitutional protection accorded individuals and minorities; (2) to inquire into the uses and abuses of constitutional adjudication as an instrument of social policy; (3) to inquire into the sources of the "legitimacy" of the Supreme Court's constitutional decisions, its ability to command acceptance and compliance with its decisions (p. 1-2). Each of these areas is indeed treated separately in a scholarly, although highly readable, fashion. The overall result, however, is far greater than the sum of its parts. In the end, what Professor Cox attains

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is a particularly well-balanced and comprehensive analysis of the role of judicial power in our modern democracy. As the reader proceeds, he encounters many self-contained discussions which are sufficient food for several evenings of sustained thought. Indeed, there is a frequent temptation to interrupt completion of this work to renew old acquaintances in the *United States Reports*. Particularly tempting is the author's challenge to Mr. Justice Holmes's remark concerning the necessity for judicial review of Congressional enactments. Fortunately, however, no area is so well developed nor so worthwhile as his treatment, central to the work, of the subtle relationship between judicial restraint and the "legitimacy" of the Court's decisions.

In developing this theme, Professor Cox begins strongly. His opening chapter, "The Supreme Court and the System of Government," explores essentially two topics: (1) the doctrine of judicial supremacy as the cornerstone in our system of "checks and balances;" (2) the sources and limits of the American people's attachment to constitutionalism. By using the "Tapes Case" as his fulcrum, Cox breathes into his commentary that special forcefulness and authority which only someone who "has been there" can bring to such otherwise abstract inquiries. Cox focuses on *United States v. Nixon*¹ neither as an historical event culminating in the first presidential resignation nor as a narrow holding on "presidential privilege." Rather, *Nixon* is presented as a jurisprudential event: the American reaffirmation of the principle that, ultimately, "[i]t is, emphatically, the province and duty of the judicial department, to say what the law is."²

For Cox, this doctrine of judicial supremacy is rooted not in the rationale of the Great Chief Justice in *Marbury v. Madison*³ but in "the rich soil of necessity" (p. 29). Concisely, but subtly, he sets out the very important practical relationship between this balance wheel in our separation of powers scheme and the "case and controversy" requirement with its aim of "avoiding weakening the courts by embroiling them unnecessarily in the turbulent waters of political controversy" (p. 28). Noting the tendency of the Court to read the term "unnecessarily" loosely in modern times, the author poses, rather bluntly, two "institutional worries": (1) will the Court, by its activism, sacrifice so much of "the power of legitimacy that attaches to decisions within the traditional judicial sphere" as to disable itself from performing its vital balance-wheel role in our separation of powers scheme; (2) will such judicial activism result in an excessive reliance upon the Courts rather than on the democratic processes and "deaden a people's sense of moral and political responsibility for their own future. . . ." (p. 103)?

Cox's answers to these two issues pose the most thought-provoking parts of the work. In regard to this first "worry," the author finds little danger of the Court's outrunning its "power of legitimacy" *as long as* it limits its giant steps from the traditional judicial sphere to areas where "the change is impelled by one of the deeper lasting currents of human thought that give direction to the law" (p. 111). In these areas, says Cox, our natural law inheritance legitimates change and, indeed, may compel it. For instance, if a constitutional right can be newly defined under the due process clause "in principles sufficiently

1. 418 U.S. 683 (1974).

2. *Marbury v. Madison*, 5 U.S. (1 Cranch) 137, 176 (1803).

3. 5 U.S. (1 Cranch) 137 (1803).

absolute to give them roots throughout the community and continuity over significant periods of time . . . ” (p. 114), they will enjoy sufficient “legitimacy” to warrant acceptance. Conversely, Cox would maintain that a judicial deviation into an area where change is not compelled by “the lasting currents of human thought” (p. 111) is doomed to eventual failure since it is not in harmony with the political society’s “enduring values” (p. 111). For example, the rationale of the abortion decisions,⁴ notes Cox, hardly articulates values worthy of such legitimacy (p. 113).

Why, then, is the prospect of overruling these cases so bleak? Perhaps the answer lies, at least partially, in the strength of Professor Cox’s second “worry,” a problem not as easily answered as he maintains. “The great opinions of the Court,” says Cox, rather than draining our people of moral and political stimulus as they break new ground, can “be the voice of the spirit, reminding us of our better selves” (p. 117). Certainly, there have been great decisions such as *Brown v. Board of Education*⁵ which have played precisely such a role. But the particular hardly proves the rule. Perhaps we have become too used to accepting the Court’s resolution of our social and moral concerns, even when the opinion did not speak “to our better selves” (p. 117). Perhaps we have abdicated so much of our political and moral conscience to the “judicial process” that we no longer do distinguish between “ground-breaking” opinions based on “enduring values” and those based simply on a utilitarian “weighing process.” Indeed, Cox’s own criticism of modern equal protection analysis strongly suggests that such is the case. In determining that certain human endeavors encompass “fundamental rights” and are therefore subject to “strict scrutiny” protection, the criteria of decision, notes Cox, are incapable of principled articulation (p. 75).

The enduring contribution of this book may well be to make us rethink whether the heavy reliance of Americans on judicial institutions, noted by de Tocqueville almost two centuries ago, has caused the judiciary to “overload the circuits” and, in so doing, to slip, half unconsciously, into elective and political, rather than principled judgments. At the same time, perhaps our willingness to “let the judges handle it” has dulled our sense of political values to the point where Cox’s “natural law” theory of validation is no longer meaningful.

4. *E.g.*, *Roe v. Wade*, 410 U.S. 113 (1973).

5. 347 U.S. 483 (1954).

PUBLIC TRANSPORTATION AND LAND USE POLICY**By Boris S. Pushkarev and Jeffrey M. Zupan**Indiana University Press, Bloomington, 1977. 242 pages. \$18.50.
ISBN 0-253-34682-7**Reviewed by Arnold H. Karvasarsky***

At a time in which the cost of urban mass transit has become an increasingly greater burden on the nation's resources, it behooves policy makers on every level to acquire a more rigorous understanding of those factors which shape the demand for transit service.

Those who bask in complacency, and expect that intra-regional mobility will be maintained irrespective of land use patterns, will sooner or later face disappointment when the economic realities of the cost of such mobility are realized.

The benefits of intelligent land use planning are made considerably more valuable if we are better able to understand the full economic costs of alternative patterns, and their impact on the mobility of residents and workers. The benefits of intelligent transit planning are better appreciated if we are able to understand the full economic costs of alternative modes as they impact existing and planned land use patterns. In *Public Transportation and Land Use Policy*, Messrs. Pushkarev and Zupan set out to address the major issue of the relationship between urban residential density and transit effectiveness. They have achieved in one volume an outstanding addition to the empirical research in the field.

The topic is hardly a new one to urban planners and transportation specialists, but the scope of this important study, and the rigorous analysis provided by the authors, add a new dimension to existing literature. *Public Transportation and Land Use Policy* has obvious value to the professional planner and urban affairs specialist: its careful analysis of well-researched data crystallizes much of the muddled waters in this field. Moreover, the wide-ranging practical applications included in the Pushkarev/Zupan study make it particularly important to the legislator and administrative official concerned with developing appropriate public policies to solve the problems in this area.

Mr. Pushkarev is vice president, research and planning, for the highly-respected Regional Plan Association, and Mr. Zupan is the association's chief planner. Thus, it is not surprising that the greatest portion of the empirical evidence in this study is drawn from the expansive 31-county New York region, which encompasses parts of New York, New Jersey and Connecticut. This by no means limits the value of this book: the diversity of land usage patterns within this region provides a broad spectrum of models which are applicable to any urban setting. Numerous comparisons with other American urban centers confirm the applicability of this analysis.

The authors begin their work with a brief review of the economics of public transit service, most notably the responsiveness of transit demand to quantifiable elements (notably price, service and availability of alternatives,

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including, of course, the automobile). This leads into a major discussion of the demand for transit as a function of urban densities. Finally, the reader is led through a well-defined exercise in estimating work and non-work trip demand from such factors as distance between origin and destination, and residential and non-residential densities.

Since demand represents only one side of the analysis, a chapter is devoted to the supply of transit services. These range from taxicabs, dial-a-bus and local and express bus service to the various intensities of fixed rail. The true economic costs of these alternates is fully discussed, in order to facilitate comparisons between different modes of urban transportation. Complementing the discussion of supply is a chapter concerned with the service characteristics of these systems, as well as with the nature of "peaking" patterns.

These matters are then set forth in a particularly well-reasoned and usable fashion, allowing the reader the luxury of analyzing the demand and supply side for transit under alternative assumptions about urban densities and service levels.

Policy ramifications, set forth implicitly throughout the Pushkarev/Zupan study, are explored in depth in the book's summary, enabling legislators and planners to explore the broad range of interrelationships which must be considered in balancing public transportation planning with land usage policies. Finally, the book's rigorous appendix challenges the reader to designate values for the multitude of variables necessary to the actual determination of travel demand in a corridor of one's own choosing. This appendix facilitates an understanding of the complexities which affect the development of growth patterns.

In this field, answers are cheap and plentiful. The Pushkarev/Zupan study does considerably more than merely offer answers to frequently-raised issues. It provides a useful, well-defined set of criteria which will enable decision-makers to recognize alternatives in the planning process. *Public Transportation and Land Use Policy* is a decidedly cost-effective investment for the man or woman concerned with the delicate balance between land use planning and public transportation, and for the planner or policy-maker seeking to explore alternative modes of urban transportation and the effects of these alternatives on urban and suburban growth patterns.

A GUIDE FOR THE PERPLEXED

By E. F. Schumacher

Harper and Row, Publishers, Inc., New York, 1977. 140 pages. \$8.95
ISBN 06-013859-9

Reviewed by Fred M. O'Regan*

Although the activities of government do not reflect it, the 1970s have witnessed a far-reaching re-examination of the goals and methods of development – both economic and social, domestic and international. One of the cornerstones

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of this re-evaluation emerged with the publication of E. F. Schumacher's *Small is Beautiful*, an eloquent and practical call for the reorientation of economic and technological processes to conform with the size, scope and legitimate purposes of local communities.

In *A Guide for the Perplexed*, Dr. Schumacher delves far beyond the reaches of economics and sociology to explore the interrelated questions of how the world has become so "dehumanized" and how we might "transcend" this dilemma. Since Schumacher died just a few months ago, this work represents, in a very real sense, his intellectual epitaph. Although clearly open to challenge in some areas, this is an important work: brilliant in logical consistency, deep in content, concise in style. As such, it should be read as both a major treatise on the modern world and a badly needed reintroduction to the dying art of philosophical reasoning.

Dr. Schumacher's major thesis is that we must develop new "maps of knowledge," or new methods of inquiry and understanding in regard to man and the world.

Throughout the book, Schumacher insists that the bestowing of pre-eminence upon scientific methodology as a *sufficient* basis for the understanding of reality is a serious intellectual mistake, one which has ushered in an age of "scientific imperialism," now two centuries old and threatening to destroy us. Although spiced with theological sentiment, Schumacher's caveats regarding our over-reliance on scientific methodology are quite consistent and often insightful.

Given the power of man over the world, our modern dilemma is viewed by Schumacher as essentially a human one. Thus, primary knowledge must increasingly be sought to lend a more thorough understanding of ourselves in relation to the world. This is a "humanization" process and must take into account our highest faculty - self-awareness - as both a subject and object of that investigation.

Coming back to the modern mind set, Schumacher makes his major point: the empirical logic of science is both appropriate and useful when used for its intended purpose - namely, to understand and "manipulate" the lower levels of existence (i.e., those below the level of consciousness); however, once put to use in the exploration of the higher realms (i.e., man), the method becomes not only insufficient but dangerously misleading. That is, ". . . causality, which rules supreme at the level of inanimate matter . . . ceases to rule . . ." in the attempt to understand human nature. (p. 102).

This argument is, I believe, both valid and important. Our reliance on empirical methodology in the attempt to understand ourselves has proved *not only insufficient, but also preclusive of further and more valid understanding*. As our logic (or phenomenology) has become restricted to the directly sensible, we search the brain to find the mind (as if, in Schumacher's analogy, we may know the programmer by studying the computer), and attempt to investigate our behavior according to prescribed statistical methodologies, specifically designed to exclude consideration of a possibly infinite number of variables.

To illustrate his point, Schumacher examines one of the premier theories of modern science - evolution. Whereas ancient religious practices, such as Buddhist meditation, have long contributed to the deepening of human understanding, they have been, in the main, dismissed as mystical. Meanwhile, "evolutionist doctrine" (clearly distinguished by Schumacher from the biological

theory *per se*) is accepted as valid while purporting to causally explain everything from “molecules forming a membrane . . . to . . . the emergence [of the genius] of Shakespeare.” Indeed, the point he makes is *not that we have supplanted faith with reason, but that we have placed our faith in the not totally reasonable.*

Schumacher’s solution to this dilemma involves “human transcendence” above and beyond our self-imposed, intellectual “reductionism;” in other words, a return to the basic search for human wisdom and not the continued evasion of it. Beyond this he is not quite clear. Seemingly, his major purpose is to engender re-thinking and then leave the specifics up to us, although an additional work may have been planned.

There are, of course, some drawbacks to his position. What is perhaps most disturbing is his unyielding emphasis on man as being somehow totally beyond the confines of nature. In fact, our current social and ecological predicament is at least partially attributable to the continued existence of such an essentially medieval attitude.

As with any well-reasoned philosophical treatise, however, the true value of *A Guide for the Perplexed* stems as much from its mode of discourse as from its specific conclusions. Its practical implications for the advancement of mankind in both human and economic terms are far-reaching. If we take, for example, one of the chief concerns of Schumacher’s professional life – development amongst the poor of the Third World, we find that we have arrogantly been tossing around large amounts of capital and sophisticated technology with nonsustaining and often disruptive results. We continue on this path because we fail to recognize that, in large measure, the solutions to such problems have more to do with basic social change than economic growth. Leaning on the crutch of seemingly endless and misdirected empirical studies, we continue to evade essential questions which relate more basically to social philosophy than economics. This continued reliance on “scientism” in human problem-solving could eventually prove disastrous, and we had best begin to grapple with the much broader concerns of the human condition.