SWEET BRIAR CHAPTER HOSTS STUDENT FORUM

Professor Gregory Armstrong, president of the Phi Beta Kappa chapter at Sweet Briar College (left) with Forum participants Deborah Snead, Eileen Miggins and Karl Fielding.

The second Phi Beta Kappa Inter-collegiate Forum for student members, sponsored by the twelve chapters of the Society in Virginia, took place on Saturday, April 15, on the campus of Sweet Briar College.

Three students presented papers at the conference, which was initiated by the Sweet Briar chapter to highlight undergraduate scholarly achievements. The following participants took part in the forum: Eileen Miggins ’78, Randolph-Macon Woman’s College, English major, whose subject was “Structure and Imagery in Hopkins’ ‘The Wreck of the Deutschland’”; Deborah Snead ’78, Sweet Briar College, Government and Sociology major, “The Legislative Process in the Virginia General Assembly: Formal and Informal Procedures”; Karl Fielding ’78, College of William and Mary, Economics major, “Non-Excludability and Government Financing of Public Goods.”

Delegations of faculty and students from several of the Commonwealth chapters were present at the event, which was open to the public. It is planned to continue the forum as an annual regional meeting with other Virginia chapters acting as hosts on a rotating basis.

ASSOCIATES LECTURESHIP

Since 1942 a lecture program sponsored by the Phi Beta Kappa Associates has maintained a roster of speakers available to chapters and graduate associations for annual meetings and special occasions. This “Associates Lectureship” is distinct from the more widely known Visiting Scholar Program under whose aegis distinguished scholars are brought for two-day visits to university campuses. The Phi Beta Kappa Associates are a group of members whose financial contributions to the Phi Beta Kappa Foundation help to meet the operating expenses of the United Chapters. As a special project, the Associates have assumed the major costs of the lecture program.

Lectureship speakers are grouped in four regional panels with eight to ten speakers on each panel. Among those who have participated in chapter and association honors convocations, annual dinners, and initiation meetings have been Madeleine H. McWhinney of New York City, Frank Vandiver of Rice University, and Darwin T. Turner of the University of Iowa. Lists of the 1978-79 speakers will be sent to all chapter and association presidents and secretaries in mid-September. Requests for speakers should be addressed to the Lectureship Committee at the Washington office.

SIBLEY AWARD FOR 1978

The winner of the 1978 Mary Isabel Sibley Fellowship is Barbara Jane Meyer, a doctoral candidate in the Department of Comparative Literature at New York University. Miss Meyer’s project is an unusual interdisciplinary study of the relationship between Surrealist French literature as typified by the work of André Breton and such aspects of modern scientific thought as quantum theory and fourth dimensional concepts.

A Phi Beta Kappa graduate of Hunter College, Miss Meyer is a linguist who is also a professional editor and librarian. She will continue her research in New York City and in Paris.

This year, by recent action of the Executive Committee of the Phi Beta Kappa Senate, the annual stipend for the fellowship has been increased to $7000 from $6000. In 1979 the Sibley Award will be offered for the study of Greek language, literature, history or archeology. Candidates must be unmarried women between 25 and 35 years of age who hold the doctorate or who have fulfilled all the requirements for the doctorate except the dissertation. They must be planning to devote full-time work to research during the fellowship year which begins September 1, 1979. Further information and application forms may be obtained by writing to the Mary Isabel Sibley Fellowship Committee, Phi Beta Kappa, 1811 Q Street, N.W., Washington, D.C. 20009.

Barbara Jane Meyer
ENERGY IN OUR FUTURE
by Charles J. Hitch

Public opinion polls consistently reveal that about half of the American people do not know that this country imports any oil from abroad, when in fact our imports constitute close to fifty percent of our current petroleum consumption. Where one might expect gradations of knowledge and sophistication about something as vital as petroleum we find instead areas of vast ignorance on the one hand and hot spots of almost hypersensitive awareness on the other. Perhaps in an effort to shake up the dormant half of the population, some of this hypersensitivity has come from the highest levels of leadership. Thus, we have had President Nixon calling for energy independence for the United States by 1980 or 85, a goal that is and was obviously unattainable. Almost as grandiose schemes surfaced under President Ford, perhaps highlighted by Vice President Rockefeller's proposal for a $100 billion government energy corporation. And President Carter has likened the nation's struggle to escape the energy shackles as the moral equivalent of war.

All this presidential rhetoric has so far achieved relatively little. But if four years of higher prices and political speckmaking have not yet resulted in a national energy policy, they have succeeded in impressing at least half the nation that something rather momentous is going on at the energy front. Indeed, it is nearly impossible to see the word "energy" in a magazine or newspaper without the word "crisis" following close behind.

Yet to my mind, the energy crisis does not exist. Energy is a keystone resource, the one irreplaceable factor upon which all — or nearly all — others rest, through which almost every other resource can be obtained. If we solve the energy problem, then we have solved simultaneously nearly all our other resource problems as well. But what confronts the nation and the world now is not a crisis, for the word carries with it a connotation of temporary emergency, of turning point, of imminent resolution one way or the other. It is a dilemma which threatens to last at least twenty years; there may not even be a single turning point; and most of the decisions made now — for good or for ill — will not bear results until many years later. Congress did not act last year in what the President described as an urgent situation, but things seem not much worse for the passing of a year. This abstract quality — the distant payoff for decisions taken now — helps account for why so many people treat the problem like the Easter bunny: they don't believe in it.

Not only is energy not a crisis, it's not an "it": it's a "them" — a bundle of severe problems made all the more complicated by the fact that they are interrelated. There are at least five distinct energy problems.

Energy is a problem of national security and foreign policy, stemming from our dependence on foreign sources of oil. By itself — regardless of political geography — this fact would be cause for caution, if not alarm, for no nation wants to be dependent on any other or group of others for something so important as petroleum. But what is undesirable in theory is even worse in actuality, for Nature in her inefable wisdom placed the world's major petroleum reserves directly in the midst of the world's major political tinderbox — the Middle East. In 1973-74 this combination resulted in an oil embargo, long lines at gas pumps, a four-fold price rise, inflation, recession, and prolonged economic disruption. We are even more vulnerable now, for our oil imports are higher and the proportion of total imports that come from the Middle East is also higher. Nor is the threat represented solely by such dramatic events as wars, embargoes, or terrorist attacks: the simple excess of demand over supply — possibly by 1985 — may be enough to provoke another leap in prices, with ramifications throughout the world economy.

Those nations with whom we share trade, traditions, and institutions for the most part do not even have our limited room to maneuver. Japan, for example, has almost no indigenous energy supplies, and the Western European countries are only marginally better-off. Our allies' sense of vulnerability already has resulted in policy changes vis-à-vis the Middle East. If a worldwide scramble for oil occurs in the 80's or 90's the impact on our alliances and on world peace could be disastrous.

Energy is a domestic economic problem. In the short to medium run the task is to insure economic health, growth, and employment through the expected oil crunch of the 1980's and 90's. Nobody knows for sure — estimating oil and gas reserves is more art than science — but the best guesses of most experts indicate that sometime during the next two decades demand for petroleum will exceed supply, which may peak and begin diminishing absolutely as well as relatively, and prices will jump accordingly. And when oil sneezes, the whole economy catches cold, for oil is pervasive: we depend on it for heat, transportation, industrial processes and products, chemical feedstocks, and other things. Oil is a comparatively recent part of human society — its major use really has been confined to this century — but we have structured our whole society around it. It will be difficult indeed to wean ourselves from this petroleum habit.

Over the long run, the domestic economic problem centers on making a smooth transition from fossil fuels to renewable or inexhaustible sources. In both time frames — that is, from now until as far ahead as we can foresee — a heavy, energy-inspired demand for capital will complicate the national economic picture, for nearly all the new technologies, such as solar, nuclear, and synthetic fuels, are highly capital intensive. Nor are modern coal-fired power plants exactly cheap. Moreover, conservation also is surprisingly capital intensive, for really significant conservation — beyond turning off lights and turning down thermostats — involves the turnover of capital stock. Old, inefficient cars, homes, factories, and office buildings must be replaced or substantially modified and that will take much time and money.

Energy is a balance of payments problem. Last year this nation's bill for imported oil came to $45 billion, a sum about fifty percent greater than our entire trade deficit. We are the world's number one agricultural exporter, but it now takes two years' worth of agricultural exports to pay for one year of imported oil. The shaky value of the dollar abroad is directly related to our astronomical oil bill and the transfers of wealth it represents. And the situation will get worse: projections for the mid-1980's are for the $45 billion tab to double or more. Again, this problem is not ours alone, but one confronting most of the non-Communist, non-OPEC world, including in an especially painful way the poorest nations of the Third World.

Energy is an environmental problem. Energy production and consumption combine to form the world's greatest environmental insult. The list of effects...
is long and ugly: death for coal miners from cave-ins and black lung; air pollution from electric power generation, industrial processes, and automobiles; an increase in the proportion of carbon dioxide in the atmosphere, perhaps leading to adverse changes in climate having far-reaching implications; ocean oil spills; water pollution from acid mine drainage; scarring of strip-mined landscapes. Coal is a primary villain in most of this, yet the President's national energy plan — and every other reasonable estimate of future needs — contemplates a vast expansion of coal mining and combustion if we are to meet our energy and economic requirements. How are we to achieve this without grave damage to the environment and human health?

Finally, energy is an equity problem. How will we be able to solve the other four problems making up the energy dilemma without grave injury to poor people in the United States and poor countries around the globe?

How are we to deal with these five sides of the energy problem? What policy and technology choices are open to us? Perhaps it is easiest to begin with the choices that are not available to us. We do not, for example, have the option of choosing the pattern of future sources of energy over time, even though the man on the street — and some people in research and development, too — may think that's what the energy fuss is all about. We are too ignorant to make even semipermanent choices and commitments. We have no more than educated guesses about the economics of energy sources now in prototype or planning stages, and the affordability of those that exist only in the imagination is purely conjectural. Nor do we know much about safety, or carcinogenicity, or climatic effects. The solutions of 1985 could look like dinosaurs before we got very far into the next millennium.

Rather than an immediate and urgent search for the answer to the energy dilemma of what to do when the oil and gas run out, we should be asking ourselves what procedures should be adopted, what processes set in motion, that will maximize the chances of tapping clean, safe, clean, secure energy sources as we move into the future. Specifically, to what extent should we rely on markets and prices, and to what extent on prescription, proscription and other nonmarket measures?

Broadly, my conclusion is that there is a role, and often an important role, for direct regulation in certain areas, but that our main reliance must be placed on prices and markets. The market is now giving decidedly the wrong signals. They say that energy as a whole is cheaper than it really is, and that certain sources of energy are relatively cheaper than their alternatives, when that isn't true either. The result is that we are subsidizing imported oil, penalizing domestic production, and discouraging both conservation and fuel switching by industrial and final consumers.

Let us take several examples of what I mean by “wrong signals” in the case of natural gas which is kept at artificially low prices in the interstate market by federal regulation: Most gas furnaces are very inefficient, but since wasting gas doesn't waste much money, there is little incentive to improve efficiency. Electric heat pumps are much more efficient than the electric resistance heating units they supplant, but there are no gas-driven heat pumps and again, little incentive to develop them. Nuclear power stations are perhaps appropriate as memorials, but as pilot lights in every gas range they are symbols only of an inappropriately priced resource. There is resistance to expensive shipments of gas and liquefied natural gas from Mexico and Alaska but these are overpriced only when compared to controlled prices of domestic natural gas. They are cheap when compared with imported oil. Similarly, so-called unconventional sources of gas, such as the geopressurized brines in the Gulf of Mexico, are neglected because they are much more expensive than controlled-price conventional sources. Finally, it is nearly impossible for solar water and space heating to compete with gas. This is particularly unfortunate because it reverses the priorities: gas, with its cheap, efficient storage, is the perfect backup for solar. Controlled prices have similar effects in the case of oil.

In general, we can say that pricing a unit of energy below the cost of providing another unit is the chief obstacle to substantial conservation and to the development of new, benign sources such as solar. It is ironic that we impose price controls on the one product — energy — which we most want to conserve and to develop new sources for.

Because of price controls, the market is confusing both producers and consumers, and we are compelled to cope with the problem by all sorts of devices which aren't working well, such as exhortation and detailed regulation. Of course, there are some reasons for not rushing to push prices up. We are rightly concerned about inflation, about equity, about our international competitive position. I have no objection to decontrolling prices gradually, over a few years; it minimizes the inflationary impact. What is important is a really firm commitment to move toward world petroleum prices, such as Canada has made. For many of the responses we desire, it is expected future prices that matter, not current prices.

All the standard rhetoric about free enterprise notwithstanding, we simply have not even tried using prices to help achieve our objectives. The litany that OPEC oil prices increased fourfold in 1973-74 is true but extremely misleading. For example, in constant dollars, that is, allowing for inflation, U.S. gasoline prices have gone up only about a third since the oil embargo. Home heating oil has gone up 44 percent, electricity 14 percent and gas service 26 percent. This, however, is only part of the story. Since the embargo and the celebrated price hikes, energy prices have stayed almost constant, with the exception of gas service, which is up about a quarter.

Further, when compared with prices of two decades ago, 1956, gasoline is up only 4 percent, fuel oil up 31 percent, gas service up 5 percent, and electricity down 37 percent. Except for winter and strike dislocations, the American consumer has hardly noticed energy prices. With the highest standard of living in the world, he is paying the lowest energy prices, and about the same prices as 10-20 years ago.

What does all of this mean in terms of policy choices? Higher prices mean less demand and more supply. How much more of each? In economics jargon, we do not know what the demand and supply price elasticities are. We do know, however, that they are much higher in the long run than in the short. And we know that elasticity is much higher for any one energy source — even one as important as petroleum — than for energy in general. This is important, for we want to encourage switching — for example, the use of coal instead of oil as a boiler fuel — as well as overall energy conservation. The President's energy plan recognizes the efficacy of prices, bolstered by what look like prices to consumers — taxes — to affect both the total and the mix of energy use in this country. This reliance on prices and taxes is an historic turnaround, for the nearly instinctive
response heretofore has been to create a complete set of regulations, along with a new bureaucracy to try to enforce them. This approach has been as ineffective as it has been ubiquitous.

Of course, there are other costs involved in energy besides economic costs. As I noted earlier, there are environmental, health and safety, and security costs as well, and these immensely complicate the picture, for they set at odds people who might otherwise agree on one policy or another. For example, growth-oriented people give by far the greatest weight to cost; they think economic growth, high incomes, and jobs are worth the environmental side effects of what now promise to be the cheapest sources — coal and nuclear. Some people are gravely offended by dirt and what it will do to health and climate, which rules out coal. Many are concerned mainly about safety. They ask, "What do dollars matter when human lives are at stake?" They would eliminate the dangerous options before choosing the most economical among the rest. A subset of these would accept "normal" risks, such as those of coal mining, but find intolerable any increased risk of catastrophic damage, such as a war resulting from nuclear proliferation. They want to rule out the nuclear option unless we can devise safeguards far superior to any now in prospect.

How do we resolve the conflicts in values among cheapness, cleanliness, safety, and security? The answer is that we can't, at least not completely, for people are always going to have different values. Political compromise will have to be hammered out in negotiations among elected representatives. But there are certain measures which can be taken to reduce areas of conflict and to make compromise more palatable.

One of these would be to assign a very high priority to conservation. Whenever we can save a BTU as cheaply as we can supply a new one, we gain economically. Moreover, since we would actually reduce adverse effects on health and environment and on international security — all those things that give rise to conflicting values — rather than intensifying them, the benefits are double-barreled. There clearly is a case for a special premium on conservation, achieved not just by appeals to conscience but by taxes and regulation, and the President's energy advisers obviously recognize this.

Another measure: we can go much farther than we have in internalizing certain external environmental, health, safety, and security costs associated with energy supply. "Internalizing" and "externalities" are two more economics jargon words. Externalities, or external costs, are those costs of producing something which normally are not borne by the producer, but by society at large or some segment of it. Polluted rivers, for example, are to some extent imposed on the downstream residents by upstream users. In the case of coal, the costs of cleaner combustion and of restoring strip-mined land should be internalized, that is, charged to factories and coal producers, and the same is true of the costs of disposing of nuclear wastes. In the case of imported oil, the costs of insecurity could be made internal. It would make great sense, for example, to tax imported oil at a rate which at the least would pay for accumulating our strategic stockpile.

Besides conserving wherever feasible and internalizing the externalities, we can learn to achieve some of our environmental and health objectives by choosing energy sources which are less polluting. Some of these are obvious, with various forms of solar heading the list. Others, may seem surprising. Coal is just about the nastiest energy source we have, but just how nasty depends on how it is used. If instead of burning it directly, as is usual in generating electricity, the same lumps of coal are converted into synthetic natural gas the results are much different. For a coal gasification plant and a coal-fired electric power plant of the same size, that is, producing the same amounts of energy, the amounts of pollutants from the gasification plant are only a sixth or less than those from the electric power plant. The end products, gas and electricity, can be directly substituted one for another in many important uses, such as home heating, and syngas may often be cheaper as well.

Let me move to another major issue, some would even say the issue — nuclear power, which seems to be at a crossroad. What are we to think about this one-time panacea for all our future energy problems? To begin with, nuclear fission power is not one energy system, though both proponents and opponents of fission tend to argue as if it were, and with such theological fervor that one despairs of a rational reconciliation. There are three quite different and entirely separable nuclear systems about which we have to make decisions. These are: the

(continued on back cover)
RICHARD HARTER FOGLE


A copious selection from Wilson’s posthumous papers, fittingly arranged as a chronicle. As a critic he is notoriously hard to classify, after admiring his range, his learning, his vitality, and his literary conscience. These letters, to many eminent correspondents, are very much like his formal published work; for one thing, they are enormously readable. They are undoubtedly important as a survey of several times and climates of the American twentieth century.


Emphasizing the unique historicity of the Southern imagination, with its preoccupation with the past, Professor Holman surveys the Southern historical novel from William Gilmore Simms to the present. Composed of five lectures, his book is brief but completely authoritative. It is a masterly achievement.


A felicitous critique of Edith Wharton’s fiction in the mould of her emotional development from childhood on — which could be stultifying but is instead enriching. Biography is handled with firmness and sympathy, and the fiction with discrimination and lucidity. For the general reader there are stimulating surprises.


Hawthorne’s unfinished romances of his last years are sad to contemplate, despite occasional flashes of his genius. They are nevertheless interesting because Hawthorne wrote them, because he commenced them with hope and ambition, and because he frequently recorded his difficulties as he struggled unavailingy to bring them under control. Critics have generally concluded that he encumbered himself with Gothic plots and devices that he could no longer use with conviction, and found no way of reconciling theme and character with action. The Ohio State editors, including Edward Davidson, their editor, and Professor Hawthorne’s last phase,” have disentangled the manuscripts from their confusing publishing history, and provided a scrupulous account of their proceedings with the texts.


It is good to have this authoritative edition of Mark Twain’s platform and banquet speeches. Professor Fatout avows the disadvantages of his project: that a printed text gives the words without the accompaniment of the speaker’s consummate art, and that it is impossible to hit upon the precise words in any event, among the various printed and manuscript versions that exist. These shortcomings are obviously inevitable, and since they are fully taken into account we can glory in what we have before us, including the scandalous “Whittier’s Birthday Dinner” and “De Woman Wid De Gold’n Arm.”


The author suggests that Frost is a poet of process, whose American forebears are Emerson and William James. His apparent simplicities are delusive, and come from “ignorance of the unique but equally strenuous kind of difficulty which inform his best work” (the “equality” refers to contemporaries such as Yeats and Eliot). Poirier emphasizes individual poems, frequently revising our familiar judgments of them. He is extremely firm, in fact, in keeping his poet up to the mark he has set for him.

Elliott Zupnick


E. R. Tufte, Professor of Political Science at Yale University, is at his best when he demonstrates that the manipulation of macro-economic policy for political purposes produces the so-called political cycle is a well-entrenched phenomenon in western democracies. The puffing up of the economy by the Nixon Administration before the 1972 election was unique only in that it was done on a grander scale than usual and had more adverse effects. When Tufte turns his attention to say Calhoun Simms to the present. He rejects the “reformist” proposal to depoliticize economic policies on two grounds: First, it would give more “power” to economists, a professional group he does not particularly admire; and second, it would prevent the administration from implementing its ideology. The first argument needs no comment. The second is a non sequitur. The issue is not whether a government has the right (responsibility) to implement the platform on which it was elected, but rather whether it should be constrained from pursuing policies damaging to the public welfare for the express purpose of influencing the electoral outcome. Tufte’s proposal — a call for a more educated electorate which would be able to resist the seductions of an increase in pre-elections transfer payments — is a “cop-out.”


In his 1973 study, The World Depression, 1929-1939, Professor Kindleberger concluded that the absence of an international lender of last resort contributed to the severity of the depression. This conclusion was disputed by monetarist economists who not only believe that means have a built-in corrective mechanism which obviates the necessity for a lender of last resort, but who also believe that one was to be established, it would, by reducing the costs of speculation, contribute to the very problems it is designed to resolve. In this book, Professor Kindleberger attempts to support his earlier conclusion by an appeal to history. He examines, in greater or lesser detail, most of the important panics over the past 250 years and concludes that where an effective lender of last resort existed or emerged, the panic was shorter lived and the ensuing depression less severe than when the panic was allowed to run its course. Although Kindleberger’s knowledge of economic history is awesome, the lack of both rigorous analysis and systematic statistical testing makes it highly unlikely that this study will have an impact on the non-believers. This is no reason, however, why the book should not be widely read and its lessons seriously pondered. Among its other virtues, it is delightfully written.


The stated objective of this book — which brings together six previously published studies with a newly written introduction and conclusion is to demonstrate: “comparative history is a useful laboratory in which to test various economic models for generality.” This objective is admirably achieved. Although the studies included in this book cover a wide range of subjects — group behavior and international trade, the rise of free trade, the formation of financial centers, commercial expansion and the industrial revolution, European port cities, and the overturning of Britain by Germany in the nineteenth century — they are all concerned, in one way or another, with the fascinating problem of policy responses to major structural shifts in the economy. Considering the importance and recurrent nature of the problem, these essays demand careful study by economists, historians and political scientists.


Ethics in the Practice of Law. Geoffrey C. Hazard, Jr. Yale. $10. An excellent assessment of ethical dilemmas, based upon a 1976 symposium of 25 lawyers, academics and a judge at Yale's Seven Springs Center. While directed to the problems of large firms, corporations and governmental agencies, the book is appropriate for the entire legal profession. The analysis lays bare the inadequacies of the Bar Association's Code of Professional Responsibility (1970) as an ethical or moral guide.

The Parties: Republicans and Democrats in This Century. Henry Fairlie. St. Martin's. $16.95. A provocative, searing and somewhat rambling essay on why Democrats and not Republicans are the ruling party in the U.S. and the hazards lying ahead for the former. This British journalist sees no demise of the party system.

Counsel for the United States: U.S. Attorneys in the Political and Legal Systems. James Eisenstein. Johns Hopkins. $15. With data gathered from 200 interviews conducted in the Johnson and Nixon years, the author presents a rigorous and welcome study of the U.S. Attorney's office ranging from functions, appointees, relationships with the Justice Department and judicial influence to the Attorney's role in policy-making, the quality of federal justice and proposals for reform.

Crooked Paths: Reflections on Socialism, Conservatism and the Welfare State. Peter Clocak. Harper & Row. $19.95; p. $3.95. A political theorist on the left encapsulates the major American philosophical traditions as possible guides to the country's third century. He envisages continuing cultural and political crises with no single "path" toward their solution and offers "conservative democratic socialism" embracing elements of both liberalism and conservatism but without utopianism.

The Remembered Gate: Origins of American Feminism. The Woman and the City, 1800-1860. Barbara J. Berg. Oxford. $14.95. Early research concluding that American feminism and the women's movement sprang from abolitionism and anti-slavery antecedents may well undergo revision as a consequence of new historical scholarship. This little readable book furnishes ample evidence that origins preceded the anti-slavery movement and should be attributed to antebellum urbanization and industrialization leading upper- and lower-class women surrounded by the woman-belle myth to form voluntary societies for the rescue of their property stricken or fallen sisters. These became the model for abolitionist societies.

JAMES C. STONE

Schoolmaking. Carolyn L. Ellner & B. J. Barnes. Lexington. $18. This is a fascinating, lively, and important professional book on the education of teachers. Schoolmaking tells the story of a two-year experiment in which the authors were both participants, observers, and researchers. The creative use of summertime unscheduled time for educators'in service or preservice — is an important concept worth replicating.

Roots of Open Education in America. Eds. Ruth Dropkin & Arthur Tobier. N.Y. City College Workshop Center. $5. This book of "Roots" reports a 1975 conference on open education. Separate chapters written by separate experts center on black history, the Iroquois Confederacy, Union classes of the early 1900's, settlement houses, the Shule, the one-room schoolhouse, the WPA experience in New York City, and early progressive schools. The final chapter is a conclusive summary of the school reform movement.


Venturing Beyond the Campus. C. Hess Haagen. Wesleyan. $12.50; p. $5. This book reports a comprehensive four-year study of students who take leaves from college-going — a common phenomenon of contemporary higher education. The leaving, mostly related to seeking greater personal exploration rather than the failure of colleges is related, in amount and kind, to higher socioeconomic status. The less affluent students must stay and make the best of their present choice.

Language Acquisition. Jill G. de Villiers & Peter A. de Villiers. Harvard. $12.50. The Villieres offer some new ideas about language acquisition and bring into focus interesting studies in grammar, linguistics, and the developing child. Is a child learning to speak a product of its environment? How does a child learn grammar and word meaning? This book looks at these questions and begins to establish some concrete explanations for them.

The Revisionists Revised. Diane Ravitch. Basic $8.95. This book is written about history, about tradition, about policy-making. Education must hold in balance ideals which exist in tension. Ravitch looks at the ideals and the history and realizes that there will always be failure and success; it can be no other way.

Investment in Learning. Howard R. Bowen. Jossey-Bass. $15. Parents, educators, and young people themselves continually ask the question: "Is going to college worth it?" Bowen, an economist and the former chancellor of the Claremont, California, Colleges, provides an authoritative and carefully documented answer, amply supported by facts and judgments.

Education by Choice: The Case for Family Control. John Coons & Stephen D. Sugarman. California. $10.95. Where the student happens to live determines the quality of his/her education. This is the de facto condition which this volume successfully decimates. The authors' solution is to give control back to the family and give them the power to select the child's educational experiences, be they public or private schools.

RONALD GEBALLE

The Miracle of Flight. Stephen Dalton. McGraw-Hill. $14.95. Beautiful, striking, high-speed photographs by the author are matched by his clear explanations of the mechanisms developed by animals and man in order to fly. The first chapter explains in simple language the fundamentals of flight; there follow one devoted to insects, one to birds, one to the evolution of manned flight, and one to aircraft of the twentieth century.

The Planet We Live On. An Illustrated Encyclopedia of the Earth Sciences. Ed. Cornelius S. Hurlbut, Jr. Abrams, Inc. $37.50. A one-volume, 1800-entry reference for the general reader as well as the student. Its more than 600 photographs, drawings, and diagrams are well-captioned. Recent advances in geology, oceanography, meteorology, and lunar science are treated. Organized alphabetically and easy to use, it will be helpful to those who wish to read about, understand, and discuss the many topics that daily force us to be conscious of the nature of our planet.

Courant in Göttingen and New York: The Story of an Improbable Mathematician. Constance Reid. Springer-Verlag. $12.80. Reid continues the excursion into mathematical lives she began with Hilbert by tracing the stormy career of a difficult person through a turbulent, tragic period. "All his life he attracted controversy. Almost every piece of mathematical work he had ever done had brought him into questionable position in relation to some other mathematician. Yet he left behind notable and lasting works — influential books and two prominent institutes. Not a
formal biography, more than a sketch, full of interesting stories, a microscopic view of the complex workings of the catadysm of the 1930's.

**Flight to Mercury.** Bruce Murray & Eric Burgess. Columbia $12.90. During 1973 and 1974, while the nation was transfixed by Watergate revelations, the Nixon resignations, and economic recession, one of its most imaginative and successful space journeys was being made. A diversified team of scientists and engineers, taking advantage of a particular configuration of Venus and Mercury, was able to steer Mariner 10 on its course in such a path that a shot-long-like maneuver put it into an orbit which passed near Mercury three times before its power plant failed. Murray, the director of the Jet Propulsion Laboratory, and Burgess, a science writer, have made a quasi-diary of the events leading up to and through the mission, with non-technical descriptions of its nature, progress, and the problems that had to be overcome. Many fine photographs are included and explained. The extensive, valuable information returned to earth by Mariner 10 cost each American 60¢.

**Sputnik, Scientists, and Eisenhower.** James R. Killian, Jr. MIT. $14.95. The first person to be appointed as Special Assistant to the President for Science and Technology recalls the heroic period of the late 1950's when the President discovered that he needed scientific and technical advice and not only sought an array of scientific talent but listened to and acted on its recommendations as the U.S. mobilized to enter the new arena, space. Killian and his colleagues came to know a side of Eisenhower hidden from most of us, untrusting of single-minded vested interests, responsive to innovative ideas, willing to discuss candidly with his Science Advisory Committee serious matters of policy and strategy. The author's long career of service to the nation spanned the presidencies that allowed him self from direct contact with the scientific community and drew to a close as he helped to draft the scheme under which we presently operate.

**EARL W. COUNT**

**The Sensuous Immortals: A Selection of Sculptures from the Pan-Asian Collection.** Pratapaditya Pal. M.I.T. $37.50. Hinduisms's pluralistic genius inevitably has overlaid its simplicities, such as they are, with complexities that issue in mankind's most intricate animate sculpture; which is profoundly beautiful even when (often) grotesque. Here are close to 200 samplings (70 in color) from southern and southeastern Asia. They occur chronologically from 200 B.C. to 1600 A.D.; for it is easy to discern regional distinctions than temporal progressions.

**Byzantine Art in the Making; Main Lines of Stylistic Development in Art, 3rd-7th Century.** Ernst Kitzing. Harvard. $25. This series of adapted lectures (at Harvard), more broadly and profoundly than the title indicates, analyzes what was happening to art (sculpture and mosaic) during that formative and reformative half-millennium which converted the ancient Mediterranean world into the medieval. And the "Byzantine" actually was but its most sophisticated and powerfully influential province. During the stressful 3rd century, the classical tradition had declined rapidly, the while a Christianity was seeking to appropriate from it. Fourth century resurgence was not wholly abortive. Stylistic conflicts in the 5th were heavy yet innovative; classical realism faded, abstraction increased, as worldview became aware of the human predicament. The 6th century consummated a synthesis hitherto a-shaping, as meanings and values shifted emphases. The climactic 7th century achieved a blend in the depiction of Christ and other celestial, of an abstract transcendentism with an idealized humanity — classicism re-entered, art, as a participant. It was one of the great turning-points in art history.

The author's interpretive critiques draw from 233 half-tone and 8 color plates; they are detailed, insightful, endlessly provocative in the best sense.

**Architectural Space in Ancient Greece.** C. A. Doxiadis. Trans. Jaqueline Tyworth. M.I.T. $9.95. You who revere the glory that was Greece will savor the eloquence of the simple-complex lines which creatively fixed space within a worldview that surpassed it. The Greeks placed and designed their (sacred) buildings to include the landscape beyond — an ecogencrism which, practically, exploited polar coordinates. Originally a doctoral dissertation (1937), this presents exquisite architects' limnings, plus half-tone photographs, from more than 30 sites.

**The Civilization of Ancient Crete.** R. F. Willets. California. $22.75. A poised historian's readable overview — rather the reverse of an archaeologist's overview of history — from earliest settlement through Minoan Bronze and Doric Iron Age until Roman subjugation. Movement in technology, arts, myth and religion, writing, social structure, law and government, are recoverable, though events be sparse. Particularly valuable is an appended translation of the Law Code of Gortyn.

**Memoirs of Heinrich Schliemann.** Leo Deuel. Harper & Row. $20. He was a world traveller, a commercial wizard; vo-eet-vient German, Russian, American citizen; linguistic extraordinary; demi-celebrity and Greek genius, intolerant and intolerable egoist, lamed with inferiorism. He was convincingly certain that Homer was always right — and so his recoveries at Troy, Mycenae, Tiryns, Orchomenos were monumental; yet they disallowed much of his detailings while vindicating the genius beyond what he could conceive. Deuel selects felicitously from Schliemann's own writings (some he translates for the first time) and summarizes the life-episodes they expound. It is hard to lay the book down.

**MADELEINE R. ROBINTON**

**The Medieval City.** Eds. Harry A. Miskimin. David Herlihy, A. L. Uдович. Yale. $15.00. An admirably well organized Festschrift in honor of Robert Lopez of Yale, this book of research studies by some of his distinguished colleagues focuses on aspects of urban life economic, political and social — from London in the north to the crusader cities in the east including Flanders, Scandinavia and Egypt in between with, of course, greater emphasis on the Italian centers, the subject of Lopez's special interest.

**Life in Renaissance France.** Ed. Lucien Febvre. Trans. Marian Rothstein. Harvard. $8.95. This is a translation of a book written in the 1920s by the founder, along with Marc Bloch, of the Annales d'histoire economique et sociale, and is a model for what he sought to achieve in historical writing — not a collection of facts and details, but that of a narrative analytic approach to reconstructing the lives of how people in a particular period lived, thought and felt. It is his use of descriptive detail and anecdotal material that help to vivify civilization in sixteenth-century France and explain its changes.

**European Landed Elites in the Nineteenth Century.** Ed. David Spring. Johns Hopkins. $11.50. David Spring, himself an author of a classic on English landed estates in the nineteenth century, organized the Schouler Lectures at Johns Hopkins on the basis of a comparison of the landed elites in Britain, Spain, Italy, Russia, Spain and France. Specialists in the history of each of these countries were asked to deal with the "problem of how his particular landed elite coped with the difficulties of the nineteenth century; how it accommodated itself to the aspirations of the new elites; how it managed to survive…" The introduction recognizes that the answers emphasizes similarities and differences, and how different they are!

**Ethics and Society in England: The Revolution in the Social Sciences, 1870-1914.** Reba N. Sofer. California. $16.50. Reba Sofer, too, is concerned with the radically transformed society of the late nineteenth century. However, her objective is to understand the response of the English intellectuals. Overwhelmed by the unprecedented problems in the wake of revolutionary social change occasioned by industrialization and urbanization, they sought to alleviate its consequences not for themselves but for those least able to help themselves, the masses of the poor. As she states, "their systematic attempt to analyze social phenomena as a prelude to redressing social evils, resulted in a new economics, psychology, and political science and a new social psychology." It was a revolution in the assumptions and methodology of the social sciences that led to a complete rethinking of the role of the state and the responsibility of its citizenry — the concept of the welfare state. Based on wide
and intensive reading, Professor Soffer brilliantly develops the history of the individual social sciences in this period and how they interrelated in their quest for explanations of human nature in society compatible with ethical reform and improving the quality of life.


Martin Gilbert, official biographer of Sir Winston Churchill, turns his attention to Jewish history. These maps from Jewish migrations about 2000 B.C. to the Yom Kippur War of 1973, are well annotated to make them comprehensible to young and old. Fascinating and illuminating.

**ENERGY** (continued)

Currently in-place light water converter reactors; the same converter reactors, but with reprocessing of spent fuels to recover both uranium and plutonium; and the liquid metal fast breeder reactor, which both burns and produces plutonium.

I believe that a decision on only the first system is necessary now, and that it should be an affirmative decision. I am aware of the drawbacks; to me the most serious is waste disposal. At best this eventually will have an adequate technological solution, and indeed there are some hopeful signs. At worst, however, we already have the waste problem with us, especially a military waste problem. The addition of commercial wastes, even for as long as twenty-to-thirty years, will affect the magnitude of the problem only in degree.

There are definite advantages to remaining temporarily on light water reactors. Perhaps foremost among these is that they work: the technology is proven, in place, and productive. Moreover, these reactors are generally cheaper than comparable coal-fired power plants, much cleaner environmentally, and — contrary to popular misconception — they are safer over time, even if a major accident should occur, which both sides of the debate agree is highly unlikely. In addition, light water reactors without reprocessing have little impact on the potential proliferation of nuclear weapons. If anything, staying in the nuclear business will enhance our leverage on other countries in preventing or limiting proliferation.

The decision on the other two fission systems, however — reprocessing for converter reactors, and the breeder — do not need to be made now. We certainly should continue research on them, as well as on other ways of stretching uranium supplies, to design the best possible breeder or near-breeder in case we should have to rely on fission for the indefinite future, but we can and should wait before moving to commercialization. Both of these technologies involve the routine production, use, and transport of plutonium — ten pounds of which can be made into a bomb — and we are neither technically nor politically ready to cope with a world energy economy based on plutonium. Also, the economics of reprocessing for converter reactors appear to be marginal. Even with a strong economic case the safety considerations should not be ignored; without one they clearly dominate the decision.

I look upon the breeder as insurance. We must find some new, relatively inexhaustible and affordable source of energy. The breeder is such a source, and will almost certainly "work," at costs probably not too different from current fission reactors. I hope we will find others — like pure fusion or some form of solar — which don't also create a plutonium economy. But we may not. Fusion may not work at all, and solar electric may remain more expensive by factors of 5 to 50. The combustion of huge quantities of coal for decades may have unacceptable environmental, health, or climatic effects. We'd better have some kind of breeder, the best kind of breeder — the least proliferation prone — in reserve. Like life insurance, you hope you don't need it — at least not soon — but it is folly not to have any just because you happen to feel healthy at present.

What does the future hold? Our answers are only guesses. A century ago no one foresaw the age of petroleum, and we too peer at the future through the curtain of the present. That we think we see the outlines of things to come attests more to our powers of imagination than vision.

About all that is really clear is that the future need not, and probably will not, resemble today. Thus, we should approach it cautiously, and with a humility consistent with our ignorance. We should be working on as many feasible options as possible, with our minds open to change and fully prepared to do so. Above all we must approach the energy problem with the profound knowledge of our place in the planetary and natural scheme of things. Industrial man temporarily forsok nature, his own and the world around him, but we cannot escape nature or nature's limits. I believe that more and more people are grasping both the challenge and the beauty of that truth.