Ian Barbour on Religion, Science & Technology

About This Issue
by Richard Dietrich, Guest Editor

What a privilege and surprise to be a guest editor of the *Ellul Forum.* This issue features the thought of Ian G. Barbour, Bean Professor of Science, Technology, and Society, Emeritus, at Carleton College in Minnesota. Ian has been important for the Science, Technology and Society Program here at Penn State; as well as for the National Association of Science, Technology, and Society (NASTS); and importantly, as an Ellul-like figure in our technological culture, society, system, and world.

Ian Barbour completed two series of Gifford Lectures (1989-90 and 1990-91) at the University of Aberdan in Scotland. He joins the ranks of such Gifford lecturers as William James, Carl Jung, and Reinhold Neibuhr. The two resultant books—his magnum opus—are reviewed herein by your guest editor. These books, *Religion in an Age of Science* (1989-90) and *Ethics in an Age of Technology* (1990-91) contain clear and patient reflections on the nature of and interconnections among ethics, religion, science, and technology. Also, they offer "comprehensive and sure-footed synthesis" to peacably conjoin them, giving the reader both a status in the world and a perspective above it.

Ian G. Barbour is the great conciliator. His vision is this: With religion and science conspiring to understand reality, and with ethics and technology reciprocating to emote reality—human existence will persist and prosper. He recognizes the dark side with its nihilism, evil and sin; but emphasizes the light side with its reality, goodness, and reconciliation. For many years Ian was professor of religion, professor of physics, and director of the Program in Science, Ethics and Public Policy at Carleton College. Thus his life's work (as reflected in the Gifford Lectures) has been to synthesize religion and ethics with science and technology.

With the above in mind, I want to give you some background information about the honoring of Ian Barbour in this issue of the *Ellul Forum*. It came about through the honoring of Ian Barbour at the recent annual conference of the National Association for Science, Technology, and Society—held February 8-11 in Arlington, VA. It was there that an annual lectureship (The Life and Work of Ian Barbour) was inaugurated through my responsibility as Values and Religion Co-chair. Darrell Fasching, who knows of Barbour's stature, caught wind of the above "annual lectureship," and the rest is history—or will be when you read this.

Therefore, this issue of the Forum contains, in large part, material from that STS Conference lectureship. My plan is the following: I am opening this Forum, somewhat as I did the lectureship. Next, Ian Barbour will address us, as he did there, with his "Technology and Theology" piece. Then, James A. Nash will respond to Barbour's address with "Norms and the Man: A tribute to Ian Barbour." This is a thoughtful, heartfelt, witty, and revealing response; based in part on Barbour's second volume from his Gifford Lectures *Ethics in an Age of Technol-*

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ogy. Alas, another responder, who took ill, was to have responded with material from Barbour's first volume, *Religion in an Age of Science*.

Included in the lectureship materials are my reviews of the above two volumes to help acquaint you with them. But having done these reviews, I thought it fitting for the *Ellul Forum* to contain an attempt at a few comparisons concerning the approaches and systems of Barbour and Ellul. They address the "religion and technology" question quite differently. I have added a few observations of my own regarding what I see as their surprising neglect of analysis concerning technology in the Post-Modern Era.

My hope is that you thoroughly enjoy this issue.

The Ellul Publishing Project

Funds are being raised to assist Ellul's heirs in the transcription and publicaton of his unpublished manuscripts. To date almost $3500.00 has been raised. Anyone interested in contributing may do so by sending a check made out to the *Ellul Forum* and marked for the Ellul Publication Project. Preliminary work is now being done on *The Ethics of Holiness*.

The Gifford Lectures 1989-1991

Religion in an Age of Science, Volume One. 1990. 297 pages; and *Ethics in an Age of Technology*, Volume Two. 1993. 312 pages. Ian G. Barbour. Harper, San Francisco.

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Ian Barbour's past scholarship has contributed to the Penn State Science, Technology and Society Program: his 1980 book *Technology, Environment, and Human Values* is a staple here. These two new volumes — his magnum opus — are capable of solid contribution to S-T-S endeavors of every stripe. We shared breakfast at the National Association of STS held near Washington, D.C. in March of this year. He sympathized concerning this task: the review of two volumes with over 600 pages of scholarly reflection spanning nearly a lifetime.

This being the Ellul Forum, I want to set the scene vis 'a vis Ellul. He is not referenced nor indexed in Volume One; and is only once referenced, therefore indexed, in Volume Two. Although they share a conservative christian theology, Barbour does not share Ellul's pessimism. In fact, Barbour includes a one-page Reply to the Pessimists, and then explains "I am most sympathetic with the contextualists, though I am indebted to many of the insights of the pessimists." (page 24)

Regarding "technology" then, Barbour is a contextualist (i.e., technology is both a product and an instrument of social power); but what is he regarding "science?" He is a conciliator (i.e., science and religion ought to allow all of us to grasp reality peacably). Having obtained a Ph.D. in physics, he taught and researched several years, then returned to graduate school in philosophy and religion.

Regarding structural components, both books contain nine chapters, and they are heavily end-noted with 447 entries in Volume One, and 767 in Volume Two. Each book has three parts, with three chapters in each. They appear, therefore, homiletically arranged, perhaps owing to the format of the Gifford Lectures.

The epistemology of the volumes should be noted — they follow a similar approach. In Volume One, the first part relates religion to science; and it relates ethics to technology in Volume Two. Barbour uses a comparative approach which is typical of a conciliator. Part Two treats three large aspects common to religion and science (physics, astronomy, evolu-

tion) in Volume One; while in Volume Two, three large issues concerning ethics and technology (agriculture, energy, computers) are discussed. Part Three, in Volume One, aims for a studied conciliation of religion and science; while Part Three, in Volume Two, thoughtfully places technology under control within its social context via ethics.

With the above foundation in place, I want to fashion a modest structure of key insights, understandings, etc. to convey a sense of the author's essence.

Barbour begins the first volume by facing the conflict between science and religion head-on. Part One, Religion and the Methods of Science begins by opposing two extremes — scientific materialism and biblical literalism; then works toward middle ground through conciliation. It is reached, for Barbour, by a clever shift from natural theology to a theology of nature. The former starts with science and reason while the latter begins with (in this case) the christian tradition based on religious experience and historical revelation. Barbour admits "I am in basic agreement with the 'Theology of Nature' position, coupled with a cautious use of process philosophy." (page 30)

Part Two, Religion and the Theories of Science, contain chapters 4,5,6 which are entitled Physics and Metaphysics, Astronomy and Creation, and Evolution and Continuing Creation, respectively. These chapters are written ad populum — no specialist jargon, no forbidding math, no assumed background. Yet the major conflicts and touchpoints are treated — as by all great teachers — with clarity, fairness, and thoroughness.

These middle chapters have two purposes: one, to address key issues, concepts, and metaphysical/theological implications of the above three relational pairs; two, to acclimate the hearer/reader to the shallow water, before it gets deeper.

Part Three, Philosophical and Theological Reflections, delves deeply into human nature, process thought, and the God/Nature relationship. These three chapters grip the reader through the height, depth, and expanse of Barbour's thought in this, the central stage of his life-drama. He is wide-ranging in referencing, perceptive in epistemic organization, and exhaustive in considering concepts, explanations, and models toward understanding theodicy and odyssey.

Volume Two *Ethics in an Age of Technology* is a quasi-apologetic for the Christian ethical framework; within it, after all, modern technology has arisen. Contra Ellul, Barbour contends that Western religious traditions can waken humanity from the mesmerizing mileu of technique. As stated before, he is a hopeful contextualist, not a doleful pessimist, nor naive optimist.

Material from Barbour's *Technology, Environment, and Human Values* (1980) has been important for this new book. For example, Chapters 3,4,5,10,11 and 13 of the former are reworked into Chapters 1,2,3,4,5 and 9 of the latter. His very helpful values schema of material values (survival, health, material welfare, employment), social values (distributive justice, participatory freedom, interpersonal community, personal fulfillment), and environmental values (resource sustainability, ecosystem integrity, environmental preservation) has been skillfully integrated into this new work. As the author states on the back cover "The challenge for our generation is to redirect technology toward realizing human and environmental values on planet earth."

Part One, Conflicting Values, begins with the conflicting views of technology as liberator, as threat, and as instrument of power — views held by optimists, pessimists, and contextualists, respectively. Florman, Ellul, Pacey, Ferkins, et al. are cited; but the new insight here is from Barbour's important delineation of the "two-way interaction" between technology and society.

This new insight drives a hopeful wedge behind which the Human Values discussed in Chapter 2, and the Environmental Values in Chapter 3 can enter technically ingrained discussion. Barbour's strength of forcing religious values fairly and thoughtfully into supposed secular discussion is very evident here. Tillich did it by "correlation," Barbour does it by "conciliation."

As mentioned earlier, Part Two deals with agriculture, energy, and the computer — chapters 4, 5, and 6, respectively. In my view, the intent to be informative regarding these issues (e.g., 132 references for the 30 pages of Chapter 4) overpowers the application of Barbour's values schema. He obliquely raises the value issues throughout these chapters; then, in a concluding page or two, makes a stronger connection to several applicable material, social, or environmental values. The connections lack compulsion.

For me, the lack of an accompanying religious impetus when engaging these issues allows the overweening technological milieu to diminish the importance, incisiveness, and power of Barbour's thought. However, the referencing, clarity, and value-related discussion make this section worthwhile, if not, engaging.

From the analysis of the three previous particular technologies, Part Three turns to a general discussion of Technology and the Future. It is here, most of all, that I miss Barbour's forte — his irresistable imposition of helpful and reasonable religious resources into a secularized discussion.

Chapter 7 takes issue with three Unprecedented Powers of modern technology which have huge ethical components: environmental degradation, genetic engineering, and nuclear weapons. There is not much new in this chapter and the ethics content is further reduced, as is the religious impetus.

The above can be said for Chapter 8, Controlling Technology, even more so. This chapter, and the previous one, could well serve as required reading for a technology and public policy course because it deals with governing, assessing, and redirecting technology. It touches all the bases, but lacks indepth analysis of deeper sources for human control of technology.

The final chapter points to New Directions for technology. Barbour returns to his strength as conciliator by insisting on the legitimacy of ethical/theological considerations within technical endeavor. It is strong because of this: he is clearly writing for me and mine, for you and yours, for the future of humanity. Yes, technology should be appropriate! We should conserve! The 98 million overweight American adults should diet for health and justice! Values can and are changing!

Barbour concludes, "I believe that the combination of education, political action, catalytic crises, and (ethical/religious) vision can bring about a more just and sustainable world."

With these two volumes, Ian Barbour's sure-footed scholarship has comprehended a half-century of techno-scientific civilization. His prodigious referencing has garnered from afar. His ordered thought has penetrated the basic dilemmas and issues of post-industrial modernity. His insistent humanity has wrestled with those in scientific and technological endeavor regarding the legitimate and necessary participation of ethics and religion in all human endeavor.

A great soul and proven scholar has spoken. For this, and the above reasons, these works deserve a place on the shelf of any educator who even brushes their content.

Technology and Theology

Ian G. Barbour

Technology and Social Justice

Environmentalists have been concerned about the impacts of technology on the environment but have often neglected issues of social justice. Social activists have usually reversed these priorities. I have argued that the Christian tradition has a distinctive contribution to make in bringing together commitment to environmental preservation and social justice. Since 1970, many writers have explored differing forms of Christian environmental ethics, but relatively few have asked about Christian attitudes toward technology in the context of recent awareness of global environmental and resource constraints.

Starting with the prophets of ancient Israel and the teachings of Jesus and the early church, the biblical tradition has challenged unjust social institutions. Many of the leaders in movements for prison reform, the abolition of slavery, women's suffrage, and civil rights were motivated by their religious beliefs. Concern for social justice today must include analysis of the effects of current forms of technology.

1. Inequitable Distribution of Costs and Benefits

Frequently one group benefits from a technology while other groups bear the brunt of the risks and indirect costs. A chemical plant may benefit consumers and stockholders, while its effluents, emissions, and toxic wastes put workers and local citizens at risk. Giant tomato harvesters bring profits to food processing companies and large landowners, but small holders lose their land and farm workers lose their jobs. Biotechnology research is directed mainly to the diseases of affluent societies, while tropical diseases affecting, far larger populations are neglected. Computers, communications, and information are sources of social power, and access to them varies greatly within nations and between nations. Technology has contributed to the enormous disparities between rich and poor countries because most new technologies require extensive expertise, capital, and infrastructure. Consumption by industrial nations is responsible for a grossly disproportionate share of global pollution and resource use.

Within industrial countries, injustices occur when the risks from pollution fall disproportionately on the poor. The Commission for Racial Justice of the United Church of Christ took the EPA list of the nation's worst toxic dumps, and correlated it with census data on the area with the same zip code. The data which had the highest correlation with the location of a toxic dump was the percentage of Afro-Americans and Hispanics in the local population. The urban poor are almost always exposed to higher levels of air pollution, water pollution, noise, and lead poisoning than citizens with higher in-

comes, and they have little economic or political power to defend themselves from such risks.

2. The Concentration of Economic and Political Power

Technology is both a product and an instrument of social power. It tends to reinforce existing social structures. In the Third World, the Green Revolution favored large land-owners who could afford tractors and fertilizer, and this led to the further concentration of land ownership. In Western nations, absentee or corporate farm ownership is common, and food processing companies sometimes control the whole food cycle, from farm inputs and crop or feedlot contracts, to food processing, marketing, and restaurant chains. Economic power translates into political power through election campaign contributions. Strong lobbies have promoted policies and subsidies favorable to oil, coal, and nuclear power, while solar energy and conservation measures have received little support. Large-scale capital- intensive technologies require huge investments and the centralization of management, making participation by workers more difficult.

The biblical tradition is realistic about the abuse of power. The concept of sin refers to the actions of groups as well as the attitudes of individuals. Every group or nation tends to rationalize its own self- interest. In large-scale centralized systems, such as nuclear power plants, human fallibility and institutional rationalization can have catastrophic consequences. In policy decisions, technical experts often use a narrow range of criteria and have a vested interest in a particular technology, so we need input from a wide range of people who might be affected by a decision. But the biblical tradition is also idealistic in its affirmation of creative human potentialities. Through technology, we can use our God-given intellectual capacities to promote human welfare within a more just social order. The biblical view of human nature would lead us not to reject technology but to seek to redirect it toward the basic needs of all people.

3. Priorities in Research and Development

A large fraction of the world's scientists and engineers are in defense-related research, and many of the remainder are working on projects that will provide luxuries for the privileged. Of the world's total expenditures for scientific research and development, only 6% are in the Third World. Adequate food, health and shelter are the most universal and the most essential human needs. Technologies of agriculture, public health, and low cost housing are thus crucial to developing nations as well as to people trapped in poverty in industrial nations. Energy, climate change, and population growth are also urgent global problems, so high priority should be as-

signed to such research areas as solar energy, high-protein crops, and family planning in all its dimensions. Both environmental preservation and resource sustainability should be considered in all technological policy and design. Energy conservation reduces pollution, global warming, and our trade deficit. Products which are recyclable cut down on pollution and resource depletion, and in most cases also conserve energy. Waste is reduced further when several processes can be integrated, as in the cogeneration of heat and electricity. In industrial nations, future growth should be sought in the technologies related to services, such as education, health care, and communications, rather than in the more resource-intensive and heavily polluting manufacturing and consumer-goods industries.

4. Jobs and the Environment

The environmental movement has been accused of being elitist and of neglecting the impact of environmental regulations on employment opportunities. However public opinion surveys have consistently shown broad support for environmental measures among all socioeconomic groups. Labor unions and environmentalists have cooperated in working for occupational safety and the regulation of chemicals in the workplace. Both groups have sought greater accountability on the part of corporations and government bureaucracies and greater public access to information and decision processes.

EPA has estimated that industries producing and deploying equipment for the control of air, water and land pollution have created more jobs than have been lost by environmental regulations. Many existing jobs would have been jeopardized by environmental deterioration - in agriculture, fishing, and tourism, for instance. Some companies have threatened to close if emission standards were tightened, but few have actually done so, and most of those that did were heavy polluters with obsolescent plants. There have of course been layoffs that caused great hardships to individuals and local communities, but job retraining, adjustment assistance and job creation programs can mitigate such consequences.

The protection of the Spotted Owl in old timber stands on public lands in the Pacific Northwest did indeed imperil the livelihood of local mill workers. However the Spotted Owl is only one of the plant and animal forms that need protection in the few remaining virgin forest areas. Moreover, the decline of timber-related jobs was primarily the product of many years of overcutting with inadequate replanting on private lands, together with the introduction of automated mill equipment and the shipment of logs overseas for processing. After protective legislation, 9 our of 10 displaced millworkers who entered a federally financed retraining program in Oregon found new jobs; in one year the state added 100,000 jobs and now has the lowest unemployment rate in a generation.

5. Democratic Control of Technology

The direction of technology cannot be left to economic forces alone because the market ignores environmental impacts and issues of social justice. The market is an efficient mechanism for allocating resources, but it must be supplemented by political decisions to achieve environmental and social goals. National legislation includes environmental regulations, allocation of federal funds for research, taxes, subsidies, and trade policies which influence new technologies. Democracy is difficult in a technological society, because policy decisions often involve technical questions, and also because corporations committed to particular technologies make large campaign contributions to legislators favoring their interests.

Reform of campaign financing would provide more opportunity for environmental, civil rights, public interest, labor and church groups to work together to influence the electoral and legislative process.

Christian Attitudes Toward Technology

Apart from issues of social justice, consider four points at which the Christian faith can offer a distinctive perspective on technology.

1. A Long-term View

Many of the impacts of our technological activities will be felt by future generations. Degraded land, eroded soil, and decimated fisheries and forests will take decades to recover. Radioactive wastes from today's nuclear power plants will endanger anyone exposed to them 10,000 years from now. If we attempt the genetic engineering of germ-line cells in plants, animals, or human beings, generations far in the future will be affected. The world of politics, however, tends to take a very short-term view. Political leaders find it difficult to look beyond the next election. The main concern of business and industry is this year's bottom line. Economic calculations give little weight to long-term consequences because a time discount is applied to future costs and benefits.

The biblical tradition, by contrast, takes a long-term view. Stewardship requires consideration of the future because God's purposes include the future. The Bible speaks of a covenant from generation to generation "to you and your descendants forever." The land, in particular, is to be held as a trust for future generations. This long time perspective derives from a sense of history and ongoing family and social life, as well as accountability to a God who spans the generations. So it is not surprising that sustainability has been a major theme in statements of the World Council of Churches, the U.S. Catholic Bishops, and several Protestant denominations.

2. A Global View

Acid rain from German factories harms Scandinavian forests; coal-burning plants in the U.S. damage Canadian lakes and trees. Brazil clears rain forests in order to export timber and beef to industrial countries - leading to the extinction of thousands of rare species that are an irreplaceable genetic heritage and a potential source of new medications. CFC refrigerants released in any nation deplete the ozone layer, subjecting people half a world away to more solar radiation that causes skin cancer. In an interdependent world, poverty and political instability in one country affects other countries through trade, immigration, terrorism, and military action.

Religion has often been a divisive force. Religious intolerance has contributed to most of the wars and ethnic conflicts around the world today. Christianity has a very mixed record, but it could be a strong voice for a global outlook. The biblical writers affirm our common humanity and assert that "we have been made one people to dwell upon the face of the earth." Micah holds up a vision of universal peace: "They shall beat swords into plowshares, and their spears into pruning hooks; nation shall not lift up sword against nation, neither shall they learn war any more" (6:3-4). Many churches today are active in working for world peace and in supporting the U.N. They have contributed to famine relief, but more significantly they have advocated agricultural and technical assistance to developing countries. Such assistance is more long-lasting than emergency relief; it is an act of global justice and not simply of individual charity.

3. An Attitude of Humility

The legends of Prometheus, Faust, and Frankenstein all point to the dangers in the search for unlimited power. The attitude of manipulation and control which is associated with technology is particularly harmful when it is extended to human life. It is tempting to seek "technical fixes" for social problems to avoid making basic changes in social institutions. Unqualified reliance on technology as a source of salvation is the modern form of idolatry. Technical rationality and obsession with things can impoverish our experience and our human relationships. I submit that awareness of the sacred and recognition of human limits can provide antidotes to the search for technological omnipotence. Receptivity and acknowledgment of grace are correctives to the dangers in control and manipulation, but they run against the dominant outlook of a technological society.

Humility requires recognition of limitations in human character and social institutions as well as ecological limits. It would lead us to respect the divine purpose and evolutionary wisdom embodied in the order of nature, and to be sensitive to the far-reaching and often unpredictable repercussions of our interventions. This does not mean that we should abandon technology, or that genetic engineering, for example, should be ruled out. Genetic defects cause great suffering in human life and we should correct them when we can, with provisions to ensure justice in access to such therapy. But we should be cautious about irreversible changes, such as germ-line alterations in human genes, because we do not know enough to predict all the consequences. We should also be more cautious in seeking positive improvements in human nature than in trying to remove impediments to normal functioning, because our ideals for human improvement are so strongly influenced by the current ideologies of our culture.

4. A Vision of the Good Life

Conservation measures in industrial nations would contribute significantly to a more just and sustainable world. Greater efficiency and improved technologies can cut down on both pollution and resource use. But I believe we must go beyond efficiency and look at our patterns of consumption. In our society there are powerful pressures toward the escalation of consumption. By the age of 20, the average American has already seen 350,000 TV commercials. The mass media hold

before us the images of a high-consumption life style. Self-worth and happiness are identified with possessions. Our culture encourages us to try to fill all our psychological needs through consumption. Consumerism is addictive, and like all addictions it involves the denial of its consequences.

The Christian tradition offers a vision of the good life that is less resource-consumptive than prevailing practices. It holds that, once basic needs are met, true fulfillment is found in spiritual growth, personal relationships, and community life. This path is life-affirming, not life-denying. Religious faith speaks to the crisis of meaning that underlies compulsive consumerism. We should seek a level of sufficiency that is neither ever-growing consumption nor joyless asceticism. A vision of positive possibilities and an alternative image of the good life are likely to be more effective than moral exhortation in helping people to turn in new directions. For most people in our nation, restraint in consumption is indeed compatible with personal fulfillment. We can try to recover the Puritan virtues of frugality and simplicity. For the Third World, of course, and for low-income families in industrial nations, levels of consumption must rise substantially if basic needs are to be met.

The new vision will require a reordering of national as well as individual priorities. With the end of the Cold War, the center of our foreign policy could shift from the containment of communism to human well-being and the preservation of our planet. If a third of the $600 billion the world spends on arms each year were spent on sustainable agriculture, energy conservation, renewable energy sources, and family planning, the prospects for the whole planet would be dramatically altered. The biblical vision encourages us not to reject technology but to redirect it toward such human and environmental goals.

Reference

Barbour, Ian G., Ethics in an Age of Technology, Harper San Francisco, San Francisco, CA, 1993.

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Norms and the Man: A Tribute to Ian Barbour

James A. Nash

I am honored to have the opportunity to honor Ian Barbour. My purpose is to say something about the man and his values by looking at one of his major works, *Ethics in an Age of Technology*, the second volume of his 1989-91 Gifford Lectures. I first became aware of Ian Barbour through two valuable works he edited in the early 70s: *Earth Might Be Fair* and *Western Man and Environmental Ethics*. I have been a fan of his ever since.

The most pressing question about Ian is: What is he vocationally? A physicist, ecologist, philosopher, theologian, ethicist, technologist, even occasionally political analyst, or what? The answer is: all of the above to a significant degree (Speaking as an ethicist, I think Ian knows far more than enough about ethics to qualify as an honored member of the guild). Ian Barbour has no respect for disciplinary lines; he is a Multidisciplinary Man - and that is a major strength of his writings. He shows a broad knowledge base, wide-ranging skills, and a comprehensiveness of concern - features which are true of both volumes of the Gifford lectures.

Another notable feature is that Ian Barbour is a gentleperson. He is intensely fair, balanced, or judicious in his analyses and criticisms of various positions - some of which I know he really dislikes. Remarkably, I could not find a single flamboyant sentence, not even a word, in *Ethics in an Age of Technology*. (This is quite in contrast to me: I enjoy throwing an occasional incendiary.) His writings are clear and precise - features which are expressions of his fairness and honesty.

Yet, the feature I admire most in his works is the pervasive sense of ambiguity. Frankly, I believe that ambiguity ought to be elevated to doctrinal status, and I suspect that Ian would endorse that belief. He consistently recognizes the mix of negative and positive values, both in actuality and potentiality (which may be an extension of his balance and fairness). Typically, he maneuvers between one-sided approaches, and supports, for example, "selective economic growth" and a mix of small and large technologies. He knows technology as both threat and liberation, and sees both the dignity of work and its degradation. This sense of ambiguity is helpful in avoiding both romanticism and cynicism. It reflects the influence, I suspect, of both Reinhold Niebuhr and Paul Tillich.

To show the man and his thought best in *Technology*, I decided to search for the moral norms (or the personal and social virtues) which underlay his evaluations/judgments. They say a lot about the character and concerns of Ian. I will identify ten of these norms and make a brief comment on each. All are grounded in a sense of solidarity, a moral response to the fact of social and ecological connectedness.

1) *Equity* - or distributive justice, the equitable distribution of burdens and benefits, particularly in taking care of the needs of the poor and maximizing benefits to the least advantaged (following John Rawls). Equity affirms a right to the basic necessities of life. It is grounded in universal human equality. One has a duty to be responsive to this right. In fact, the fundamental moral purpose of technology is to provide for basic human needs and ecological integrity. This prominent concern for equity comes out in his discussions of everything from computers to the just distribution of risks associated with nuclear wastes. (See pp. 36-37, 110, 200, 203, 228, 235, 243.)

2) *Participation* - to enable powers of choice in decisions affecting our lives, in politics, the marketplace, and work. Participation is tied closely to freedom; Ian speaks of "participatory freedom." It entails public discussion and public consent, and involves the accountability of economic and political institutions to the people. Thus, Ian calls for the democratic governance of technology. (See pp. 9, 38-39, 114, 176, 221-22, 237, 240.)

3) *Sustainability* - that is, responsibilities to future generations. Ian stresses the truly long-term, not the next couple generations. One of the major themes of the book is "impacts distant in time and space." He tolerates no discounting of the future (at least not with-out justification). This value shapes his perspective on nuclear energy and solar energy. (See pp. 66, 126-27.)

4) *Subsidiarity* - or, more accurately, the *controllability* or *diversification of power* (which is usually the context in which Ian discusses subsidiarity). He expresses grave concerns about the concentration of economic and political power. Barbour wants the decentralization or dispersal of political, economic, and technological power. He sees technology, in fact, as unprecedented power. He is also concerned about "large scale" projects; he prefers the intermediate technological scale (245) or a mix of small and large projects. If nuclear energy is justified at all, smaller reactors are preferred (128). He clearly wants public interventions in markets and the regulation of technology.

His concern about power is closely linked to "participation," and it is grounded in a realistic recognition of the powers of sin. He is consistently aware of the moral ambiguities in human character, and the inevitable mixture of good and evil in human projects. (See pp. 13, 39, 128, 179, 245.)

5) *Bioresponsibility* - that is, respect for the rest of nature. Humans have moral duties to nonhumankind, not to ecosystems as such, except as these are instrumental values for life forms. Ian rejects biotic egalitarianism, but his principle of discrimination among species, which gives priority to humans, is not clear in *Technology*. He shows a sensitivity to the welfare of all life, and he supports environmental integrity for that purpose. (See pp. xvii, 69.)

6) *Frugality* - Resources are sufficient for need, but not for greed, he says. His concern is about both profligate consumption and production, both social and ecological responsibilities. Frugality is the foundation of justice and sustainability in Ian Barbour. Typically, for him, frugality is a middle way. It is an important theme in his moral thought. (See pp. xvii, 137, 142, 251- 262.)

7) *Efficiency* - a moral criterion at some points in Ian's thought, but not one that he has clearly developed. I'd like to see him develop the moral dimensions of efficiency, because he'd have some unique perspectives. He clearly would recognize the ambiguities in the concept. For example, ultraefficiency in energy consumption is laudable; in fisheries, however, a whole species or ecosystem can be wiped out through indiscriminately efficient drift nets. (See pp. 140, 244.)

8) *Proportionality* - a norm which is generally implicit rather than explicit in *Technology*. Costs/risks ought to be proportionate to the good - or evil - expected. This criterion is evident when he deals with risks of low probability but great magnitude. (See pp. 205, 228.)

9) *Flexibility/Adaptability* - a criterion which is implicit in *Technology*, but seems to be a basis of evaluation when he talks about fitting action (35, 44) or "appropriate technologies" which fit local social, cultural (and I add ecological) conditions. This norm is undeveloped in Ian's thought - and in everyone else's. Indeed, it is the most undeveloped ecological norm. It is close to sustainability, and perhaps a dimension of it, but I suspect it is distinct.

Adaptability might be described as ecosystemic compatibility or the mimicking of nature. It is an accommodation to the forces and constraints of nature. It is fittingness. It allows room for the unpredictable and uncontrollable; therefore, it is an insurance strategy, such as the redundancy of habitats to protect endangered species. Adaptability is an antidote to the managerial arrogance and imperialism of some advocates of "sustained yield" - for example, in fisheries - who consider a species to be an isolated unit rather than a part of an ecosystemic whole. (See pp. 35, 44, 245, 247.)

10) *Humility* - the pervasive norm in Ian's thought, because it is a pervasive feature of the man. Humility guides all the other norms. Adaptability, for example, is empowered by a sense of humility about how little we know ecologically. Humility recognizes the limitations on all human powers and avoids overconfidence in our capacities.

These norms give insights into the character of Ian Barbour. They are noble norms, and they give evidence of a noble character in a man who takes them seriously.

References

1. Barbour, Ian G., *Ethics in an Age of Technology*, Harper San Francisco, San Francisco, CA, 1993.

2. Barbour, Ian G., *Earth Might Be Fair - Reflections on Ethics, Religion, and Ecology*, Prentice-Hall, Englewood Heights, NJ, 1972.

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Ellul and Barbour on Technology

by Richard A. Deitrich

Ellul published *The Technological System*[1] in 1980, the same year as Barbour's early major book, *Technology, Environment, and Human Values*[2]. We have used these books in our STS curriculum, relying heavily on their seminal (politically correct in this case) thinking about technology. As you are aware, Ellul is usually spoken of as a pessimist; Barbour, however, is a self-confessed contextualist. I call him a "mediator" of Snow's two cultures. His literary culture expertise is, of course, in theology.

In our flagship course "Critical Issues in STS," we use Ellul's basic characterization of technology as artificial, autonomous, self-determining (organismic), self-augmenting, and means-oriented. This characterization, as you know, seems to give technology a "being" of its own — thus Ellul has an ontological approach. This, we explain, is *one way* to understand technology. To help the students identify with Ellul's "milieu" thesis, we use a 50-item S & T opinion survey with statements such as "The world is a safer place now than it was 150 years ago," and "S & T will find solutions to our environmental problems." They respond by circling one of these: (SA, A N, D, SD). We make sure that Ellul's ontological approach toward understanding *modern* technology is very clearly explicated. (Note: Early in the class we carefully distinguish between generic, modern, and science-based technology.)

This "pessimistic" view is then softened by using Barbour's "contextual" view. His tripart values schema has worked well in our courses during the eighties, especially. It is as follows:

Material Values	Social Values	Environmental Values
survival	distributive justice	resource sustainability
health	participatory freedom	ecosystem integrity
material well being	interpersonal community	environmental preservation
employment	personal fulfillment	

The above schema as well as Barbour's organizing plan within *Technology, Environment, and Human Values* reveal his "volitional" approach toward understanding technology—as opposed to Ellul's ontological approach. The book has three parts—Conflicting Values, Environmental Policies, and Scarce Resources. His overarching theme seems to be this: Humans can sort out their values; they can incorporate these into policies which are just and sustainable; and, with this incorporation, they can cope with technology and the finite resources of planet Earth when technique and scarcity are accepted, understood, and properly addressed by humane, value-laden policies.

Their Depiction of Technology

Barbour's contextualism, with its volitional approach to controlling technology, allows him to mediate between religion and science, and to *redirect* technology through values. Indeed, his two Gifford lectures (and resultant volumes) attempt this mediation and redirection—these have been his life's work as a physicist and theologian.

To assure you that I am sure-footed about the above, here is the last paragraph of his preface which summarize the five aspects of the scientific age which set the agenda for volume one, *Religion in an Age of Science*:

> In looking at these five challenges—science as a method, a new view of nature, a new context for theology, religious pluralism, and the ambiguous power of technology—my goals are to explore the place of religion in an age science and to present an interpretation of Christianity that is responsive to both the historical tradition and contemporary scene.[3]

The "mediation" intent is obvious here, but I think we in this forum are more interested in Barbour's redirection intent concerning technology. Coincidentally, the final paragraph of volume two, *Ethics in an Age of Technology* is also instructive here: "The challenge for our generation is to redirect technology toward realizing human and environmental values on planet earth."[4]

Enough has been said, I trust, for us to conclude that Barbour does place technology in the context of human creativity and control. We can do technology, and we can control technology because we are in the image of God. We can misuse technology because of sin, but we can redirect technology through religion and its concommittant ethics. Thus modern science-based technology is depicted as fairly neutral regarding evil, an imitation of God regarding creativity, and a mainly controllable endeavor regarding responsibility. Nature—and nature's God—is, for Barbour, still the controlling milieu.

In comparing Ellul's "pessimistic" approach, we recognize that he depicts modern science-based technology very differently. Although the idea of "technique" has deep conceptual meaning for Ellul, it is science-based technology that powerfully impresses this "technique" upon reality—as does the body impress the human mind upon reality.[5]

Ellul sees modern technology as the result and embodiment of minds and Mind which are obsessed by technique. Mind

must be written both small and large because of his intent. His intent is to warn about "fulfillment" of dangerous, demonic, and evil local and worldwide potentialities based upon intense analysis of modern technology as the instrumental cause. Thus Barbour's "redirection" intent, although thoughtful and well-intentioned, probably appeared to Ellul as the effort of an amiable general who, with his defenses breached, wants to talk the enemy into entering a peace agreement.

A Brief Systems Analysis

Indeed, Barbour's system does expect both sides of the "religion and science" equation, and the "ethics as technique versus technology as technique" means) to be under humane, reasonable, and just control. It is true that the "religion *in* an age of science" motif does allude to our S and T milieu, as does the "ethics *in* an age of technology" motif. But without Ellul's dramatic "technological usurpation of nature" scenerio, Barbour's system lacks motivational dynamic. His milieu can be livable and manageable if people on both "sides" recognize that they are, in some cases, misguided, underinformed, and working against their own best interests. As Barbour said "The challenge...is to redirect technology...." His mediation is intended to halt the hegemony of S&T, and to result in mutual respect and well-being through integrative harmony.

In looking at his use of "age" instead of "milieu," my sense is that Barbour is actually proposing peace (as did the general in my analogy) so that these two human endeavors—religion/science and ethics/technology—can be joined to combat their mutual enemy in the coming age of post-modernism.

Let me explain. Religion, forming the common cultural center, had hegemony over S&T throughout the Renaissance; but was weakened by the Reformation. For this reason (and because of advances im concepts, instrumentation, and math, etc.), pre-modernism has given way to modernism with its most distinguishing characteristic being modern science and modern technology—I am speaking of Western Society. Now the *world* is becoming post-modern, before much of it has become modern—i.e. modern in the sense that shared scientific knowledge and widely used technology form the common cultural center. My understanding is that neither common religion—with its ethics, nor scientific knowledge—with its technology, will form the common cultural center of post-modernism. To this thought I will return later.

I have searched Barbour's works, including his research paper/booklet *Science, Technology, and the Church* [6] for signs that he recognized Western Societies rapid shift from the Modern Age toward the Post-Modern Age. No, it appears he did not because it is not obvious in his system. This is surprising.

But is the impetus toward post-modernism afforded by technology more obvious in Ellul's system? It is, and it isn't! I have searched five of his works [7] and found no direct concern with post-modernism per se; however, since *The Technological Bluff* is his most recent work, the recognition of something like it is more latently powerful. Chapter XI Technical Progress and the Philosophy of the Absurd contains my case in point.

In Chapter XI, Ellul speaks of the absurdism of Camus, the exitentialism of Sartre, and the Nihilism of Nietzsche. He sees these life-views at work behind Nazism because their effects became actualized through the atrocities at Auschwitz et al., and in the obliging conducts for which Fasching and others still seek explanation. On the first page of this chapter, Ellul talks about a life-view which goes beyond Nazism. Without naming it, he sets forth a post-modernism explication:

> To live is a pure fact. There is no meaning in what happens, nor are we to search for meaning or to attribute it History makes no sense, it is going nowhere, it obeys no rules, it has no permanence. Good and evil do not exist....There is permanent misunderstanding. What we do is foolish to others;...hell is other people.... Only what exists s is real. But this, too, is as shifting and uncertain aswater sand. [8]

He continues by discussing the effect of the above philosophy of the absurd on scientific thinking. Then he closes the chapter by coupling the above sensitive, existential, picture with short sections about technical, economic, and human absurdity. This is, according to my research, as close as Ellul gets to speaking of the Post-Modern Age in his system—with its ontological approach to technology, and its intent on explaining the "fulfillment" of history by technology. (I trust that an Ellul scholar will address this issue in a later Forum issue.)

My puzzlement about Ellul's system has two aspects. One, does he anywhere posit within technology the intersection of supernatural good, supernatural evil, and ambivalent human good/evil enterprise? This could go far in explaining the autonomous, self-augmenting, etc. —in short— ontological characteristics of modern technology. Two, does Ellul anywhere explain the role of technology in a theodicy of God, satan, and fallen humankind? If so, where; if not, why? (I leave it to Ellul scholars to answer these questions.)

Cautious conclusions

My own "system" is in better alignment with Ellul's thought than Barbour's. I am pessimistic concerning our future—unless unusual divine intervention occurs. Technology provides the means for "shallowing" humanity's morals and meanings as well as amplifying the effect of evil. A global totalitarianism could well grip humankind with cultural/social absurdism, existentialism, and nihilism. This time there will be no Judeo-Christian civilization to fight for the self-evident truths that humans are endowed by their creator with certain inalienable rights, etc. This time, those seeking to turn back the dehumanization may be without sufficient resources in nature, religious motivation from culture, scientific capability in society, and access to technology to confront a global aggressor. This despot may have sufficiently altered nature, its certainties, and human being to brook no human adversary. (The Roman destruction of Jerusalem and the following diaspora of the Jews is an apt analogy here.)

When humanity is sufficiently alienated from nature; and nature is sufficiently replaced by the milieu of technology; and nature's God is sufficiently replaced by science—then what? Perhaps this is what Ellul is getting at by saying—

> This ideology of a divine, soteriological science in association with a dream world is reinforced by what we anticipate and by what is about to come seemingly with no human direction and in obedience to none of

the existing classical laws. Science is becoming capable both of absolute novelty and also of the regulation of a world, as is only proper for the diety. Like all deities, it has an oracular power. We ourselves can no longer will or decide. We leave this to the benificent science in which we believe. [9]

Here, Ellul clearly ontologizes science, but on a different level than technology.

What, I believe, Ellul did not see is that modern science—having spent much of its moral and cultural capital (from mainly Judeo-Christian religious sources) in the Modern Age—will be altered, thereby losing its aura of pragmatic certainty and its ability to hold together a human common cultural center for civilized humanity. As in Nazism, other concerns could become more urgent than the right to life, liberty, and the pursuit of happiness. We could again see something like Nazism arise; this time a new form of social Darwinianism could be sanctioned by a much more widely relativised scientific community surrounded by nearly "universal" so called norms and certainties which are derived from the exigencies of the moment.

I see it this way. The source of "truth" (mainly in the form of universal norms of conduct) which formed the common cultural center in *pre-modern* Western Society has been abandoned in large part. Alongside the above Judeo-Christian source of "truth," came modern science to form a new common cultural center in Western Society based on "fact." Now *modern* Western Society is abandoning its source of "fact" (mainly in the form of universal laws of nature), and a new common cultural center is forming to usher in *post-modernism.*. This new common cultural center, based on neither "truth" nor "fact," is based on "technique." The source of "technique" (mainly in the form of universal technical applications) is modern technology from Western Society, and now the world. "La Technique" was, of course, built on the above truths and facts from the two preceeding Ages.

We have continually shallowed human spirit by discounting universal norms of conduct which define our human-ness, and we have continually blunted human reason by relativising universal laws of nature which provide certainties. This, I think, explains Ellul's chapters regarding a global escape to absurdity in post-modernist society with its new common cultural center based on technique. *This "technique-oriented" global society with its technological milieu will, in my view, give rise to the societal and cultural absurdism spoken of by Ellul.* This will be similar to present-day forms of cultural existentialism, which stay safely supported in their caccoons of essential society. But without the support of a sufficiently moral and rational society, existentialim becomes absurdism. Chaos will replace cosmos.

This will occur when the moral-norm capital of pre-modernism, and the certainty capital of modernism are nearly expended. Absurdism is even now at the door; it is admixtured with various forms of *escapism*, and there are numerous and various means of escape. Western society is widely using many means of escape such as— abandonment, abortion, abuse, alcohol, crime, divorce, drugs, euthanasia, insanity, media, the cyberworld, sports, suicide, violence. These are only a few of the ever-widening activities of escape which embody in our world an absurd attitude toward the transcendant with its norms for truth, and toward nature with it laws

for certainty. When humanity will not face-up to these norms and laws, it will face-away to what remains. What does remain?

NOTES

1. Jacques Ellul, *The Technological System* (New York: Continuim Publishing Corp. 1980).

2. Ian G. Barbour, *Technology, Environment, and Human Values* (New York: Praeger Publishers, 1980).

3. Ian Barbour, *Religion in an Age of Science* (San Francisco: Harper, 1990) p. XV.

4. Ian Barbour, *Ethics in an Age of Technology* (San Francisco:Harper, 1993) p. XIX.

5. I think that this parallel, born of Cartesian dualism, has been a strong factor in Ellul's analysis of technology in which he sees it as impressing a heartless/soul-less/efficient rationality upon reality. Thus humans have lost the tripart self-understanding which allowed the spirit/soul (religious) nexus to oversee the mind/body (techno-scientific) nexus. Thus "la technique" has become autonomous in relation to "le sacr'e".

6. Ian Barbour *Science, Technology, and the Church* (Cleveland: United Church Board for Homeland Ministries, 1994).

7. The five books are the following: *The Technological Society*(1963); *The Meaning of the City*(1970); *The Technological System*(1980); *The Humiliation of the Word*(1985); *The Technological Bluff*(1990).

8. Jacques Ellul, *The Technological Bluff* (Grand Rapids:Eerdmans Publishing Company, 1990) p. 199.

9. *Technological Bluff* pps. 185-186.

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Book Reviews

In the Vineyard of the Text by Ivan Illich.
Chicago: University of Chicago Press, 1993.

Reviewed by Joyce Hanks

Ivan Illich believes that our Western approach to the use of books is currently undergoing a second massive sea-change, following the first such event more than eight hundred years ago. Current movements away from conceiving of the book as a *text* give us the necessary perspective, he believes, to examine the process through which the book reached that status in the first place. Readers of Jacques Ellul's *The Humiliation of the Word* (Grand Rapids: Wm. B. Eerdmans, 1985; French ed. 1981), will find significant parallels in Illich's book.

Unlike most of Illich's books I have seen, *In the Vineyard of the Text* takes a rather traditionally documentary approach to its subject, complete with massive footnotes and bibliography. Following his main line of argument, however, requires very little reference to the scholarly apparatus: Illich shows that, in the time before certain technical changes in book production in the twelfth century, reading was primarily an oral matter, a way of following or discovering what someone had *said*. By the thirteenth century, books served mainly to record another person's *thought*, and book design had evolved so as to make that thought highly accessible to others.

Illich has found a useful vehicle for grounding and elaborating on what he sees as a major shift in Western habits: the *Didascalicon* (dating from 1128), a guide to reading by Hugh of St. Victor, a twelfth-century Flemish theologian, philosopher, and mystic who lived in a Parisian cloister. *In the Vineyard of the Text* is organized as a free-wheeling commentary on the most pertinent sections of Hugh's book. Since the *Didascalicon* instructs in the "old" manner of reading (which will soon begin to disappear from the medieval scene), Illich can contrast it with what he calls "bookishness," the approach to books that we moderns know best. According to Illich, bookishness, in its turn, is about to disappear, as the screen replaces the page in the twentieth century.

What significance do such changes hold, in Illich's view? In part, the same significance Ellul found: the word loses power and importance when reduced from something spoken by another person to the status of a series of disembodied notions to be manipulated at will by others. For Hugh of St. Victor, reading constituted a path to virtue, a way of discovering God's remedy for human sinfulness and fallen condition. Reading for this purpose required certain gifts, intentions, and attitudes, as well as the development of skills related to memory, meditation, historical knowledge, and exegesis. By the late twelfth century, Illich believes that reading had ceased to center on the desire for moral change. The book had became more a source of knowledge than of wisdom. Previously, books had dealt with nature or God; but the new approach concerned the mind. Leisurely reading that had earlier led to

reflection gave way to rapid searches for information, now that the written text provided multiple points of entry into a writer's thought.

Illich reveals other important facets of this dramatic change as well: books began to proliferate as a result of twelfth-century technical innovations that made them easier to copy, handle and read—centuries before the invention of printing. These novelties included the widespread use of paper, alphabetical indexing, editing, paragraphing, variation of type size, underlining, and the use of chapter titles. In addition, new reference works, such as concordances, began to appear.

Illich finds subject indexing, a new use of the alphabet, especially significant, and illustrative of the transition he wants to explain: "From the teller of a story the author mutates into the creator of a text" (p. 105). Index-makers wanted to make book contents available to others who could then build on them.

By the thirteenth century, all these new tools will lead to the production of encyclopedias and the use of additional visual and organizational aids, such as punctuation marks and content summaries at the beginning of chapters.

The sudden realization, after Hugh's death in 1142, that the Roman alphabet could serve to record languages other than Latin, leads Illich to formulate a technological principle:

> Instead of confirming the theory that tasks become possible when the tools to perform them become available, or the other which says that tools are created when tasks come to be socially desirable, this use of the ABC suggests that an eminently suitable and complex artificial device already available within a society will be turned into a tool for the performance of a task only at that historic moment when this task acquires symbolic significance. The page had to give birth to the visible text, the "faithful" had to give birth to the moral self and the legal person before the dialect spoken by that person could be visualized as "a" language (p. 72).

Further links between Technique and culture, according to Illich, include the development of the universities as a kind of replacement for medieval monasteries. The book as a source of oral reading and wisdom found its place in the monastery, but the new "bookish text" needed a different sort of home, so the university was created to deal with it.

In the monasteries of Hugh's time, teachers spoke while their students listened. By the age of Thomas Aquinas, however, lecture notes and outlines were routinely made available to university students, who sometimes took down the teacher's words, dictation-style. Rather than understanding a moral communication, these later students responded primarily to a written lecture.

The modern shift from the centrality of books to that of "text" leads Illich to meditate on the loss of meaning, another concern of Ellul's:

> A new kind of text shapes the mind-set of my students, a printout which has no anchor, which can make no claim to be either a metaphor, or an original from the author's hand. Like the signals from a phan-

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tom schooner, its digital strings form arbitrary font-shapes on the screen, ghosts which appear and then vanish. Ever fewer people come to the book as a harbor of meaning (p. 118).

Illich has thoughtfully provided both the original Latin (or French) and an English translation for his quotations. This helpful feature enables readers to follow his explanations and evaluate his suggestions for further exploratory reading. He has also taken care to couch in modern terms those words whose usage has changed over the centuries. As a result, his book is not only eminently understandable, but provides a useful introduction to twelfth-century philosophy. That "bookish" medieval invention known as the index, however, is desperately needed to make Illich's work more accessible.

Readers eager for further information will find endless paths to pursue in Illich's footnotes. On the specific question of the appearance of portable Bibles in the thirteenth century, a recent article in *Civilization: The Magazine of the Library of Congress* offers additional data; see Jay Tolson's "The First Information Revolution," in the Jan./Feb. 1996 issue (pp. 52-57). And a helpful companion volume to *In the Vineyard of the Text* (University of Chicago Press, 1993), is David Cayley's *Ivan Illich in Conversation* (Concord, Ontario: House of Anansi, 1992).

Resist the Powers with Jacques Ellul, by Charles Ringma. Sutherland, Australia: Albatross Books, 1995.

Reviewed by Donald Bloesch, Dubuque Theological Seminary

Charles Ringma, who established Teen Challenge in Australia and now lectures at the Asian Theological Seminary in Manila, elaborates on various themes in the theology of Jacques Ellul. These meditations reflect both the thought of Ellul and that of the author, who acknowledges Ellul as his spiritual and theological mentor along with Dietrich Bonhoeffer and Henri Nouwen. In absorbing the wealth of insights offered in this volume, we must keep in mind that we are being introduced to this eminent theologian through the eyes of an admirer.

The strength of the book lies in its solid grasp of the salient emphases in Ellul's spirituality. Ellul stands in an illustrious tradition of spiritual writers and sages, including Augustine, Thomas à Kempis, Teresa of Avila, Blaise Pascal, John Bunyan, Soren Kierkegaard, Dietrich Bonhoeffer and Thomas Merton. Too often Ellul is thought of mainly as a sociologist and political analyst but hardly as a spiritual guide. He is certainly a prescient social prophet, yet he is also a remarkable theologian of the Christian life. Ellul deftly brings together the personal and the social, the spiritual and the political, since the kingdom of God is his pivotal emphasis. This kingdom, moreover, is an entirely new reality breaking into the old reality and radically challenging its assumptions and goals. According to Ellul, the Christian will be markedly different from the worldling, not just because of a disparate belief system, but also because of a unique style of life. Ellul sharply warns against aligning the faith with any particular ideology and underscores the fact that Christians will always be suspect in the political arena, for their loyalty is to a kingdom that is not of this world.

Charles Ringma is to be commended for his astute analysis of Ellul's spirituality. He ably shows that holiness in Ellul's version involves downward mobility and a break with consumerism. Christianity embodies values that palpably conflict with those of the technological society. In the current cultural milieu productivity and efficiency are valued more highly than respect for human dignity. Ellul is adamant that Christians should always be on the side of the poor, but the solution to poverty and exploitation is not new laws (though they may well be necessary), but an altering of consciousness, which only faith can effect. As Christians we should be actively involved in the political and social issues of our time, but our aim should be simply to make life tolerable, not to try to build a utopian society that will only end in tyranny and the crushing of individual initiative. The Christian's most significant spiritual weapon in this conflict is prayer, and prayer is based on the hope of God's intervention in human and wordly affairs.

This book can profitably be used for devotional reading and gorup discussion. It nurtures the inner life while heightening sensitivity to the crying needs of the poor and dispossessed.