PROLOGUE: It is January 1934 in the city of Paris. A husband and wife are at work in a university laboratory. They are exposing a piece of ordinary aluminum to a stream of tiny charged bits of matter called alpha particles. Stated so simply, this hardly sounds like an important event. But look more closely, for it is important indeed. Later you will look at the technical details, but for now they will not get in the way of the story.

The story is something of a family affair. The husband and wife are the French physicists Frédéric Joliot and Irène Curie. The alpha particles they are using in their experiment are shooting from a piece of naturally radioactive metal. This metal is polonium, first identified 36 years before by Irène's parents, Pierre and Marie Curie, the discoverers of radium. What Frédéric and Irène have found is that when common aluminum is bombarded by alpha particles, it too becomes radioactive for a short time.

This was a surprise. Until that moment, a familiar, everyday substance becoming artificially radioactive.

What student, opening an introductory high-school physics text, can read that passage and resist turning the page to find out what happens next in what promises to be a great adventure story? Telling a rousing story is indeed the aim of the Project Physics Course, a national curriculum codirected by Gerald Holton, Mallinckrodt Professor of Physics and Professor of the History of Science at Harvard—the 1981 NEH Jefferson Lecturer and first natural scientist to be so honored.

The team of collaborators who prepared the course hoped, Holton has written, “to develop a sequence of organically related ideas whose pursuit takes a student to an ever higher vantage point, a more encompassing view of the working nature, of the style and life of the scientist, and of the power of the human mind.”

Hundreds of thousands of students in this country in secondary schools and colleges have used the course, now in the third edition since its commercial publication in 1970, and millions more around the world have used the materials in French, Arabic, Japanese, Hebrew, Italian and other language adaptations. Although few will ever become scientists, they will have a chance to “see physics as the wonderfully many-sided human activity that it really is.”

Throughout his career as physicist, historian, editor, and educator, Holton has been a lucid interpreter of the complexity of the scientific enterprise and the scientific imagination to scholars and practitioners in other disciplines as well as his own. In the late 1950s he launched and edited Daedalus, the journal of the American Academy of Arts and Sciences, as a forum for serious dialogue on questions and ideas that cut across all fields of intellectual inquiry. Entire issues of Daedalus have been devoted to science and culture, the future metropolis, symbolism in religion and literature, mass culture and mass media, arms control—most, if not all, of the seminal questions of our time. To a whole generation of intellectuals, Daedalus exemplified “interdisciplinary studies” long before the term came into academic fashion.

Twenty years later, Holton founded the journal, Science, Technology and Human Values, published by the MIT press, and was one of the initiators and first faculty members of MIT’s new College of Science, Technology and Society, which aims to incorporate humanities study into the science and engineering curriculum. He is recognized as a leading Einstein scholar, and
Editor’s Notes

According to the recent Commission on the Humanities’ report, “science and technology have been a domain of the humanities in western culture every since its Greek origins.”

The author of those words might have been Gerald Holton, the tenth Jefferson Lecturer in the Humanities. For even as the late C.P. Snow was proclaiming his “two cultures” theory—stressing the divisions between science and the humanities—Professor Holton was founding Daedalus, the interdisciplinary journal of the American Academy of Arts and Sciences.

Mr. Holton’s myriad achievements are chronicled elsewhere in this issue of Humanities which focuses on NEH-supported activities that join human values with science and technology. Holton has written, does it become clear “that these two kinds of destiny are in fact intertwined, that these two developments stem from two potentials within the same person.”

At the Gymnasium, Holton also read Hegel, and vividly recalls the lesson on Hegel’s “On the Idea of Being.” The final cause of the world is a child in post-World War I Vienna, the gap between the orderly world of science and the ever-changing panorama of history seemed “unbridgeable.”

Holton was born in Berlin of Austrian parents in 1922 and was schooled at the rigorous classical Humanistische Gymnasium. In a recent article in The American Journal of Physics he recollects the traditional, sharp division between history and science:

The curriculum at our Gymnasium was heavy on history, literature, and ancient languages... Here was the vibrant, colorful, ever unfinished struggle of mankind...

On the other hand, in our science classes, we encountered an entirely different universe. Here was the finished and apparently unchanging product of distant and largely anonymous personages, unchallengeable monuments to their inexorable rationality— but only occasional traces of historic development.

At the front of the classroom hung two maps. On the left, a geopolitical map of Europe and Asia. This map was regularly changed, a new one for each period, and... with each change we students could see the violent, spasmodic, unpredictable pulsation of shapes and colors in the wake of the thrilling story of conquests.

On the right side was a very different map—a social and cultural map. Here was the very embodiment of empirical, testable, reliable, and ordered sets of truths. That map was never changed, although there was a rumor in the benches that some of the blank spaces were being filled in... to the young mind,” he writes, the golf between the maps “seemed like a division that demanded some sort of decision.” (The adult Holton was to observe that Einstein saw it as a choice between a world “dominated by wishes, hopes, and primitive feelings,” and “this huge world which exists independently of human beings,” contemplation of which “beckoned like a liberation.”)” Only much later in life,” Holton has written, does it become clear “that these two kinds of destiny are in fact intertwined, that these two developments stem from two potentials within the same person.”
years later, to the United States. Holton was sixteen when they left Vienna. It was assumed that he would join his father in the practice of international law. "I was interested in regularities, it turns out," he says, "but in the much more credible kinds of laws—physical laws."

He was already captivated by science, and began his studies at the School of Technology in Connecticut. It was almost graduation time until he decided whether to take his B.A. in physics or literature. Physics won out when Walter G. Cady took him on as a research assistant to work on crystal physics. (He received an M.A. in physics the next year—1942.)

In 1943 Holton came to Harvard to work on the acoustics of sonar (useful in anti-submarine warfare), and to teach physics to radio officers and Army personnel. At war's end he began his Ph.D. work as a student of Percy W. Bridgman, winner of the Nobel prize in 1946 for his research on high-pressure phenomena.

Holton describes Bridgman as grounded in "the backwater of American sensibility," a man "crusty and constantly questioning," to whom "the central reality was . . . science done at first hand." In the 1920s, when physicists were confronted with the new ideas in quantum mechanics, Americans, under Bridgman's influence, "just leapfrogged over the metaphysical difficulties and went directly to the measurable part. This was absolutely American—pragmatic, and the pay-off was right there," Holton says.

Bridgman was a wonderful mentor . . . in the sense that . . . he didn't have compartments. In his life, both his physics and his philosophy of science, and indeed his social theory, were all of one piece.

The fact that he worked with his hands, with the directly understandable, transparent techniques, was part of his implicit philosophy. He never called himself a philosopher. He just was a philosopher.

When Harvard President James B. Conant returned to Cambridge from his World War II service in Washington, he was convinced of the national need for stable support of scientific research, wider understanding of the place of science in history, and the best teaching of science that could be devised for students in all fields. What followed was the science requirement in the General Education curriculum.

Holton, a junior Harvard faculty member at the time, tells of "the accident of being intrigued into teaching in the General Education program" by Conant, and of coming "up against some of the raw pedagogic problems" that the new curriculum posed.

The first science textbook to come out of the General Education program was also Holton's first book, the Introduction to Concepts and Theories in Physical Science, published in 1952 when he was thirty, and still in print. While the book presents, as required of a text, the technical physics, it does much more. Holton rose to the challenge set down in the Report Establishing General Education at Harvard, that science includes . . . conceptual relations, a world view, and a view of the nature of man and knowledge, which together form the metaphysics of science; a history which forms a continuous and important segment of all human history; and writings which include some of the most significant contributions to a literature.

The aim of the book was, in Holton's words, "the presentation of science as experience, as an integrated and exciting intellectual adventure." That college text is in a sense the grandfa-
cepted doctrine and to the clear evidence of the senses.

The term "theoretical analysis," Holton reminds us, is familiar in anthropology, art criticism, musicology and other disciplines, and he likes to compare himself in "the task of identifying, ordering and categorizing thematic elements in scientific discussion" to the "folklorist or anthropologist who listens to the epic stories for their underlying thematic structure and recurrence."

His role then is to describe themata—as he does in the following explication of a text by the contemporary particle physicist, Steven Weinberg:

The technical report of, say, the analysis of a single-chamber photograph is cast largely in terms of a life-cycle story. It is a story of evolution and devolution, of birth, adventures, and death. Particles enter on the scene, encounter others, and produce a first generation of particles that subsequently decay, giving rise to a second and perhaps a third generation. They are characterized by relatively short or relatively long lives, by membership in families and species.

Listening to these village tales told by physicists, one is aware that the terminology may initially not have been 'seriously' meant. Yet the life-cycle thema works, and so do a number of other themata imported into the sciences from the world of human encounters. ("On the Role of Themata in Scientific Thought," The Scientific Imagination: Case Studies.)

Yet Holton warns against pushing analogies too far. By merely describing, one gives up the hope of making judgments:

I would not like it to be thought that the themata in a scientific work are its chief reality. Otherwise, work in the history of science would degenerate into descriptivism, and scientific findings would seem to be on a par with the tales of the old men in the hills of Albania, to whom today's story is just about as good or as bad as yesterday's. There is in science a sequence of refinements, a rise and fall, and occasionally the abandonment of introduction of the themata. But also there undoubtedly has been on the whole a progressive change to a more inclusive, more powerful grasp on natural phenomena.

In the Humanistische Gymnasium, Holton recalls, the discipline of history was presented "as the measure of all things." The failure to carry this vision through into the sciences—the setting up of a false barrier between science and its cultural context—has always worried him. In an introduction to a Dadaea volume on "Science and Culture," Holton has cited Plato, discussing Socrates' warning, more than 2,000 years old, about the misapprehension of science on the part of philosophers:

When he was young, he had had a great appetite for the study called natural science, and had thought Anaxagoras would be a suitable teacher. But these fine hopes were soon dashed: The man talked only of things like air and ether and water and other abstract phenomena. He left the real cause untouched, the soul unattended.

James Meyers teaches at St. Gregory's College, a private two-year school in Shawnee, Oklahoma. He is, as he puts it, "the physics department." He also teaches "some astronomy classes, computer programming, and once in a while an occasional math class."

Since graduate school, Meyers had always had "a condescending attitude towards people in the humanities. We were taught to regard them as people who weren't interested in anything that was worthwhile worrying about." And, Meyers adds, "since humanists used different methodology, they probably weren't finding out anything worth finding out."

However, since Meyers attended a summer seminar in 1979 at Yale University, "Physicists in Historical Context," he has drastically revised his earlier opinions about the humanities. The seminar Meyers attended is part of the annual program of summer seminars for college teachers sponsored by the NEH. Preference in granting fellowships to attend is given to those who have been teaching for at least three years and who are at a college or university without access to the collections of a major library. One focus for several seminars is in the area of science, technology and human values.

The seminar at Yale led by Martin Klein, and one given at Harvard by Everett Mendelsohn, "The Social History of Modern Science," were open both to the humanist and to the natural scientist. NEH seminars in Science, Technology and Human Values are planned so that the seminar content as well as the classroom experience of the participants will form a bridge between science and the humanities.

James Meyers, who was not an astronomer by training, feared he was passing "some of my own boredom on to the students." Most of his St. Gregory's students were humanities majors, and Meyers turned to the course at Yale for help in relating science to the humanities.

Albert Gunns, a professor of history at California State University at Long Beach, participated in the seminar with Meyers at Yale. His area of expertise, twentieth-century American history, had led him to a recent and intense interest in the impact of science on the development of the United States. Gunns viewed the seminar as a way to learn more about the science involved in his historical studies.

Klein's seminar was designed to focus on the scientist at work: a particular individual in a definite historical setting facing certain problems with the resources available. The scientists who were examined were Galileo, Newton, Carnot, Maxwell, Rutherford, and Einstein; students read works by the scientists themselves as well as historical scholarship about their work.

Although there was not an exact balance of humanists and scientists, there was a lively exchange between the disciplines. Gunns joked that he gave scientists "an in-depth idea of what the humanists' ignorance of science was." But Klein commented that "it was startling to the scientists to see how a historian would take a text and give it a close reading, suddenly to be confronted with a whole mode of thinking about the world, a whole way of talking about it."

Gunns said, "I think they came to value the fact that an accurate history gave them a deeper understanding of their own field."

While some of the individual scientists at Yale, Mendelsohn at Harvard was leading his students through the social history of modern science using three paths: the chronological framework (the seventeenth through the early twentieth centuries), methodological analysis of research procedures and modes of interpretation in the social history of science, and a focus on specific topics such as patterns of institutionalization and scientific careers.

Mendelsohn described the interaction of his students this way: "The seminar members themselves became resources for the perspectives and information of their own disciplines. The scientists took on the task of explaining technical materials to the humanists while the humanists became the teachers when historical or literary issues arose."

One of the strengths of Mendelsohn's seminar was the diversity of its members, both in their research interests and their regional diversity—participants came from as far away as Montana, Minnesota, and Hawaii, as well as from the eastern part of the United States.

Several seminar participants remarked that the variety of points of view provided a trusted sounding-board as well as an intellectual hybridization of their ideas. For Stanley Bernstein, one of Mendelsohn's seminar participants and a professor of chemistry at Antioch for the last eleven years, the mix meant "some legitimization of my own idea that there is no such thing..."
The Social History of Modern Science

as a purely objective scientist. Then I got hints of how to pursue that, a framework in which those ideas may be investigated, frameworks from the social sciences, some from history."

For Pierce Mullen, also at Cambridge that summer and a professor of the history of science at Montana State University in Bozeman, the seminar was an affirmation of his belief that "there is a bridge built by the fact that the scientist works in a social situation and can never be completely divorced from the concerns of the society. The way in which Everett developed the material indicated to me that there was a bridge, that I hadn't been imagining it, but that other people also had been thinking about it."

For many of the seminar participants, the benefits stretched beyond the exposure to new material, although that academic plus should not be minimized. For many it was a mid-career breather, a time to re-immerses themselves in scholarship, to finish a research project that had been put on the back burner.

The seminars pursue a total immersion pattern: in addition to class meetings, there is ample chance for informal discussion over coffee, or dinner. One participant found the experience "absolutely extraordinary. The usual pressures for a professor are to do everything but scholarship: to teach, to sit on committees, to advise students. I hadn't been around real scholarship since graduate school and I had forgotten what it was like!" The ultimate beneficiaries of the seminars are the students of the participants. For some who attended, it will mean something as simple as adopting a teaching technique used by the seminar leader. The Harvard seminar encouraged Kathleen Redd, an associate professor at St. Cloud University in Minnesota, to convey to freshmen in her introductory social science course "the usefulness of all disciplines and all perspectives in looking at human experience."

And for Gunn's, the lone humanist who participated in Klein's seminar, his summer's work meant retooling a floundering history of science course and presenting it as "Modernization: an examination of the impact of science and technology on the Western world as well as the underdeveloped countries."

Perhaps Bernstein gave the most direct testimony to the value of Mendelsohn's seminar "[It was] sharing ideas with others and making the leap into a world view different from one's own comfortable discipline." —Louisa Hart

Ms. Hart is a Washington writer.

Other recent NEH Summer Seminars in science, technology, and human values:

- Exact Sciences in Antiquity and the Middle Ages, Asger Aaboe, Yale U., New Haven, CT
- The Second Scientific Revolution, Stephen G. Brush, U. of Maryland, College Park
- The Functions of Discourse in Science and Literature, E. Fred Carlisle, Michigan State U., East Lansing
- The Importance of History to the Philosophy of Science, Ian Hacking, Stanford U., CA
- The Unity of Learning in the Later Middle Ages, John E. Murdoch, Harvard U., Cambridge, MA
- The Interpretation of Scientific Change, Dudley Shapere, U. of Maryland, College Park
- Liberty, Equality and Fidelity in Bioethics, David H. Smith, Indiana U., Bloomington

Heaven (right) and earth (left) illustrate nineteenth-century mathematical and geometrical problems.
Gödel, Escher, and . . . the Humanities

A flock of Escheresque birds in still, symmetric flight crosses a ground that appears first to recede, providing a white sky for the bird formation, then to approach, becoming a grid of pale twins flying their own, opposite journey. The white ground is neither paper nor canvas, but the luminescent square of a computer screen; the "artist," a visitor to the Franklin Institute Science Museum's exhibition on mathematics, the arts and the humanities, opening in Philadelphia this June.

Producing on a computer, by a computer-taught mathematical formula, the visual symmetry of an M.C. Escher drawing is one of many experiments in the exhibition that will bring museum visitors face to face with what Pythagoras of Samos first realized long ago, "All is number." It demonstrates, too, a sophistication in computer programming never before used in interpreting the humanities for a general museum audience.

In a jolting confirmation that the medium is the message, the connections between mathematics and music, art, literature, linguistics, archaeology, anthropology, and philosophy are interpreted, illustrated, diagrammed, and experimented with through a computer—four Apple microprocessors, to be exact.

The microprocessor is the most obliging and versatile of museum guides. It offers its visitors a "menu" from which they may select a program of particular interest to them—symmetry, depth and perspective, numerical relationships in music, or geometric form. The information is organized and offered, as in a subject outline, general information presented first, followed by a series of choices for more detailed explanations.

A visitor interested in geometric form, for example, may be given information about the

Readers familiar with Escher's art will recognize that this pattern of birds was used in his well-known woodcut, Day and Night. Like the birds, Escher's symmetrical fishes consist of identical animals, dark and light.

From Schoenberg's Fourth String Quartet.
computer accepts numbers, translates them into notes, and directs a "music board," a simple electronic synthesizer, to produce corresponding sounds. This capability allows a visitor to "compose" music in an approximation, however streamlined, of the Schoenberg method. It takes the computer about two minutes to teach them e, inversion, and retrograde. By commanding these components to be repeated in a certain series, the visitor "composes" a piece and is then directed to the resource center to hear tapes of music that Schoenberg composed in a similar, if more elaborate, fashion.

Project directors Harvey S. Shipley Miller, curator of museum collections, and Goldwater, director of museum education, both emphasize that the exhibition, cofunded by the National Endowment for the Arts and the National Endowment for the Humanities, is not an exhibit on the computer, but one in which computers help to restore the visibility of mathematics and its reciprocal influences on art and the humanities.

Though the microprocessors are the most sophisticated and innovative departure from the conventional text-on-the-wall exhibition, they are not the only means for visitors to encounter these influences. Goldwater describes the planned exhibit as one "more in the tradition of the Science Museum, which is a 'hands-on' Museum." There will be a working camera obscura for experimentation with perspective, sets of tiles and mirrors that people can arrange in various patterns of symmetry, an oscilloscope to demonstrate the Pythagorean discovery of the harmonic series.

To show how completely mathematics infiltrates all human surroundings, the directors are selecting materials from many cultures, many disciplines, many ages. An Escher drawing, a medieval Rose window, a wrought-iron trivet all may be used to depict certain laws of mathematical symmetry, but in addition, the symmetry of the Rose window also has implications for religious symbolism; that of the trivet, for cultural anthropology.

Reproductions of paintings by Giotto, da Vinci, Mondrian; models of the Parthenon and Buckminster Fuller's geodesic dome; historical analysis of the discovery, made in the eleventh century by the Arabic philosopher Alhazen, that an object's appearance depends on the angle of reflected light that reaches the eye; commentary on the structural patterns and proportions of Virgil's Aeneid—information carefully selected from months of research will be organized by the four thematic groupings: symmetry, numerical relationships in music, depth and perspective, geometric form.

In the resource center, visitors can explore ideas too complex to capsulize on a computer screen or to turn into experimental devices: Noam Chomsky's theories of transformational grammar, for example, or the influences of Greek geometric form on epistemology and phenomenology.

Proportion in architecture. Depth in language. Symmetry in art. Proof in logic. Perspective in psychology. Form in literature. The language of mathematics permeates human endeavor. But in the course of the twenty-five hundred years since Pythagoras, the intertwining of mathematics with the arts and the humanities has become increasingly difficult to recognize, hidden perhaps by its very ubiquity. The Franklin Institute exhibition is planned to demonstrate that the language of mathematics is the vernacular of the universe—a language that counts in the humanities.

—Linda Blanken
Ms. Blanken is managing editor of Humanities.

"Mathematics, the Arts, and the Humanities: A Model Computer-based Museum Interpretive Research Tool" Harvey S. Shipley Miller/Franklin Institute, Philadelphia, PA 19328, 1978-81/Museums and Historical Organizations Program, Division of Public Programs
EINSTEIN AND MODERN LITERATURE

In Frederick Durrenmatt's play, The Physicists, Albert Einstein is a central character, the inmate of an insane asylum, left hopelessly to play his violin while the secrets of his theories are used to create instruments of destruction. It is one of the many works of modern literature where Einstein moves—if not in the plot, then behind it, revolutionizing techniques of narration. It is also one of the many instances where Einstein is used as symbol, the reality of the living man having been replaced by a personification of the atomic age.

Einstein as myth and muse is the subject of an interdisciplinary study, Einstein and Modern Literature by Alan Friedman of the University of California at Berkeley, and Carol Donley of Hiram College, Ohio, scheduled for publication next year. Friedman, who directs the astronomy and physics education program at the Lawrence Hall of Science, and Donley, who is on the faculty of the English department, pool their resources in exploring the myths and truths, the factual errors and formal experiments, inspired by Einstein and other modern scientists, in the works of writers as diverse as Jorge Louis Borges and Louis Zukofsky. Their collaboration began in 1979 with support from NEH.

The influence of Einstein on literature, however, reaches back at least to 1919, when the Eddington eclipse expedition verified a prediction of Einstein's theory of relativity, making headlines around the world. Dozens of journalists and commentators wrote about Einstein's discovery, and poets were soon to follow. One of the first poets to publish a poem about Einstein, says Carol Donley, was William Carlos Williams with "St. Francis Einstein of the Daffodils," in 1921:

> April Einstein through the blossomy waters rebellious, laughing under liberty's dead arm has come among the daffodils shooting that flowers and men were created relatively equal.

Old fashioned knowledge is dead under the blossoming peachtrees.

"April Einstein" was indeed young when he made his discoveries about the universe, and barely middle-aged when his discoveries were accepted and Williams wrote this poem. Yet he is most often remembered as a wizened old man of seventy. "Einstein has become the symbol of wisdom in our time," says Friedman, adding, "We associate wisdom with age. That's why Einstein is always shown as an old man."

Friedman is fascinated by the myths that have grown up around Einstein. People believe, he says, "that Einstein's theory made everything relative. It's not so." Einstein did believe that certain laws of nature were universal, but many people took the loss of traditional absolutes such as time and space to imply a loss of traditional moral values. The world according to Einstein was a strange place: our intuitions have grown up around Einstein. People believe, Friedman says, "that Einstein's theory made everything relative. It's not so."

Friedman believes that certain laws of nature were universal, but many people took the loss of traditional absolutes such as time and space to imply a loss of traditional moral values. The world according to Einstein was a strange place: our intuitions have grown up around Einstein. People believe, Friedman says, "that Einstein's theory made everything relative. It's not so."

"Einstein has become the symbol of wisdom in our time," says Friedman, adding, "We associate wisdom with age. That's why Einstein is always shown as an old man."

Einstein's theory was never accepted by Einstein, who was bare of that name. On this murderous mission, he goes to the house of Stephen Albert, where he is told of a labyrinth, constructed by his own creator, ancestor, which embraces "all possibilities of time." In the majority of these times, Donley says, Albert, looking at the man who is, unknown to himself, his own assassin, "we do not exist, in some you exist and not I; in others, I and not you. . . . In the present one, which a favorable fate has granted me, you have arrived at my house. . . ." The spy responds that "in every one I am grateful to you," but Albert interrupts him: "Not in all. Time forks perpetually in unnumberable futures. In one of them, I am your enemy." And as Albert turns away, the spy raises his revolver to shoot.

It is this Einstein-inspired revolution in thinking about time and space and the breath-taking formal changes which it inspired in poetry and novels that Carol Donley examines in the book. "Not that there is always a causal connection between the new forms and Einstein's theory," warns Donley. "Rather, poets like Williams looked to the theory of relativity to justify certain formal changes."
A fundamental shift in medical education

Doctors are turning to the humanities for the questions—if not always the answers—raised by the proliferation of complex issues in modern medicine. Following the lead of the prototypical Department of Humanities at the Pennsylvania State University medical school at Hershey, more than half the medical schools in the country now include a well-organized program in the humanities.

“We are witnessing that rare event—a fundamental shift in the aims of medical education,” wrote Dr. Edmund Pellegrino, president of Catholic University, for the Encyclopedia Britannica. The shift, he says, “is as profound as the introduction of the laboratory sciences in the early years of this century.”

Penn State’s medical school at Hershey is the creation of Dr. George Harrell, formerly dean of the University of Florida Medical School.

At a time when few of the nation’s medical schools had instruction in ethics, Harrell created at Hershey a humanities department with statutory status equal to that of the science departments, another Harrell innovation. The behavioral sciences were assigned an adjacent location to encourage communication among the departments. From the beginning, the humanities department participated in the decisions and operations of the school, including student admissions, recruitment of scientific and clinical faculty, curriculum planning and library development.

The first class arrived in 1967. From 1969 on, NEH supported the design of courses, and by 1974 the humanities department had a faculty offering courses in the history of science and medicine, literature, philosophy and ethics, political science and law, and religious studies.

The humanities department was developed by its chairman, the Reverend E. A. Vastyan, an Episcopal clergyman, formerly at the University of Texas Medical School, who with a number of theologians from campus ministries had long been meeting to discuss the role of religion in medical education.

Harrell regarded the alliance between religion and medicine as one evident in history’s earliest records. “The first physicians were priests, shamans and witch doctors,” he says.

Vastyan thinks of a medical school as a paradigm of our culture with its need to provide basic human services while adapting to an explosion of technical advancement.

He contrasts the ethics and philosophy
A Guide to the Culture of Science, Technology, and Medicine

appears at a time when much debate—both in the classroom and in larger public forums—focuses on ethical questions arising in science, technology, and medicine. The 725-page book contains state-of-the-art reviews of the history, philosophy, and sociology of three areas—science, technology, and medicine, with a final chapter on science policy studies, an analytical table of contents, and an extensive bibliography appended to each chapter. In the words of its editor, Paul T. Durbin, the Guide is designed to “demonstrate the relevance of these new fields to the solution of ethical questions” arising in the context of science. Teachers and students, scholars, and policy makers, will find references in the Guide to technological and medical fruits of science—from recombinant DNA to computer diagnostics—as well as social and historical categories—from national health insurance to Babylonian science. Unlike the Encyclopedia of Bioethics, which covers some of the same ground (and which also received major support from NEH), the Guide is not really an encyclopedia, although both were published by Free Press under its division of encyclopedias. Says Durbin: “The Encyclopedia of Bioethics has its entry on ‘Philosophy of Technology’ an entry of about 1,200 words, with a two-page bibliography. But the Guide contains a full chapter on the philosophy of technology—about 150,000 words, and ten pages of bibliography.” Durbin adds, “The Guide has the same kind of authority as the Encyclopedia, but it is much larger.”

To paraphrase Arnold Thackray, whose essay on the history of science opens the Guide, what teachers and scholars will find here is not so much a “map of the whole territory,” as “a compass and some initial instructions” to some new fields. Not that history and sociology per se are new. Only in recent decades, however, have the history and sociology of technology and science established their own graduate programs and produced scholars. There’s nothing new, either, about the idea of looking at science from a humanistic point of view,” says Paul Durbin. As we can learn by looking in the Guide, Aristotle raised a bioethical question when he recommended the use of early abortion as a way of controlling population, and a Portuguese Jewish physician named Rodrigo Castro discussed doctor’s fees and stressed the virtues of prudence and generosity in the conduct of physicians in his Medicus politicus sive de officiis medico-politicis as early as the seventeenth century.

“What is unique about the Guide,” says Durbin, the man who knows it more intimately, perhaps, than anyone, “is that it is the first effort of its kind to pull the different disciplines together to study the impact of scientific and technological advances on our culture as a whole.” Indeed, the Guide assembled in this four-year interdisciplinary effort with the help of grants from the National Endowment for the Humanities and the National Science Foundation—decided to call their book a guide to culture, not a guide to values precisely because they were interested not only in value issues within the sciences, but also in the value of science—and medicine and technology—within our contemporary culture.

The question of doctor’s fees, for example, has a context within the history of medicine, as Gert H. Brieger notes in his chapter on the history of medicine. But the question also has an ethical dimension—how much should doctors receive for their services?—as H. Tristram Engelhardt, Jr., and Edmund L. Erde, indicate in their chapter on the philosophy of medicine. The very same issue, however, can also be discussed within a broader social context, in terms of the social aspects of medicine, and the way science and medicine work as social institutions. This is the approach of sociologists like Linda H. Aiken and Howard E. Freeman who contributed the Guide’s chapter on medical sociology and science and technology.

In some respects, says Durbin, the Guide resembles Science, Technology, and Society, edited by Ina Spiegel-Rosing and Derek de Solla Price, and conceived initially, says Durbin, “as a study primarily in science policy, and later expanded to include some history and philosophy.” Some of the scholarly difficulties the Guide aims to overcome were brought out in the way specialists from different fields responded to the publication of the Spiegel-Rosing/Price enterprise in 1977: philosophers bemoaned it as a major breakthrough, some historians welcomed having an influence in philosophy of science, but others bemoaned the lack of historical originality in the work. Some sociologists praised it, but others rejected it as too narrowly based on the physical science model. “The Guide carries further,” says Durbin, “the work begun by Science, Technology, and Society,” and attempts to remedy misunderstandings among specialists by including full chapters on the history and sociology of science and technology. “It contains a more complete bibliography, without...
Illustrations that symbolize the breadth of subject matter contained in the Guide: an inclined plane; a full-length Oriental figure stroking his beard, acupuncture points and meridians illustrated with Japanese characters; a model of the Pioneer I spacecraft which transmitted 43 hours of data although it failed to reach the moon; Hippocrates; Stalk of a Lily with a Head of Flowers, by Leonardo Da Vinci; Charles Darwin.

overlapping entries. The bibliography is subdivided into journals, classics, and straight bibliography.

"Each contributor," Durbin continues, "handled a topic a little differently. Some used a more historical, others a more analytical approach. But all the essays attempt a synthesis which related their own specialty to the other disciplines included in the Guide." For example, Arnold Thackray, in his essay on the history of science, blends historical elements with key concepts and current controversies within his field: He touches on medieval science, and moves to the modern notion of a scientific revolution. At the same time, Thackray relates the history of science to philosophy and sociology of science—and to the philosophy and sociology of technology and medicine.

As the physicist and historian of science Gerald Holton has noted in a different context, until recently it has been taken for granted that both the doing and the findings of science will be for the good of mankind. But the public becomes increasingly ambivalent about the beneficence of science, the more visible science becomes. And Thackray points out in his essay in this volume, the new visibility of science, and the increasing number of specialties within science, only serve to deepen "the need for mediation between the many groups with interests in the social construction of science."

The value of this enterprise was eloquently argued a few years ago in an essay called "The Future of Knowledge," by the British philosopher Stuart Hampshire. Hampshire warned that modern knowledge may become sterile unless scholars begin to fertilize their own narrow fields with loam from other disciplines, and added:

Of its nature knowledge advances by the division of labor, by ever-increasing specialization. Every inquiry subdivides into new disciplines requiring separate investigation. It is also true that new knowledge depends on ideas from different disciplines being connected within a single mind. This contradictory requirement, not to be avoided, is a principal wound in modern culture, and it has been a topic for political theorists, poets, and philosophers ever since the Enlightenment. "("The Future of Knowledge," New York Review of Books, March 31, 1977)

A Guide to the Culture of Science, Technology, and Medicine, is a poultice for this "wound in modern culture," at least as it has afflicted humanists and scientists.

—Carolyn McKee

Ms. McKee is a Washington writer.

"A Guide to the Culture of Science, Technology and Medicine" by Paul Durbin, University of Delaware, Newark, 1976-77 Science, Technology and Human Values Program, Division of Special Programs
One New Dimension in Decision Making

Our laboratory records indicate that we are slowly contaminating all wells in our area, and two of our own wells are contaminated to the point of being toxic to animals and humans. This is a time bomb we must defuse.

—From "The Hooker Memos" a December 16, 1979 broadcast of 60 minutes.

You are an environmental engineer with a large chemical company. You warn management against its practice of dumping water containing toxic wastes for two years. Management does not respond. Does your responsibility end here? Or do you jeopardize your professional future and your family's financial security by "blowing the whistle" on your company?

Is this a typical dilemma faced by managers in government, business and industry?

While the Hooker case may not be "typical," it is enough like the daily round of decisions faced by government managers and their counterparts in business and industry to warrant a closer examination of the entire decision-making process, according to Homer Sewell, director of the Neh project, "Applied Ethics for Government Managers."

Sewell says that decisions made by government managers affect the lives of thousands, if not millions, of people. "The problems of the next two or three decades—population growth and the concomitant shortages of resources and food, the revolution in microbiology and microelectronics and the social upheaval they will precipitate, the proliferaton of nuclear and even more lethal biological weapons—we can't go on muddling through like we have up until the present," insists Sewell.

The program was held at George Washington University and consisted of two courses designed to attract senior government managers whose jobs relate to science and technology. Government executives quickly filled the two seminars: one, an all-day workshop consisting of lecture, case analysis, seminar debate and discussion; the other, a longer, more rigorous program involving eight seven-hour seminars. The forty participants in the latter program included colonels, naval captains from NASA Goddard Space Flight Center, the United States Navy Ship Research and Development Center, the United States Nuclear Regulatory Commission and the Defense Communications Engineering Center, among others.

"They came with terribly important concerns about the moral dimension of their professional experience," Sewell explained.

Each interdisciplinary session in the seminar was led by a distinguished figure in a particular humanities discipline. Dr. Daniel Callahan, director of the Hastings Center; Institute of Society, Ethics and the Life Sciences, led the session on ethical issues in science; Dr. Robert Baum, director of the RPI Center for the Study of Human Dimensions of Science and Technology, on societal issues in engineering; and Dr. Lesley Walters, director of Georgetown University's Kennedy Center for Bioethics, on medical ethics.

After being grounded in the theoretical traditions of moral philosophy, the participants examined the ethical applications to decision making in their professional lives, with such questions as:

"Are we scientists responsible for the consequences of basic research?"
"Is there such a thing as forbidden knowledge?"
"Are there some technological possibilities that should not be pursued?"

"I think some of us were saying, 'Give me a formula—a set of rules and regulations to make ethical decisions!'" said Robert McEwen of the U.S. Geological Survey, "but at the end, at least for some of us, there was a realization that that was impossible."

Sewell believes that, "some of the participants came out of the course more frustrated than before. The nature of these kinds of questions is intrinsically ambiguous because they are a reflection of our consciousnesses . . . even though we are enormously successful at answering the 'what' questions of our existence, we are no closer to answering the 'why' questions than we were 1,000 or even 10,000 years ago."

"Ten years ago the average corporation executive never had a serious thought of the moral climate in which he did business," said Sewell, who left his position as director of the Boeing International Corporation in Europe to acquire a Ph.D. in moral philosophy and currently teaches ethics to graduate engineering students at the George Washington University.

That contemporary management practice itself has contributed to an ethical malaise in business and government was addressed in sessions such as "Can an Executive Afford a Conscience?" and "Is Business Bluffing Ethical?" Participant Robert Levine, a technologist from the Defense Communications Engineering Center, blamed management practice for "an environment where self-objectives and the rewards that come with not making mistakes are more important than any real accomplishment."

Callahan, of the Hastings Center, pursued the practice by technologists and scientists of applying "scientific" methodologies to policy making with discussions asking "How might we judge whether technological progress and innovation actually contribute to human welfare? Are such techniques as cost-benefits and risk-benefits "value-free?"

"We aren't unethical," said Robert McEwen, "but we need to sharpen our decision-making process. We worry about a lot of things but we don't do anything about them."

The realization of the need for a sounder and more informed approach to ethical questions by the professions, government and business is demonstrated by the burgeoning interest in ethics courses in the professional schools, the appearance of consulting firms specializing in applied ethics and in seminars like this one.

"Applied Ethics for Government Technical Managers" will be repeated at least biannually and will be the basis for a permanent course in the School of Engineering and Applied Science at the George Washington University. The success of the programs, measured by the enthusiasm of the participants who recommend future courses to their colleagues, has led to serious discussions concerning the establishment of a center devoted to the study of ethical issues in business and government for which the Washington, D.C., area is a particularly appropriate location.

"The objective of an applied ethics course," asserts Sewell, "is not to leave the participant a more moral person—there is no way to make a person more moral except by veiled indoctrination—but to develop a more morally sensitive person. We can increase our moral sensitivity to an issue as opposed to our total ignorance of its moral dimension. We can do a better job by asking questions using the analytical material at our disposal."

—Karen Salisbury

Ms. Salisbury is a Washington writer.

Courses on Applied Ethics for Managers of Technical Activity in Government" Homer Sewell/George Washington U., Washington, DC552, 454/1980-81/Science, Technology and Human Values Program, Division of Special Programs
Please note: Area code for all telephone numbers is 202.

DIVISION OF EDUCATION PROGRAMS—Myron Marty, Acting Director 724-0351
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Deadline in boldface for projects beginning after
June 1, 1981 October 1981
June 1, 1981 January 1982
July 1, 1981 January 1982

DIVISION OF PUBLIC PROGRAMS—Stephen Rabin, Acting Director 724-0231

Each state group establishes its own grant guidelines and application deadlines; therefore, interested applicants should contact the office in their state. A list of those state programs may be obtained from the Division of State Programs.

DIVISION OF FELLOWSHIPS AND SEMINARS—James Blessing, Director 724-0238

FELLOWSHIP PROGRAMS—Maben Herring, 724-0333
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Preliminary Proposal—May 1, 1981 December 1981
Final Application—August 1, 1981 December 1, 1981
Youth Programs—Marion C. Blakey 724-0396

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Grant Application Deadlines Through August 1981
Students, professional schools, and foundations (including the National Endowment for the Humanities) have shown considerable interest in the topic of professional ethics, or, more broadly, the humanities and the professions. This sudden rush to fund research, and to teach, write, and discuss the problems of the area of "applied ethics" reflects a society in trouble. The humanities, it is hoped, will offer some measure of wisdom to practitioners in medicine, law, journalism, and public administration who have lately discovered that their power and success in solving problems have generated a special set of moral problems that their technical training has not prepared them to confront. Despite social interest and support for the enterprise, teachers who currently patrol the terrain of professional ethics face skepticism from their colleagues within the academy. Faculty members in professional schools are willing to respect the technical nature and established courses in professional responsibility, but many worry that such courses do not match in rigor the technical subjects of a professional education. They generally assign the work to an untenured colleague whose academic career depends upon research in a more traditional field of specialty. Or they purchase the partial services of a teacher in the humanities who has lately taken up an interest in the particular profession. The language of disdain sometimes verges on the phallic: the "soft" insights of the humanist do not compare with the "hard" data on which the professional depends for competence and fortune. The well-intentioned humanities scholars seem far removed from the hard realities of professional practice. Meanwhile, thoughtful traditionalists in the humanities have their own doubts about applied ethics. The current enthusiasm for the subject seems a little opportunistic and somewhat unbecoming. Faculty members introduce courses in professional ethics for the sake of favorable body counts. They mount research projects in the field in response to the sweet-talk of foundation money. Finally, they tend to lack intellectual credibility in the eyes of some colleagues in the fields of philosophy and theology, who find applied work secondary and derivative of foundational research in the classical disciplines.

No one wants to defend opportunistic behavior. At the same time, it should not be forgotten that the proud disdain of some scholars for the world of practice has itself rested on an economic base. Teachers in the humanities have been able to rely on substantial enrollments in their traditional courses because, until recently, students graduating with a B.A. degree could secure a job irrespective of major; the public school system needed armies of teachers. Further, foreign language departments had the advantage of cold war funds to keep themselves afloat with government students. Recently however, the economic base of the humanities has eroded.

The key question is whether these recent shifts in enrollments and money must be experienced as pure intellectual loss or whether, within limits, the humanities have something to gain intellectually, in addressing new constituencies in new ways. A response to this question requires a look at the word "applied." A term which may encourage a somewhat misleading view of the task of the teacher. The phrase "applied ethics" suggests a sharp distinction between ethical theorists, who do the original research (more highly prized by tenure and promotion committees), and applied ethicists, who relate abstract principles, generated elsewhere, to practical problems of the kind the professions face. One immediately thinks of the corresponding distinction between pure and applied research in the sciences or between fundamental and mission-oriented research directed to the development of specific technologies.

Applied ethics, so conceived, at once claims too much and too little for the field. It claims too much to the degree that it implies to the professional community that the humanities offer some kind of rescue and salvation from moral problems. People in this camp look to the humanities to infuse the society with values and to help it cope with its problems and destiny. (Malcolm Muggeridge once called values the polite "BBC" term for religion.) In this view the applied ethicist functions as a kind of professional's professional, who, it is hoped, has access to a tradition and to a mode of reasoning that will eliminate the moral dilemmas that beset professionals in professional life. With some such professionals attend seminars on ethics and foundations support them. But, of course, moral problems are a peculiar class of problems—chronic rather than occasional. This leads thoughtful moralists to want to lower expectations.

Alternatively, applied ethics claims too little for itself—particularly within the Academy—insofar as it suggests that "applications" have a merely deductive, derivative, and dispensary relationship to theory. Thus, truly serious moralists are presumed to do abstract, foundational work; applied ethicists, at best, live parasitically off this basic research and relate it to specific problems which, alas, they know less well than the expert in the field. Their competence is constantly at risk. They carry water from wells they have not dug to fight fires they cannot find. They do not appear to be intellectually serious figures.

This condescending view of the applied ethicist overlooks a more heuristic possibility for the vocation. Wrestling with specific issues may help one see theoretical problems in a fresh way. Through the effort to reach some kind of clarity about "applications," one may not merely package what is already known, but discover what is unknown, barely known, or known purely by rote. To this degree, the applied ethicist is more than a taxonomist who classifies already established moral systems and applies them to specific issues. He or she works as an applied moralist who offers fresh theoretical insights in interpreting and criticizing a specific world of practice. James Madison, Edmund Burke, Erasmus, Martin Luther, Samuel Johnson, and Simone Weil are examples of thinkers who bridged worlds to the benefit of both.

The word "theory," unfortunately, sometimes suggests to the practical person a remote and abstract enterprise, blindly distant from the real world; and much of it is so. But classically understood, theory is a kind of bridge to knowledge, which provides a fresh envisioning of the world. So Plato understood it, when he cast the poles that he knew in the light of the ideal state. And so Machiavelli understood it, when he dedicated to the Prince, he compared the political theorist to the landscape painter who views the world from the distance of insight and perspective. Another very word "theory" in its Greek root refers to vision. Appropriately, the word "theater" also derives from theory because theater, like good theory, presents us with a world to see. Theory, then, gives us a corrective vision. It does not merely scan the landscape; other modes of practice become more blurred and unclear, our possibilities for action, so that behavior that previously seemed plausible and imperative now loosens its hold, its power to compel. Every world of practice tends to harden into its own image, to the point where already formerly seemed plausible and imperative now loses its hold, its power to compel. Every world of practice tends to harden into its own image, to the point where already formerly seemed plausible and imperative now loses its hold, its power to compel. Every world of practice tends to harden into its own image, to the point where already formerly seemed plausible and imperative now loses its hold, its power to compel. Every world of practice tends to harden into its own image, to the point where already formerly seemed plausible and imperative now loses its hold, its power to compel. Every world of practice tends to harden into its own image, to the point where already formerly seemed plausible and imperative now loses its hold, its power to compel. Every world of practice tends to harden into its own image, to the point where already formerly seemed plausible and imperative now loses its hold, its power to compel. Every world of practice tends to harden into its own image, to the point where already formerly seemed plausible and imperative now loses its hold, its power to compel. Every world of practice tends to harden into its own image, to the point where already formerly seemed plausible and imperative now loses its hold, its power to compel.

This re-visioning of the world that human practice presents. Through this cognitive illumination, the ethicist serves, in some limited way, the human capacity for resolution and decision. Ethical theory may not always eliminate moral quandaries, but it opens up a wider horizon in which they may be seen for what they are and thus become other than they were. To this degree, it creates a little clearing and space for men and women to act somewhat differently.

Edible re-visioning of the world that human practice presents. Through this cognitive illumination, the ethicist serves, in some limited way, the human capacity for resolution and decision. Ethical theory may not always eliminate moral quandaries, but it opens up a wider horizon in which they may be seen for what they are and thus become other than they were. To this degree, it creates a little clearing and space for men and women to act somewhat differently. It throws the accepted world in a new light, an unexpected perspective; it opens up new possibilities for action, so that behavior that previously seemed plausible and imperative now loosens its hold, its power to compel. Every world of practice tends to harden into its own image, at that point in time, in that time frame, whereby it rationalizes the dubious. In ethical reflection, the world, as it once appeared, gets stretched and rearranged; other modes of practice become more inviting; other social structures, more fitting. Teaching ethics in this mode does not attempt...
Philosophers who are also trained in law, medicine or business may well be exemplary lawyers, physicians or corporate managers, and indeed their philosophical training may enrich their other professional skills. But simply being a philosopher—particularly a moral philosopher—does not make anyone a values expert. When it comes to practical decay also can have moral significance. On the contrary, phi-

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Philosophers and philosophy courses can

...
Almost everyone at one time or another has consulted a dictionary, atlas, or encyclopedia. Yet to the popular imagination the making of such works often seems an arcane and plodding pursuit, whose product reflects a mere rehearsal of facts, a summary of information handed down and handed out. Moreover, the sheer scale of any enterprise to create a reference work challenges in itself contemporary notions about the inherent limitation of individual possibility: what one person can do or ought to attempt.

Ours is not an epoch in which scholars are encouraged to strive for eloquence in several disciplines; we are usually more comfortable with the specialist who knows one thing and knows it very well. In earlier periods, philosophers, statesmen, and literary figures assumed responsibility for refining and redacting what they thought significant or indispensable to human experience. The Victorian man-of-letters, Sir Leslie Stephen, undertaking to write a Dictionary of National Biography: Samuel Johnson, dated to compile a Dictionary of the English Language; Denis Diderot, playwright, novelist, art critic, survivor of the French Revolution and projector in its teeth of the Encyclopédie: all come to mind as examples of men who accepted, as fundamentally possible for the individual, the creative act of assembling, defining, and interpreting a comprehensive body of knowledge.

There is always the danger, of course, that such grandiose efforts may prove pyrrhic or self-destructive. One recalls George Eliot’s Casaubon and the havoc of his attempt to unify all the world’s mythologies within a single compass.

But then there is also the instance of James Murray, devoting thirty-five years to editing the Oxford English Dictionary only to die before its completion, who nevertheless could view his immense task as a kind of triumphant destiny: I think it was God’s will. In times of faith I am sure of it. I look back and see that every step of my life has been as it were imposed upon me—not a thing of choice: and that the whole training of my life with its multitudinous and irregular incursions into nearly every science and many arts, seems to have had the express purpose of fitting me to do this Dictionary . . . . But I am only an instrument, only the means that He has provided, and there is no credit due to me, except that of trying to do my duty: Deo soli gloria.

However much the spirit of the age may seem to consort against the encyclopedia and lexicographer, the need for what they do apparently remains undiminished. No less than previous cultures (and perhaps even more, given the vast amounts of information generated by our society), we require the coherence and interpretive judgments these kinds of works bestow. Perhaps this begins to explain, perhaps, that this period may ultimately be deemed a “great age” for atlases, dictionaries, and encyclopedias.

A geographical atlas might seem to be among the most conventional of reference works and one least susceptible to the concerns of the humanities. However, as the historian Lester Cappon has observed, “Graphic expression has a peculiar capacity to communicate facts and ideas directly and indirectly, outspokenly to the fact seeker, subtly to the knowledgable reader who probes further.”

The Atlas of Early American History is a work designed to communicate on both these levels. Its 286 maps, based on years of original research, are drawn and chronologically arranged to reveal the history of the Revolutionary Era from 1760 to 1790 and are accompanied by extensive text and a bibliography of sources for its cartographic data.

But almost all of the information in the Atlas may be inferred from the maps themselves which take as their subject not only traditional depiction of terrain and military sites, but political representation in the Colonies, the location of religious congregations by denomination, economic and cultural activity, and a number of thematic issues that fuse the temporal element of history with the spatial dimension of geography.

In “reading” this atlas, one may learn a variety of things: how the geography of the Colonies compares with that region of the United States today, how the population developed from 1720 to 1790, how the war itself progressed in twenty-four discrete periods, even how long it took for news to travel from Boston to Philadelphia. Sponsored by the Newberry Library and the Institute of Early American History and Culture and published by Princeton University Press, the Atlas of Early American History has been hailed as a landmark in the history of cartography and the use of cartography for historical reference.

A similar approach to the expanded possibilities of the atlas is seen in the Historical Atlas of South Asia, edited by Joseph Schwartzberg and published by the University of Chicago Press in 1979. Reflecting the work of more than
fifty cartographers and historians over a period of fourteen years, this atlas undertakes to depict the history of South Asia from the Old Stone Age to the present day. Its maps trace various political, cultural, social, and economic aspects of a region encompassing India, Pakistan, Bangladesh, Afghanistan, Nepal, Bhutan, Sri Lanka, and the Maldives. Certain maps also portray how the internal history of these countries was affected by Central Asia, Southwestern Asia, and China.

In its totality, the Atlas provides not only a wealth of data and information but also a vivid sense of the limitations of previous intellectual demarcations used to define South Asian history: the Hindu, Mohammedan, or British "periods"; transmuted European categories like "Ancient," "Medieval," and "Modern"; thematic schemata like "Slavery," "Feudalism," "Capitalism," and "Communism." The maps themselves are enriched by a substantial narrative text, bibliography of sources, indexes and cross-referencing.

The creation of new tools and reference works relating to native-American history may prove especially important, since they often will provide, for the first time, the necessary base for sustained interpretive research in this field as well as help to illuminate the true history of the Indian experience to a broader audience. Currently nearing completion, the Atlas of Great Lakes Indian History will depict in its forty maps and 176 pages of illustrated text, introductory schemata like "Slavery," "Feudalism," "Capitalism," and "Communism." The maps themselves are enriched by a substantial narrative text, bibliography of sources, indexes and cross-referencing.

The temporal span of the Atlas stretches from 1600, marking the first significant contact made between Indian and white, to 1875, when final treaties had been concluded with the government and the tribes placed where they may be found today. Since so much of its information has never been published before in any form, the Atlas of Great Lakes Indian History is expected to become an invaluable resource for a wide range of scholars, teachers, and students; for government administrative agencies and workers in local communities; and, perhaps most of all, for Indians themselves—whose history in this region will now, at last, have been appropriately documented.

Of no less importance to Indians and to scholars of their culture (and the history and structure of language generally) is the completion of adequate lexicographic tools. At the Native Language Center of the University of Alaska, linguists and native speakers are working collaboratively to produce a series of dictionaries that will preserve from extinction ten separate native-Alaskan languages. Similar projects have been undertaken in recent years to create dictionaries for the Penobscot, Gros-Centre, Colville, Comanche, and Salish languages. Appearing in 1980, The Navajo Language: A Grammar and Colloquial Dictionary epitomizes the varied uses and impact such dictionaries may have. Designed as a bilingual lexicon, it serves as a research tool for linguists and other scholars, as a tool for those concerned with the teaching of English or Navajo as foreign languages (even providing the raw material for a series of progressively graded texts), and as a basic reference for the young Navajo, enabling him to meet the necessity of learning English without sacrificing a knowledge of his "first" language.

Major dictionaries for other languages, often widely separated in time and geography, are also in progress. The Assyrian and Hittite Dictionaries at the University of Chicago and the Sumerian Dictionary at the University of Pennsylvania are each based on tens of thousands of cuneiform tablets dating from 3000 B.C. to A.D. 1000 and will constitute the first comprehensive lexicographic reference work for these historically significant civilizations.

When the three dictionaries are finished, the entire written corpus of these cultures will be made accessible to historians, linguists, economists, and cultural anthropologists; moreover, in supplying with their definitions a full context for each word, these dictionaries serve as a kind of encyclopedia as well as a thesaurus for the user.

Surprisingly, perhaps, dictionaries for certain languages currently spoken remain unwritten. The first English-Vietnamese/Vietnamese-English Dictionary is just nearing completion. A modern Greek-English dictionary is now being compiled at the University of North Dakota. Its editor has been working assiduously for the past twenty years; he is seventy-three and estimates the project may be completed by 1990. And as in the case of James Murray, the Dictionary has become his life. He will often work a nine-hour day, eat dinner, nap for an hour, and return to work for five more hours. Recently he told a reporter, who sought him out among this three million file cards, that "many people don't know what labor goes into this." He is hard-pressed even to remember when he last saw a movie—"twelve years ago, or maybe fifteen." All the same, he also took care to read approvingly to this reporter the words of the lexicographer J.R. Halbert from a card taped to the wall of his office: "I know of no more enjoyable intellectual activity than working on a dictionary... ."

—George Farr

Mr. Farr, a member of the Endowment staff, directs the Research Materials program.

Ed. note: All book projects mentioned in this article are supported by NEH grants. In Part II of this Dustjackets series, Mr. Farr will discuss encyclopedias and the impact of computer technology on the creation of research tools and reference works.
An Overview

Fellowships are, in effect, grants of time. They make possible uninterrupted study and research by providing stipends to cover the approximate cost of undertaking a summer research program or attending a summer seminar. Endowment fellowships range in length from four weeks in some summer seminars to a full year for most fellowships.

Unlike most other Endowment grants, fellowships go directly to individuals for personal study or research, rather than to institutions to fund larger-scale, collaborative projects; and applications are submitted directly by individuals, either to the Endowment or to the seminar directors.

This reflects another difference between fellowships and most other Endowment grants: the basic purpose of fellowships is to help individuals develop their ideas and capacities rather than to provide funding for a product such as a reference work, educational curriculum, museum exhibit, or television program.

Through its fellowship and seminar programs the Endowment keeps a primary focus upon the individual scholar: thinking, studying, doing research, planning courses, writing, and, in the seminars, exchanging ideas with colleagues.

NEH fellowship and seminar programs have been directed toward three main groups:

1. Scholars who can make significant contributions to humanistic knowledge (Fellowships for Independent Study and Research, Summer Stipends, Fellowships at Centers for Advanced Study).

2. Teachers in the nation's undergraduate and two-year colleges, who will convey to generations of students the insights of the humanities (Fellowships for College Teachers, Residential Fellowships, Summer Seminars), and

3. Leaders in professions outside teaching who will bring humanistic insights and understanding to their work and to the public (Fellowships and Seminars for the Professions).

The three groups are not, of course, mutually exclusive. Scholars may also be—in fact usually are—teachers, and vice versa; members of the nonacademic professions may also be scholars.

Before 1978, college teachers desiring NEH fellowships for independent study and research had to compete with applicants from the research-oriented universities. Because of their heavy career investment in undergraduate teaching and the colleges' limited research resources, some had difficulty competing successfully.

In 1978, the Endowment established a separate program of Fellowships for College Teachers, intended primarily for teachers in undergraduate and two-year colleges. This new program, freed of the overwhelming preoccupation of established scholars proposing work designed to result in significant publications, can more readily respond to different kinds of work which contribute to knowledge and teaching in the humanities in undergraduate institutions: for example, concentrated reading in the substance of one's teaching or study that will enhance the understanding of one's own field, as well as research directed toward published contributions to knowledge.

Recipients of fellowship awards cut across all sections of American society, and their projects are equally varied. Perhaps the best way to get a sense of their diversity is to look at some of the examples that follow. —James Blessing

Mr. Blessing is the director of the NEH Division of Fellowships and Seminars Programs.

“Ordinary” People

When anthropologist John Gwaltney set out on the field work made possible by his NEH fellowship, he wanted to test the validity of the traditional anthropological technique of the life history to document not an exotic culture, but the cultural character of "my own community." Gwaltney had already used the technique. As a student of Margaret Mead at Columbia University, his dissertation (published as The Thirte Shy) was on river blindness among the Yolos Chinante of Oaxaca, Mexico.

Gwaltney, who teaches at the Maxwell Graduate School of Syracuse University, is black, blind, and belongs to a large, extended family of relatives and friends whose help he enlisted as guides and participants. What he recorded goes far beyond attitudes simply about illness and society. "Data can dictate direction," he says, describing the process that resulted in an astounding book—Drylongso: A self-portrait of black America—published last year. Drylongso has already been hailed as a landmark contribution to the literary tradition of Oscar Lewis's Children of Sanchez and Studs Terkel's rendering of the lives and thoughts of "ordinary" people. ("Drylongso" means ordinary in the argot of core black culture).

Gwaltney interviewed forty-one men and women from age eighteen to eighty-nine. Many are domestic workers, others, industrial workers, teachers, students, retirees; most are poor, or very close to being poor; all were chosen for their conscious allegiance to ancestral values and because they speak for what Gwaltney calls "core black culture." All are highly respected members of their community. Gwaltney shares "the opinion commonly held by natives of my community that we have traditionally been misrepresented by standard social science." As one of his informants put it, "I think this anthropology is just another way to call me a nigger."

Thus the book was meant to be not another collection of street-corner exotica but an explication of black culture as it is perceived by the vast majority of Afro-Americans who are working members of stable families. "You never hear about black people like you or me," Janet McCrae tells Gwaltney. Not that there is anything so special about me, but everything I read about is sick ... I'm an ordinary black person. I have never spent a day in jail. I'm polite to everybody who is polite to me. I don't take drugs and I can save my money. I can say three sentences without "man" and "like" and "you know." I am not about to get on welfare as long as I can work. "Since I don't see myself or most people I know in most things I see or read about black people," says Harriet Jones, "I can't be bothered with that."

I wish you could read something ... that would show the people ... like most of us really are most of the time—together enough to do what we have to do to be decent people.

Although Gwaltney understands, he says, the "awful itch to say what people mean," he was determined to let his men and women speak directly to us. The candor with which they do speak out in the absence of any mitigating interpretive buffer is what makes the book astonishing—and disturbing. "Not since the nineteenth-century slave narratives," says Maya Angelou, "have so many black Americans told such truths to white Americans. The book is terrifying and illuminating." The truth that disturbs is a thorough, well-nigh unanimous mistrust, contempt and scorn for whites, the more compelling because it is expressed not as unreflective anger, but as a dispassionate moral judgment.

We don't really agree with white people about anything important. If we were in...
power we would do almost everything dif­ferently than they have.

The only white man that I ever could stand was John Brown, and they lynched him when my grandfather was 14 years old. As long as white people have been run­ning this country, they have done everything—except protests—that we all know things should be done.

Gwaltney says we need to accept that like it or not, “there is a section of the truth,” and that if there is to be any real dialogue between Ameri­can communities, we must hear “this seg­ment of our society thinks.” He believes that “we must learn to live as a plural society;” and to that purpose we all need to know more about the character of ethnicity. He speaks of what can be learned from “the art of listening,” and wishes that more people “were doing in Ameri­can ethnicity what I’m doing instead of sitting in offices quantifying data.”

**Medieval Justice**

In 1329, just before the opening of the local court session presided over by the king’s itinerant justice in the county of Northampton­shire, there was some political trouble in the town of Northampton: the mayor was dragged out of his house by the hair and forced to ac­cede to certain demands—mainly that he resign the office of Coroner which he also held.

The inevitable legal actions that followed were tried during the session. We can recon­struct these cases and the events behind them from eyewitness reports of the court proceed­ings, accounts that are part of the vast series of records that provide some of the best evidence we have of the history of medieval English law as well as the social realities with which the law had to deal. For example, the defendants in the Northampton friars finally pleaded nolo contendere and avoided going to jail by negotiating a heavy fine—not unlike some modern politicians.

The evolution of the English system of common law, which in turn has shaped Anglo­American constitutional tradition, is one of the great subjects of modern historical investiga­tion. Questions about the authority of central government, the origins of parliamentary insti­tutions, and the working out of the unique Anglo-American doctrine that due process is central to our form of law and government, have engaged generations of scholars. As old evidence is reconsidered and new sources be­come accessible, the debate flourishes.

The manuscript reports of the 1329–1330 Northamptonshire court session—known as a general “eyre” because the king’s judges were commisioned to hear all pending litigation involving freemen that came under the jurisdic­tion of the crown—have never been published.

An NEH Summer Stipend allowed Donald Sutherland, professor of history at the Univer­sity of Iowa, to complete his work of translat­ing, annotating, indexing, and introducing the reports of the Northamptonshire eyre. The text will be published by the Selden Society.

The judges who presided over the eyre also had administrative power to investigate royal fiscal claims in the county, a power fiercely re­sented by the local gentry. Hostility on the part of local society was so strong that the king was forced to retreat. The 1330 eyre of Northamp­tonshire, along with eyres the same year in Bedfordshire, Nottinghamshire, and Derby­shire—Sutherland is now working on manu­script reports of those—were the last ever in England to investigate royal fiscal claims. From then on, judges’ commissions were restricted purely to judicial business.

Reconstructing the reality of fourteenth­century legal procedure from the opaque sources is tough, painstaking work. About twenty different manuscripts report the 700 cases tried at the Northamptonshire eyre, and the accounts of a specific case may be wildly di­vergent. Matching the reports to the corre­sponding official record of cases entered by the clerks of the court on the Plea Rolls is “opera­tion needle in haystack,” says Sutherland. The Plea Rolls are in Latin, while the reports, which were written and circulated privately among lawyers, are in French. Often the manuscripts are hard to decipher; copyists, paid by the page, wrote as fast as they could without worrying much about legibility.

The reports are not verbatim, but present cases in dramatic form—“we can almost hear the voices,” Sutherland says. The Plea Rolls—the inexorable record of judgments, fines, and penalties—are an invaluable source of data, but some of the reports bring us the texture of medieval life with more immediacy than any other body of evidence we have.

Sutherland who uses some of the cases ex­tacted from the Northamptonshire manuscripts in his undergraduate legal history course, also drew on them in a 1979 NEH Summer Seminar for College Teachers he directed on “Freedom and the Rule of Law.” A strict observance of the points of legal procedure can be identified with the liberty of the subject, he believes, even though the phrase “due process” was not heard in the fourteenth century. “These people were the most fantastic sticklers for procedure,” Sutherland adds. One of the chief objects of the rules of pleading was that no one be required to make specific statements or be compelled to tes­ify. Sutherland calls this very broad tradition from which our Fifth Amendment rights come “the right of reticence.”

When the reports of the four last years are published—by 1986, it is hoped—more than 1,000 cases previously unavailable in any form will be accessible to the international communi­ty of scholars dedicated to tracing the main themes of Anglo-American law.

**Fellowships for College Teachers**

A teacher at a small, four-year college where the principal commitments are to teach­ing and service has commented:

The opportunity to renew our self-esteem and keep ourselves intellectually honest has a hard-to-measure, but nonetheless im­portant, impact in the classroom. By en­couraging us to go about a neglected piece of our business—scholarship—the Endow­ment’s contribution to ‘effective teaching’ may well be that it allows us to return to the job with a sense of refreshment and commitment that has gotten diluted by scarce promotions and the weather eye kept on class enrollments and full-time-student body counts.

The Fellowships for College Teachers program is designed especially for teachers of un­dergraduates who teach at Virginia Polytechnic Institute and State University, puts it. This is easier to say than to accomplish. Entzminger has found that his research on Milton and the fall of language has sharpened his own teaching of freshman English by leading him to emphasize the rela­tion­ship between writers and their audiences.

At VPI, noted for its engineering and pre­medical programs, students often approach the
required freshman reading and writing course with the preconception that the exclusive function of language is to convey information. Thus literature ought to be logical and make its points clearly and directly; a "good" text is one that starts with an introduction, explains what it promised, and ends with a clear summary conclusion. This is the kind of mindset that prompted one student to complain, after reading 100 pages of what looked like a "good" text, "Why didn't she tell me that in the beginning?"

How does specialized scholarly work in Milton criticism (the manuscript Entzminger completed as a result of his six-month NEH Fellowship is titled "Divine Word?: Milton and the Redemption of Language") help a teacher show students how to appreciate the subtleties, even the imprecision, of literary language?

Entzminger reports that students are immediately intrigued by some of the same topics that engaged Milton and other seventeenth-century writers caught up in the crisis of language that accompanied the seventeenth-century upheavals in politics, society and religion. We too are forced to confront "... the conscious or unconscious abuse of language that in fact says something very different. The students read Alice in Wonderland, a perfect text for raising questions of meaning and providing examples of language used to convey information as well as language used to mislead. And by analyzing ads, Entzminger's freshmen see that in fact says something very different. The students read Alice in Wonderland, a perfect text for raising questions of meaning and providing examples of language used to convey information as well as language used to mislead. And by analyzing ads, Entzminger's freshmen see how media can be manipulative, while advanced students in his Milton course examine the poems to see how language is carefully manipulated to control the audience's perspective. The freshmen grapple with the question if literature is inevitably manipulative, how does one distinguish it from propaganda? On the basis of the author's intent, says Entzminger. The "secret mark" of literature is that "it lets you in on consciousness about yourself; propaganda makes you do something."

Milton himself, a consummate manipulator of language who also wrestled with the dangers inherent in writing, defies simple categorization, Entzminger says. That makes reading Milton all the more challenging, just as the challenge of teaching freshman English is to convince students that careful, sensitive reading more than repays the effort and that complexity is a quality to be appreciated and prized in language and literature.

Modernization in Japan

There are six people on the faculty of the history department of Knox College in Galesburg, Illinois: two American historians, two European specialists, one medievalist, and Mikiso Hane, who covers the rest of the world. Hane's repertoire of courses includes Western civilisation, Russia, India, China, Southeast Asia, and Japan. "I teach everything," he says cheerfully.

Hane used his twelve-month NEH fellowship to study the effects of modernization in rural Japan by examining one village—Hane's own ancestral village of Oya, where he lived between 1933 and 1940. Born in California, he was sent back at age ten and remained until he was eighteen; his research also became a pilgrimage to recapture a lost memory of childhood.

Oya, he discovered, is no longer a farming community. The town is halfway between Hiroshima and the naval base of Kure and urban sprawl has overtaken it. Most people now go off to work in the city, and city people have made the rice fields residential areas.

There was more than enough material for Hane to broaden the scope of his initial topic and analyze the effects of modernization on the Japanese peasantry in general. The book he wrote on Japan from 1868 to 1945 (it will be published by Pantheon) examines the underside of the "miracle" of Japan's modernization by dealing with the lives of the peasants and the men and women who were the products of agrarian poverty—girls forced to work in the textile factories or to become brothel inmates, miners, and the burakumin (outcasts). Hane's
main sources are for the most part memoirs, diaries, and the mass of oral history gathered by Japanese social scientists and journalists. Although some of these interviews have been published in Japan, the material will be accessible to an English-speaking audience for the first time in his book.

Hane came back from his fellowship year with all kinds of ideas for doing comparative history. His examination of the plight of the Japanese farm girls working in the silk and cotton factories led to a comparative study of Japanese women textile workers and their counterparts in nineteenth-century New England.

There are interesting parallels between what happened in Japan and other countries that moved from agrarian to industrial economies—France and Russia in particular. A study comparing Japanese and Russian peasants in the nineteenth and twentieth centuries is another possibility, and one that would be especially pertinent to Hane's teaching of Russian history. He also wants to continue his work on modernization by looking into the life of urban dwellers, particularly those in the slums.

The only problem is finding the time to get started on the next project, Hane says. Meanwhile he has decided to pay more attention in all his courses to the impact of modernization on the masses and to slant the non-Western history courses more toward social history.

Hane is a subscriber to Barbara Tuchman's dictum about studying history through the lives of individuals, and notes that students are more responsive to social history when it looks at the "life of the common people." Students often need to have things described in concrete terms, and helping them understand what life was like for a specific farmer or peasant, whether in medieval France or Meiji Japan, makes history more interesting, he says. "That's what I've been trying to do."

Doing comparative history is nothing new for Hane. His dissertation was on English liberalism and the Japanese enlightenment, and he points out that since most of the countries he deals with in his courses are still agrarian, his research on Japanese peasant life is very useful all around. Unlike historians who are specialists in one narrow field, Hane is involved in teaching so many things, he says, that "I find I'm learning something all the time."

Mothering in Classical Antiquity

Five years ago, a child psychologist at the National Institute of Mental Health asked Valerie French, who teaches ancient history at the American University in Washington, D.C., to do a brief survey of the ancient world to help answer the question: Was Locke's concept of the tabula rasa characteristic in Western thought, or did adults at various times perceive that they react differently to different children? She quickly agreed, "He offered to pay $200, and I needed the money," she recalls.

French soon found there was virtually no secondary material on the subject, and ever since, she has been absorbed in what has blossomed into a full-scale investigation of early childhood in classical antiquity, staking out in the process a relatively new field of historical inquiry. An NEH fellowship last year allowed her to find and organize evidence from classical literature, history, archaeology and medicine that will result in a two-volume work on child rearing from the age of Homer (800 B.C.) through the reign of Constantine (350 A.D.).

An understanding of how families reared their children helps answer tough historical questions about the structure of society, shifting family patterns and changes in value systems. For example, French suggests that the failure of fourth-century Sparta to preserve its traditional ethos after the Peloponnesian Wars may be due to a radical change in child rearing during the Wars, when Spartan women forced to assume more responsibility for the state and the economy turned the job of child rearing over to non-Spartan women, and that these women were not able to establish the traditional social models by which Spartan ideology was transmitted from generation to generation. French also believes that "a fair amount of bizarre behavior" among Roman imperial families—particularly the Julio-Claudians, may be explained by the fear, indulgence and instability that marked their early childhood.

In the course of her research, French has ventured into fields new to her as she came to recognize the need for multidisciplinary analysis of the material. She consulted with child psychologists ("you must resort to psychological theory" to talk about mother-child bonding, for instance), sociologists, obstetricians and pediatricians. Although the secondary histories of pediatrics led her to believe the primary sources were skimpy, French discovered a rich tradition of pediatric literature, and found herself studying "a field I'd never heard of before,"—pharmacognosy, the medical administering of herbs. To analyse the data collected from hundreds of funerary epitaphs she found for Roman children, she learned to use a computer.

A course she teaches on psychobiology incorporates much of the new material on childhood and French now spends much more time on family life in her general courses on Greece and Rome. Slides made from the hundreds of photos she took in England, Italy and Greece illustrate her guest lectures on images of child life in art history classes, and a paper on "Roman midwives and maternal care" will be presented at this year's Berkshire Conference of Women Historians. A long list of research topics is ready to suggest to students and scholars interested in ancient childhood.

French has learned, she says, that she cannot produce the definitive treatment of the subject; the material is too vast. "If I try to run down all the loose ends, I'll never finish." Her own children have helped to interpret the iconography of children at play and explain the use of toys that were obscure to her.

In response to some feminist resistance to studying the history of mothering at a time that many historians are turning away from an examination of women's traditional roles, French says "It's silly not to devote an enormous amount of attention to what ninety-nine and nine-tenths of all women live."

-Barbara Delman Wolfson

Ms. Wolfson is a Washington editor and historian.
1981 NEH FELLOWSHIP AWARDS

Arts—History & Criticism

Fellowships for Independent Study and Research

Frederick M. Asher, Minneapolis, MN, $68,500, American Folklife: Traditional Architecture, Art, and Historical Perspectives.

P. A. V. W. M. van der Hamen, Nijmegen, NL, $54,063, American Art and the Classical Tradition.

Barbara R. Pomroy, Hunter College, CUNY, $52,200, American Art and Design.

Joseph L. Love, Urbana, IL, University of Illinois, $51,660, American Art and Design.


Mary L. Papanicolaou, HDG, $52,800, The Origins of the Concept of Freedom in the Ancient World.


Jeffrey J. Pyle, University of California, Santa Barbara, $52,800, The Origins of the Concept of Freedom in the Ancient World.

History—Non-U.S.

Fellowships for Independent Study and Research

George Akis, U. of Hawaii, Honolulu, For Eastern Europe.

Robert J. Scally, Boston University, MA, $53,156, American Art and the Classical Tradition.

Alfred J. Finke, University of California, Santa Barbara, $53,156, American Art and the Classical Tradition.

Joseph L. Love, Urbana, IL, University of Illinois, $53,156, American Art and the Classical Tradition.


Tulanes Robert J. Gentry, MD, Cambridge, MA. Fellowships at Centers for Advanced Study in the Humanities and the Social Sciences are for two years. The grants are for studies in the humanities, social sciences, and related fields. The grants are available to researchers who have completed their doctorates and are engaged in advanced study.

The grants are awarded to individuals who have demonstrated outstanding scholarship and promise for future achievement. The awards are made on the basis of a merit review process, which includes the submission of a research proposal, a vita, and letters of recommendation.

The grants are designed to support the research of individuals who are at the forefront of their fields and who are making significant contributions to the advancement of knowledge. The recipients of the grants are encouraged to use the funds to support their research activities, including travel, equipment, and publications.

The grants are awarded through a competitive, peer-reviewed process. The reviews are conducted by a panel of experts in the relevant fields. The panels are composed of scholars who have made significant contributions to the advancement of knowledge in their respective fields.

The grants are intended to support the recipients throughout the duration of their research projects. The recipients are expected to provide regular updates on their progress and to make their research findings available to the public.

The grants are administered by the National Endowment for the Humanities (NEH), an agency of the United States government. The NEH is committed to promoting the study of the humanities and to supporting the work of scholars and teachers in the humanities.

The grants are open to researchers in the United States and abroad. The grants are available to individuals of all ages and backgrounds, including undergraduate and graduate students, as well as established scholars.

The grants are awarded on a competitive basis. The recipients are selected on the basis of their demonstrated excellence in scholarship and their potential for future achievement.

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Fellowships for Independent Study and Research
Ralph S. Brown, Jr., Yale, U. New Haven, CT
Donald H. Regan, U. of Michigan Law School
Terence F. O'Brien, Catholic University of America, Washington, DC
Audrey L. Haring, U. of Pennsylvania, Philadelphia, PA

Summer Humanities Seminars for the Professors
Legends and Truth: The Tides of Hispanic American History, New Mexico State U., Las Cruces
American Studies Seminar, University of New Mexico, Albuquerque

Summer Stipends
Miller S. Ball, U. of Georgia, Athens

Language & Linguistics
Fellowships for College Teachers
Engelhard, Charles, Columbia University, New York City
Kiss, Donat, University of Washington, Seattle, Seattle
Farr, Edward, University of California, Santa Barbara

Seminars and Language Teachers
Linguistics of the Hebrew Bible, Hebrew Union College, Cincinnati, OH
Historical Linguistics of the Koiné and Early Church, University of Notre Dame, Notre Dame, IN

Summer Stipends
Mark E. Walkinshaw, SUNY, Albany, NY

CUNY, Bronx, NY

Fellowships for Independent Study
John H. Allen, U. of Florida, Gainesville
John M. Ammons, U. of North Carolina, Chapel Hill
J. Douglas, U. of Georgia, Athens
Robert B. Spaeth, University of Wisconsin, Madison

Summer Stipends
Mary L. Tietze, SUNY, Stony Brook, Stony Brook, NY

Fellowships for College Teachers
Englehardt, Gary, California State University, Long Beach

Summer Stipends
Mark R. Balles, SUNY, New Paltz, New Paltz, NY

CUNY, Brooklyn, NY

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Fellowships for College Teachers
Englehardt, Gary, California State University, Long Beach

Summer Stipends
Mark R. Balles, SUNY, New Paltz, New Paltz, NY

CUNY, Brooklyn, NY
Fellowships for College Teachers
Century America, Religion and Society in Ancient Israel, James P. Brady, John R. Bokina, Science
Summer Stipends
Dante L. Germino, Charlottesville, VA; Margaret S. Cullen, Middlesbrough College, Cambridge, MA.
Richard A. Joseph, U. of California, San Diego; James J. Buckley, St. Andrews, Scotland; Walter L. Humphreys, Knox College, Galesburg, IL; Susan M. Barbour, University of Detroit, MI.

Social Science

Fellowships for Independent Study and Research
Dante L. Germino, U. of Virginia, Charlottesville; Richard A. Joseph, Dartmouth College; Hanover, NH, Political Science; Anne F. Thorton, Cambridge, MA, Political Science.

Fellowships for College Teachers
Larry L. Adams, CUNY, Political Science; James W. Anderson, Williams College, Williamstown, MA, Psychology; John R. Bokina, U. of Detroit, Political Science; Charles P. Bosselman, Salisbury State College, Md, Sociology; James F. Brady, U. of Massachusetts, Boston, Sociology.

Warren R. Brown, U. of New Hampshire, Durham, Political Science; Adele E. Gallagher, Our Lady of Elms College, Chicopee, MA, Education; Sugwon Kang, Harvard College, Oneonta, NY, Political Science; Robert P. Kraynak, Colgate, Hamilton, NY, Political Science; Jake C. Miller, Belmont-Cookman College, Dayton Beach, FL, Political Science; Carl F. Pfeiffer, Ohio Wesleyan, Delaware, Political Science;


Articles in “Islamic Bindings and Bookmaking,” an exhibition opening next month at the Oriental Institute Museum in Chicago, are noted not only as pre­cursors of all European bookmaking but also as objects of delicate beauty.

Exhibition Openings
On Common Ground: The Boston Jewish Experience, 1649--1980/AmERICAN Museum of Immigration at the Statue of Liberty, NYC/May 12--July 31
Voices from the Turtle Islands/Native American Center for the Living Arts, Niagara Falls, NY/a permanent exhibit opening May 17
Islamic Bindings and Bookmaking/Oriental Institute Museum, University of Chicago, IL/May 19--August 18
Copan, Ancient City of the Maya/Science Museum of Boston, MA/May 20--September 6, 1982
Hawaii: The Royal Isles/Seattle Museum of Art, WA/June 3--July 26
Shakespeare, the Globe and the World/Chicago Museum of Natural History, NYC/June 18--September 20

Research Conferences
American Indian Historians: The Changing Historiography/Davenport Hotel, Spokane, WA/May 6--9/Glennier C. Trafer (509)335-8676
Russian Literature in Emigration: The Third Wave/U. of Southern California, Los Angeles/May 14--16/contact Olga Match (213)743-2678
Near V. Minnesota: A 50th Anniversary Symposium/U. of Minnesota, St. Paul/May 28--30/contact Donald Gillmor (612)373-3171
International Symposium on Louis Adamic: His Life, His Works, His Influence/Minneapolis Institute of Minnesota, St. Paul/May 29--30/contact Rudolph J. Vecoli (612)373-5581
The Issue of Divestiture of Research Materials from Rare Book and Special Collections Libraries/Brown U., Providence, RI/June 11--12/contact Thomas R. Adams (401)633-2725
Chicano English/U. of Texas, El Paso/June 13--18 (tentative)contact J. Ortega-Galicia (512) 532-7852
Classics and Semiotics/Vanderbilt U., Nashville, TN/June 18--20/contact D. Patte (615)332-4884
Individuation and Wholism: The Confront and Taos Philosophical Perspective/Bowdoin College, York, ME/June 24--29/contact Donald Munro (207)756-3493
1982 NEH Budget Goes to Congress

Ed. note: NEH has received many calls about its FY '82 budget. The following is an explanation of the revised NEH budget and how the budget works.

The Endowment's fiscal year (FY) 1982 budget request will soon begin the lengthy process of formal review in the Congress, with House and Senate subcommittee hearings scheduled for the end of April.

In the first phase of the Congressional review process, the House Appropriations Subcommittee on Interior and Related Agencies and the Senate Subcommittee on Interior will hear testimony on the Administration's FY '82 budget request for NEH.

In February, President Reagan proposed a FY '82 Budget Reform Program for the Federal government. The President's revised budget requests an appropriation of $85 million in FY '82 for the NEH. The original FY '82 budget request, submitted in January, was $169.4 million.

At the Congressional subcommittee hearings, NEH officials will testify in support of the current budget request and make recommendations for its distribution among agency divisions and programs. The House and Senate subcommittees will also hear testimony on the NEH budget from interested and knowledgeable individuals outside the agency.

All appropriation bills originate in the House. Therefore, after debate on and possible revision of the President's request, the House subcommittee will submit its recommendations to the House Appropriations Committee. Further debate and revision may occur in the full committee before it sends an omnibus appropriation bill for the Department of Interior and Related Agencies (including NEH) to the floor of the House.

There is again the opportunity for discussion, negotiations, and alterations by the Representatives in full session, although committee recommendations are usually accepted. A majority vote in favor of the appropriation bill will send the measure to the Senate, where it will undergo a similar review. Based on recommendations from the Senate Subcommittee on the Interior, the Senate Appropriations Committee will report out an appropriation bill for debate and passage by the full Senate.

Should the appropriation bills passed by the House and Senate differ, they will be reviewed by a joint conference committee. The committee will then send a compromise bill to the two chambers for passage.

The resulting appropriation bill on the Interior and Related Agencies, which may differ from the Administration's request, will then be sent to the President for approval. The President has the options of signing, vetoing, or not acting on the bill.

The first budget resolution for all Federal departments and agencies is scheduled to be adopted by the Congress on May 15, 1981. After further review, a second and final resolution is expected to be passed by September 15.

The approved FY '82 budget will cover the period October 1, 1981 to September 30, 1982, the Federal government's 1982 fiscal year. The NEH budget for the current fiscal year, FY '81, has not been revised and remains at the approved level of $151,299,000.

—John Lippincott

Mr. Lippincott is an Endowment staff member

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About the authors . . .

Annette C. Baier studied philosophy at the University of Otago, New Zealand and at Oxford, England. She taught at the Universities of Aberdeen, Auckland, and Sydney before coming to the United States. Her first teaching assignment in this country was at Carnegie Mellon University, where she helped to create a program in philosophy. Now a professor in philosophy at the University of Pittsburgh, Professor Baier has published in philosophy of mind and action, in ethics and moral psychology, and is at present writing about David Hume’s philosophy of mind and society. Page 14.

William F. May is the Joseph P. Kennedy, Sr. Professor of Christian Ethics at the Kennedy Institute of Ethics, Georgetown University. He was an undergraduate at Princeton University, and received his graduate degrees from Yale. Professor May was the first chairman of the department of religious studies at Indiana University, and also served as chairman of the religion department at Smith College. A former president of the American Academy of Religion, he serves on the board of directors of the Society for Values in Higher Education and on the Board of Counselors of Smith College. May is a Founding Fellow of the Hastings Center and cochairs its research group on death and dying. Page 15.

Barbara Delman Wolfson attended the Bronx High School of Science, Vassar College and Columbia University, where she received undergraduate and graduate degrees in history. Her special field of interest is the social history of ideas. She was archivist for the McCarthy Historical Project, a collection of documents and oral history of the Eugene McCarthy presidential campaign, now in the Georgetown University Library, and has taught history at American University—including a course in medieval history for police officers enrolled in a degree program. She is a frequent contributor to Humanities and serves as editorial consultant to the magazine. Page 1.

In the next issue . . .

WHY GREECE AND ROME CONTINUE TO EXCITE, with

HELEN NORTH, Centennial Professor of Classics and chairperson of the classics department at Swarthmore College, on the resurgence of student interest in Western classical civilization;

KARL GALINSKY, professor of classics and chairperson of the classics department at the University of Texas, Austin, on building support for a large classics department (the largest in the country); and

SARAH POMEROY, associate professor of classics and director of women’s studies, Hunter College, City University of New York, on women in ancient Greece and Rome, and

News from the Agora, Metaponto, and Nemea—freshly dug by teams of archaeologists . . . the meaning of Pompeii . . . a new study of Heraclitus . . . the American Academy in Rome and the American School of Classical Studies at Athens . . . the Latin explosion in Philadelphia . . . the culture of Greece through its vases . . . a radio dramatization of the Odyssey, and

Adventures of a First-time Panelist by Frank Hercules, plus Dustjackets: Research Tools and Reference Works, Part II

RECENT NEH GRANT AWARDS • DEADLINES FOR GRANT APPLICATIONS

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