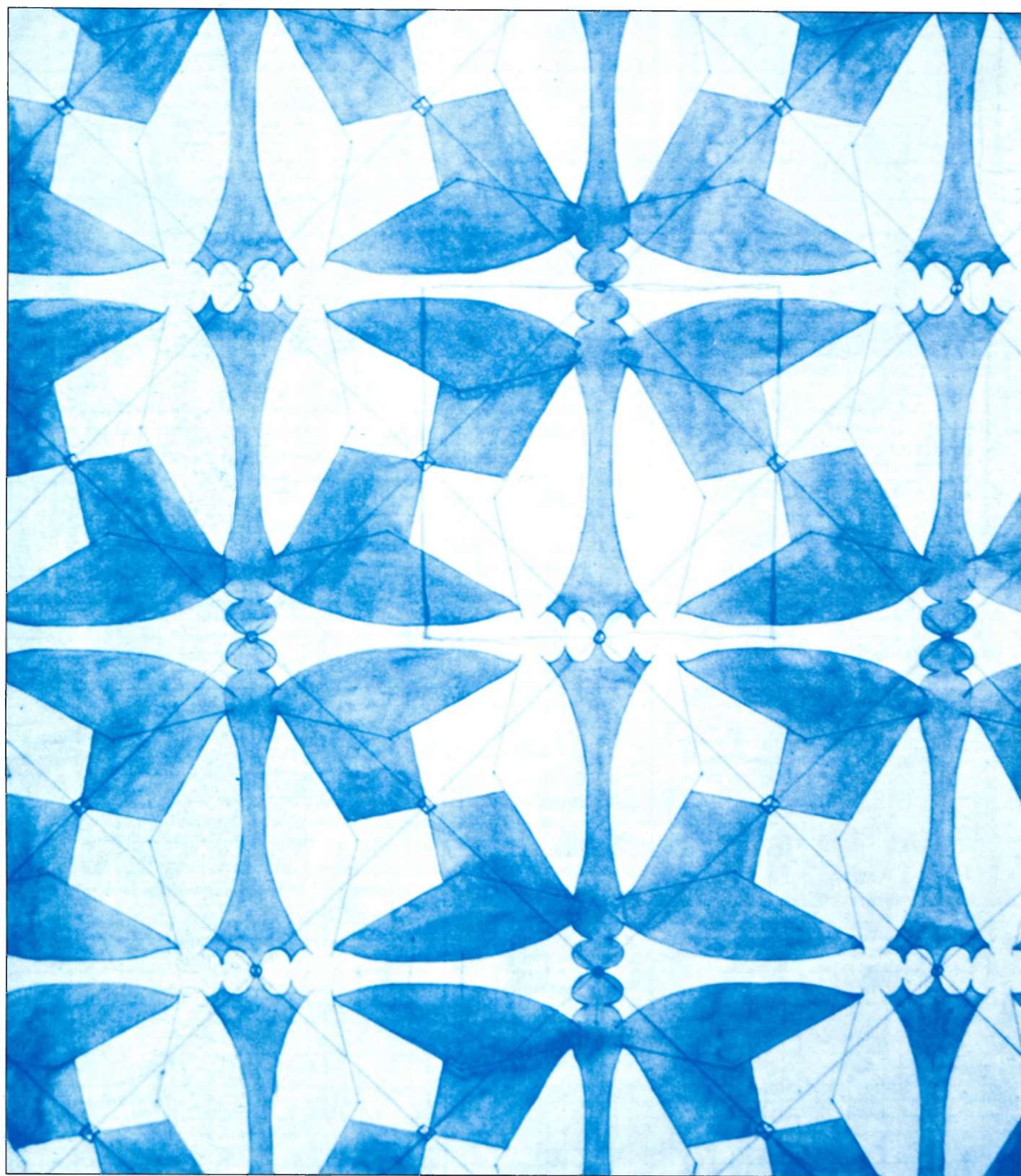


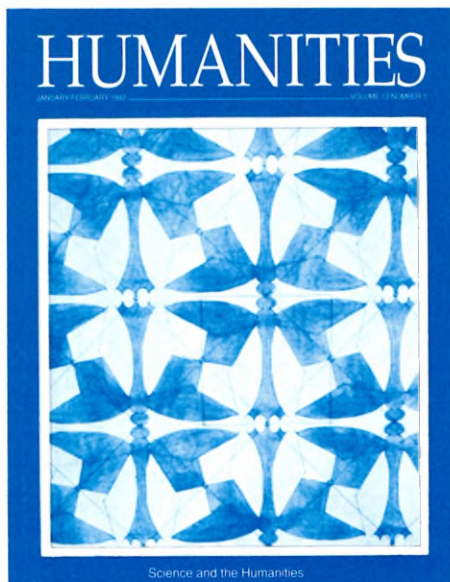
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Science and the Humanities



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EDITOR'S NOTE

Science and the Humanities

"We had the best of educations," the Mock Turtle assures Alice in *Alice in Wonderland*. His school under the sea might have been a little unusual, but the classes were thorough. The Mock Turtle ticks them off: "Reeling and Writhing, of course, to begin with, and then the different branches of Arithmetic—Ambition, Distraction, Uglification and Derision."

When Alice ventures to say she has never heard of "Uglification," the Gryphon steps in. He runs through the logic of illogic. Finally he gives up: "If you don't know what to uglify is, then you *are* a simpleton."

In the chastened spirit of Alice—if chastened is a word that can be used in the same breath with Alice—in this issue of *Humanities* we look at different kinds of learning, specifically the divide between science and the humanities. The language is as slippery as asymptotes to exegesis, as mysterious as the Mock Turtle's words to Alice.

Should the distance be breached? Why bother?

In a more serious forum, the Rede Lecture at Cambridge, C. P. Snow attempted to answer the question three decades ago. His thoughts became a slim book called *The Two Cultures*. The disdains and misperceptions that lay between scientist and nonscientist, Snow contended, were not mere rudeness: They were a danger to modern society. Still later he wrote: "In a time when science is determining much of our destiny, that is, whether we live or die, it is dangerous in the most practical terms. Scientists can give bad advice and decision-makers can't know whether it is good or bad. On the other hand, scientists in a divided culture provide a knowledge of some potentialities which is theirs alone."

He had a rebuke for his fellow humanists: "A good many times I have been present at gatherings of people who, by the standards of the traditional culture, are thought highly educated and who have with considerable gusto been expressing their incredulity at the illiteracy of scientists. Once or twice I have been provoked and have asked the company how many of them could describe the Second Law of Thermodynamics. The response was cold: it was also negative. Yet I was asking something which is about the scientific equivalent of: *have you read a work of Shakespeare's*."

The theme is picked up in this issue by Harvey Flaumenhaft of St. John's College in Annapolis, Maryland, an institution at which professors are "tutors" and teach disciplines outside their own. Flaumenhaft, a political scientist, introduces us to early theories of astronomy. "A good way to free ourselves from being merely tools of others' thoughts is to make their thoughts our own," he tells us, "by seeing how the answers of today arise from the questions of yesterday...." He is general editor of the Masterworks of Discovery series, an Endowment-supported project explaining great texts in the sciences.

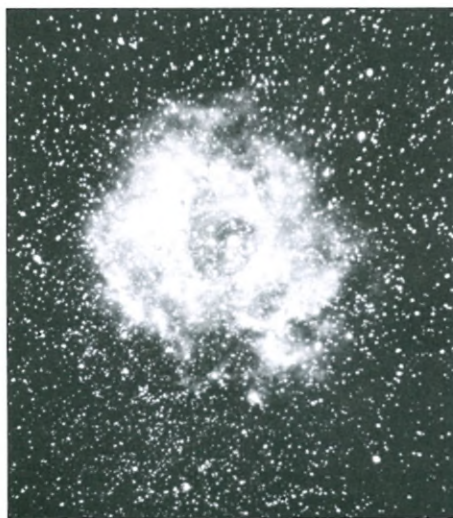
—Mary Lou Beatty

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Lynne V. Cheney

Photo by Teresa Zabala

A Conversation with ... Elizabeth Fox-Genovese

Feminism was the topic when Endowment Chairman Lynne V. Cheney met recently with Elizabeth Fox-Genovese of Emory University in Atlanta. Fox-Genovese is Eleonore Raoul Professor of the Humanities at Emory, professor of history, and director of the Institute for Women's Studies. Her most recent book is *Feminism Without Illusions*.

Lynne V. Cheney: Since the title of your newest book is *Feminism Without Illusions*, you might describe to me what feminism with illusions is like. I'm trying to understand what the illusions are.

Fox-Genovese: All right. The illusions are, one, that women are absolutely interchangeable with men, that sexual difference has no bearing whatsoever; or, two, that women are so different from men that they have a different morality, an entirely different vision of the world, and cannot relate to men in a common culture, that there is no common ground. So it's really the dilemma of equality and difference that I was trying to get at with the question of illusions. In addition, I think that academic feminism frequently doesn't have very much to say about the lives of real women in the real world.

Cheney: When you talk about these two illusions, the one that women and men are exactly the same and the other that they're completely and absolutely different, as I read feminist literature, it seems to be all on that latter side, that women are so completely different, that we speak in a different voice, that we must be understood in a different tradition, that we must be analyzed in a different way. I don't sense very much any more that other impulse, that one that says we're exactly the same. Where do you see it?

Fox-Genovese: I think on balance you're right and that the main thrust in academic feminism these days

emphasizes difference. On the equality side, you do have a group of people—and I think here of someone like the political scientist Susan Moller Okin—who believe that if only we had more shared parenting, that men and women would be functionally, effectively equal, without any significant differences.

Cheney: Where do you come down? I suspect you think that the truth is somewhere in the middle or that the truth is complicated.

Fox-Genovese: Yes, I think the truth is complicated, and I come down very much in the middle. The baseline for me is that we do live in human bodies, and yes, there is a sexual difference between men and women. I have no doubt about that. I also think, as a historian, that for much of history sexual difference has had some real consequences for sexual roles. Just take our own Western society—the tendency to see women as primarily committed to bearing and rearing children, and men as better fitted for defense, protection, and things that require physical strength. For a long time, there was real plausibility to that. Now, in a world in which we have safe and easily accessible contraception and in which technology plays a major role in our lives, the claims of difference are significantly reduced.

Cheney: The differences don't make a difference so much any more.

Fox-Genovese: They do not make a big difference any more. Women can fly jet bombers.

Cheney: I happen to think so. I'm not sure everybody I know agrees with me. What they may not be able to do is crawl through the trenches and over the barbed wire or whatever happens when you reach a fortification.

Fox-Genovese: That's the point. But if you think that physical strength—men's physiological attributes—deter-



Elizabeth Fox-Genovese

Courtesy of Emory University

mines their sexual roles, then it's quite clear that they are fitted for heavy manual labor, professional sports, and the infantry. Sitting behind CEOs' desks—it is not clear to me that that requires the same degree of physical strength.

Cheney: What about aggressiveness, though? When we start talking about personality traits, do differences here make a difference? Are women as aggressive as men? Will they want to reach the fortification or prevail over the next company as much as men do?

Fox-Genovese: That's one of the very difficult questions. I respect the work that sees a hormonal difference that would have an impact on aggression. There's no question about that. What I'm less sure of is when it comes into play. At what level is it relevant? I have a passing remark in my book—and it is a little cutting—that no one who has experienced the junior high school girls' clique can claim that women are incapable of aggression.

Cheney: Or that they're primarily nurturers.

Fox-Genovese: Exactly.

Cheney: But when you start talking about women and men and how they are, it's very easy, it seems to me, to lose track of individuals. I know that is not a word you like a lot, but there's such a spectrum. And I know women who are exceedingly aggressive and I know women who are very shy, and I know men who are exceedingly aggressive and men who would really rather not rock the boat and cause too much trouble. Individual differences sometimes seem to mitigate gender difference.

Fox-Genovese: I could not possibly agree with you more, but there is some confusion about this business of the individual. I am not hostile to individualism. I think some of the troubles we're up against have to do with what I would call atomization. In other words, I think we are pushing the language of individualism well beyond an individualism anchored in families and consonant with notions of unity or corporate responsibility. My quarrel is not with individualism; it is with the radical individualism of what people are calling a postmodern world. It is the extension of the language of individual rights to situations that I do not think they were ever intended to cover.

Cheney: Like abortion, for instance?

Fox-Genovese: I think abortion is the most complicated of all. No, I do not like the argument for abortion on the grounds of an absolute individual right. I'm very uncomfortable with it and I think some American women are as well. Some American women who favor choice aren't entirely clear about or comfortable with the argument for the reason that at a certain point a fetus becomes a potentially viable life—it begins to look like a socially meaningful one. I am not arguing that it does at the moment of conception. But if you don't moderate your argument for abortion to take account of the claims of life, you put the terminally ill and the handicapped and even the elderly at risk. Individual right is closely related to an argument for abortion for personal convenience.

Cheney: It's always struck me as ironic that people who are in favor of the idea of abortion on demand are also likely to be opposed to capital punishment.

Fox-Genovese: Exactly.

Cheney: It is a very complicated issue and I don't have a position on it with which I feel entirely comfortable. But I do know that when I try to articulate the principles that are in conflict here—on the one hand, the right of a woman to absolute control of her body and to decide her fate, and on the other hand, the argument about life and the right of the fetus to life—I can never phrase the principles in a way that makes the woman's right to control her body seem to prevail.

Fox-Genovese: It sounds to me as if we are extremely close on this.

Cheney: But I thought your position was that women should have the right to abortion on demand.

Fox-Genovese: No.

Cheney: I misunderstood. I know you do emphasize the complexities of the issue.

Fox-Genovese: Yes. I go a little further and say that I think it is conceivable that the American people, through their elected representatives, could reach a social consensus, that meaningful life for which we are willing to spend public funds and for which we are willing to draw lines begins at fill-in-the-blank, say three months for lack of something better—that there is a point at which the fetus is life, but the potential is so far removed from what the independent life will look like as to permit discussion.

A number of Catholic theologians, for example Charles Curran, are trying to develop an argument that would satisfy the church that conception, and hence individuality, begins some time—say two weeks—after implantation. My assumption is that they're trying to free the church from the ban on contraceptive measures immediately following intercourse, that that's what the two weeks would buy.

Cheney: Or a morning-after pill, too.

Fox-Genovese: Or a morning-after pill. What that does is create a little space in which people can back off their most rigidly held positions, draw a breath and say, "Human life in fact is not given to us by science or by Scripture absolutely. We are a civilized and moral nation and community, and we can agree on some sense." Now, that may be utopian on my part. That is the position that would make me comfortable. That in the very early stages, we don't even call it abortion in the sense of taking a life. But thereafter, when we're anywhere near what the Catholic church used to call quickening, within a couple of months of viability, at a certain stage of recognizing the activity in the womb, that we can say, "All right, this is life and no other individual has the right to take it."

Cheney: I did misunderstand what you said in your book. I thought that in the end you offered a pragmatic assessment: that sometimes and in some circumstances life is so undesirable that arguments for preserving it ring hollow.

Fox-Genovese: What I tried to say is that the people who are most opposed to abortion are also likely to be the people who are least likely to want to provide support for infants and mothers, and most of the children who are born into poverty do pose an economic burden, especially in the case of single motherhood. I think that's something, again, that we need to look at.

Cheney: Do you find yourself in an uncomfortable position, as someone who's been a feminist and identified yourself as a feminist for a very long time, holding the position you do on abortion, for example? How do your fellow feminists react? Because you do espouse a different view.

Fox-Genovese: I espouse a very different view. On this particular book,

I have argued that feminism is really a form of sibling rivalry. Women want what their brothers have.

—Fox-Genovese

when I wrote it, I honestly expected to be lynched.

Cheney: (laughter) I know the feeling.

Fox-Genovese: I mean, just plain lynched. It was true a little bit for the book *Within the Plantation Household*, which also wasn't popular in all circles.

Cheney: Because it said that there was no female solidarity?

Fox-Genovese: Yes, and because it said antebellum southern white women were conservative and on the whole they were not secret feminists, and assuredly not secret abolitionists, and they did take very seriously the elite culture of their region and of the Western world, in which they participated with their men. It wasn't a story that everybody wanted to hear, and I thought this was going to be even worse. But it has been years that I have not been extremely popular in feminist circles, although I have worked very hard for women. I have trained a great number of women graduate students. I care very much about strengthening women, educating women, about asking them to be the best they can be, and about improving their general position in society and the economy. I'm also middle-aged, and I was lucky enough to figure out that even if I tried to please, it wasn't going to work, that deep down people would recognize that I was not a member of the club, so I might as well figure out what I really thought and say it.

Cheney: It's such a strain to try to be anybody but who you are. Is there an irony here? In your book you set individualism against communitarianism and seem always to favor communitarianism. But what you've just said sets the individual and her thoughts and beliefs over and above the solidarity of the community, in this case the community of feminists.

Fox-Genovese: Yes. Well, I don't think that women share overarching interests. I have always felt that there are differences by race, by class, by region. I have argued that feminism is really a form of sibling rivalry. Women want what their brothers have. It's not even so much their husbands. When women want opportunities like more education or better-paying jobs, it's because the world shows them the possibility. That doesn't mean that they want the same thing that all other women want.

Cheney: One of the great problems with identifying ourselves by groups, you know, whether it's ethnic groups or the gender we belong to, is that it does seem to impose a sameness of thought, so that you're regarded as treasonous if you go against prevailing thought. You and I might disagree about this, but in the Clarence Thomas hearings, there was a particular way of thinking that he was supposed to exemplify because he was black, and he didn't; so there was a price to be paid.

Fox-Genovese: Mrs. Cheney, I was out of my mind about that. I belong to the National Women's Political Caucus, which is a nonpartisan group, and in Georgia it's a group in which black and white women work together. Early this summer, the national group came out unanimously against the Thomas nomination before anyone had heard anything he had to say.

Cheney: Oh, dear.

Fox-Genovese: I was appalled by a lot of those hearings. No, I do not accept that because you are black or because you are female or because you are anything else, you have to have a certain position. I think the best thing that could happen to the black movement in this country is to have some clear alternatives in the leadership. That happens to be a personal view.

Cheney: It takes so much bravery to be the first person who's different. I mean, in a sense you're very brave too. You're a feminist, but, you know, you're willing to be different. It's harder to do that than it is to be part of the whole thing.

Fox-Genovese: Of course it is. And it's lonely. There is no question, it's lonely. I get small reports. People are reading my book. Every once in a while I will talk to young professional women who will tell me they have read it, how much it means to them, and why in the name of time is the formal, official women's leadership not talking about their lives.

Cheney: There's this phrase that you talk about again and again in your book, "the personal is political." First of all, maybe you could explain. What do feminists mean when they say the personal is political? I know that you don't agree with that idea, but what generally is meant by it, by the idea of the personal as political?

Fox-Genovese: It originated really in the late sixties and the early seventies when feminists were discovering that, for example, marriage was a political relationship. It was a struggle. That was the period in which some people signed marital contracts and negotiated about who would do the dishes and more important things. But everyday aspects of women's personal lives were questions of political struggle. I prefer to reserve politics for regular political institutions and contests. I'm not naive. I understand that a political culture permeates the society.

Cheney: All right. So the "personal is political" really was about how all of those relationships that go on between men and women in marriage, for example, are really power struggles. Is that it?

Fox-Genovese: That's basically it, that these are political contests that must be recognized as such.

Cheney: And you prefer not to view it that way.

Fox-Genovese: I prefer not to view it that way. I try to suggest that the personal is in a sense sociological or historical in that it is true that a lot of people from similar backgrounds, women in particular, could live lives that they experience as very private and even anxiety-ridden and suddenly discover that a lot of other women were having similar kinds of experiences. There's an

irony in this because this is what adds up to the notion of a common story. And you can move from a fairly homogeneous group up to, if you want, Sophocles and the Oedipus story. There are stories, there are experiences that have something in common, and to interpret them purely as a question of personal failing, personal guilt—what did I do to him or her—misses the context, and great literature manages to raise the personal story to a level of greater resonance. So people can read into it their personal situation and at the same time transcend the narrowness of their personal situation.

Cheney: Maybe my view on the personal being political is not one that resonates very well at the highest level, because I just think it's unworkable. I have certainly seen it destroy a lot of marriages. It turns the mildest disagreement into *Apocalypse Now*. It escalates mild friction into warfare.

Fox-Genovese: I agree completely that it doesn't work. Look, we can't have it both ways, and that's one of the complications of our world. If we want privacy and some sense of personal relations that are a little alee of the buffeting . . .

Cheney: A shelter from the storm.

Fox-Genovese: If we then move and bring political language and big political guns into that, the whole character is gone. Now, we live in a very complicated world, and I want to be careful about this one because I do tell young women that marriage is not normally a viable career.

Cheney: That's good advice.

Fox-Genovese: It may be, as it is for me, the foundation of their lives, their most important personal relation, but there isn't a law, father, brother, who can force a man to support them. In that sense, to encourage a woman to make marriage a career and to embrace private values without question is unrealistic. The supports for it are gone.

Cheney: As I look at the way lives evolve now, they're so different from when we were growing up.

Fox-Genovese: It's radically different. We know women who married and gave up thinking of the things that they might do with their lives or put them on the back burner, and suddenly found themselves with a couple or three kids and a house on which they couldn't pay the mortgage.

Cheney: That's right, and no husband.

*My mother did work and I think
that made all the difference.
She was a deputy sheriff....*

—Cheney

Fox-Genovese: And no husband, and tuition bills in the future. This affects not only women, it affects children, because even middle-class children caught in that situation are more likely to end up with slightly less good educations right down the line. Their opportunities are seriously reduced if the financial support isn't there.

Cheney: It's true. I hope the next generation is better prepared than yours or mine was for that circumstance, because it's just the saddest story to see that happen to someone who's so ill-prepared to deal with it. Why were we lucky? We have our marriages. But how did we also end up with careers? This is fairly unusual for the women I graduated from high school with.

Fox-Genovese: It is for the women I graduated from high school with, a little more common for the women I graduated from college with, and that may in part be that I went to Bryn Mawr, which tended to prepare women. But there are not very many women in our generation who did.

Cheney: What is your own personal story? How did you end up being a professor of history, director of the Institute for Women's Studies at Emory?

Fox-Genovese: I did go to graduate school, but I really went in the mode of being a good student rather than of preparing myself to be a professional. It's a psychological difference, but for me it was a very big difference. I was continuing something I'd done and was good at doing. I had no good models of what it might be to have a career.

Cheney: The first models I saw were college professors.

Fox-Genovese: I did, too, but a lot of my college professors who were women were not married.

Cheney: That is interesting. The two I think of were not.

Fox-Genovese: And that makes a difference. And certainly my mother and her friends and my best friend's mother and her friends didn't have careers in the normal sense.

Cheney: My mother did work, and I think that did make a difference. She was a deputy sheriff in Casper, Wyoming. Isn't that wonderful?

Fox-Genovese: That is. My mother had a master's degree. She had worked until I was born—I was the oldest child—and she continued to be very active in efforts for public schools and libraries, which were her two great passions.

Cheney: That's a nice life.

Fox-Genovese: That was a good life, so that she was known and valued in the community. But she really did feel she had to put the children first, so she didn't keep a regular paid job. There was no need to. For me, there were a number of difficult years, I think, in the sense that I didn't have the conviction of what I was going toward and some internal conflicts and uncertainties. I was very lucky in marrying the man I did. He had a great deal of confidence in me.

Cheney: A liberated Marxist Sicilian. (laughter) I mean, I can't even imagine these contradictions.

Fox-Genovese: And an avid reader of *National Review* and admirer of your husband. I mean, you've got to get this all in context.

Cheney: It's hard.

Fox-Genovese: It's hard, it's hard.

Cheney: But he sounds funny, first of all. He sounds as though he has a good sense of humor, and I've always thought that having a husband with a good sense of humor was really important if you were both going to be busy and try to accomplish a lot.

Fox-Genovese: It's a big asset. There is no question.

Cheney: At some point you made the decision you wanted to be a professional.

Fox-Genovese: Yes. The first thought for me was to finish my dissertation. I can remember when I was still around Cambridge, a couple of people actually wanting to give me a job.

Cheney: That's nice, to be sought after.

Fox-Genovese: And it was so unbelievable. It hadn't really crossed my mind. That's when it hit me that all of this might lead to something. Then I married Gene and we moved to Rochester, where he became chair of the department, and I settled down seriously to finish my dissertation. I think I was the only assistant professor whose appointment ever went to the Board of Trustees. Allan Wallis was president of the university then, and my first book was on the history of economic thought. Allan understood what my work was.

Cheney: Why would it go to the Board of Trustees? I don't understand the system.

Fox-Genovese: My husband was chairman of the history department and it was nepotism. They were understandably scared of hiring me and then perhaps finding it awkward to fire me. So I was scrutinized pretty carefully. But that really launched me. I've always loved teaching, and this gave me the opportunity to teach.

Cheney: I'd forgotten about nepotism. There used to be a kind of unstated rule that an administration, Republican, Democrat, whatever it was, would not appoint the wife of a congressman to any job. First of all, it was a conflict of interest. Who knows what they might whisper to each other? Secondly, how could you ever fire her? That was the key. Once you got her, you couldn't get rid of her no matter how bad she was, and so better just not to hire her in the first place. That has changed, though I think there still may be some wariness about spousal relationships. It's not the way it used to be. So the world has improved.

Fox-Genovese: The world has improved. It's a tricky one, but now universities, for example, are having to look hard at spousal appointments.

Cheney: Yes, and indeed often offer package deals to get someone very good, whether it's the husband or wife, to come along and bring the spouse.

Fox-Genovese: The trick is to get two people who are both good in their own ways and who both make sense for the institution.

Cheney: Back to your book for a minute. One of the things that I think is terrific about it is it's not predictable. Your conclusions are not always what one might expect going in. Your arguments about pornography, for example, are very subtle. Tell me, would you censor 2 Live Crew? Would you say that 2 Live Crew's records shouldn't be sold?

Fox-Genovese: I'm very uncomfortable with that one. I said very clearly in the book that it was an exercise in trying to get our thinking straight, not policy prescriptions. Since then, of course, people come to me more and more with, "Well, what do you think about policies?" and I'm being challenged. What about 2 Live Crew? I don't think it's what kids should be learning.

Cheney: I agree with that.

Fox-Genovese: But I really feel that the kinds of pornographic films and visual representations in which people are killed, maimed, abused, especially children—where real violence is committed—that there ought to be a way to prohibit them through interstate commerce. Maybe localities should have a stronger role. That's where my own thinking has come down. It's clear from the book, I'm not comfortable with censorship where there is not clear evidence of abuse of human beings.

Cheney: NWA now has a record that clearly talks about abusing women. It's gone beyond 2 Live Crew. I said 2 Live Crew should not be censored, but this new record is just astonishing in terms of advocating violence toward women. I've been such a strong defender of free expression, even when it's hateful and I disagree with it, but when you move this far toward advocating violence toward a group, it becomes really troubling.

Fox-Genovese: Yes. I'm not jumping in to censor people and I certainly don't like to censor the male imagination. I'm concerned with the commodities, what people are buying and selling.

Cheney: Censoring the male imagination—that sounds pretty awful.

Fox-Genovese: Well, of course it sounds awful. But there is that strand in feminist thought. That's part of

what I'm arguing against. To me, at one level, pornography is structurally similar to humor. It is a way of viewing the world. And I'm pretty comfortable with letting people view the world the way they want to view it, even if I abhor their vision. What I am concerned about is where we can draw a line about what they can buy, sell, and propagate.

Cheney: Well, another line I have to worry about is the Mapplethorpe paradigm, you might call it. Here are photographs that, of course, I wouldn't censor. I wouldn't suggest that these should not be in a museum, and it seems to be silly to even think about trying to hide them away in a closet. But on the other hand, given the fact that many, many people find them abhorrent—they portray such things as one person urinating in another person's mouth—should the federal government sponsor them? This is a separate question.

Fox-Genovese: I saw no reason in the world why the federal government should sponsor them, and no, I don't think they should be censored.

Cheney: Isn't this interesting, that we did end up being in the same place on this?

Fox-Genovese: I want to come back to something about the community-individual thing, because I'm using the words in a different way than people have started to use them even since I wrote the book. It's going to be hard to say this without sounding hopelessly fatuous. I think the American nation, as a community, is under a certain amount of attack these days.

Cheney: Oh, a lot.

Fox-Genovese: I suggest in one of the later chapters of the book that I think it is very important to take a stand in favor of a national identity. So I'm using community in a kind of loose corporate sense, and I just don't have the right word. Collective doesn't quite get it because of its implications, the innuendos it has, and that's why I fell back on community. The groups of people united largely either by family bonds, territory as in towns, villages, or national political identity as in country, have the right to some collective standards. I'm using individualism as abortion on individual demand, as the extreme case of children suing parents or young children taking to the streets because no one is supporting them. And as individual-

ism not in the good Victorian sense, but the radical atomization of "me first" and "me alone." I have argued that the folks who are defending collective groups on campuses—the ethnic identity, that kind of thing—actually are radical individualists, that their invocation of community has nothing to do with corporate structure or anything with its own legal identity. It is a useful grouping for the purposes of advancing the interests of specific individuals.

Cheney: That's an interesting way to look at it.

Fox-Genovese: I didn't mean to go on like that, but I did want you to understand that the way I'm reasoning comes more out of a strand of political theory than it does out of the contemporary discourse over PC, which I think is largely a swindle. I don't think they've got the term straight. I don't think they're talking about community.

Cheney: Does PC exist?

Fox-Genovese: That's a big topic, isn't it?

Cheney: I, of course, think it does, but the *New York Times* recently did a very sympathetic piece about a group of politically correct professors who have decided to say it doesn't exist.

Fox-Genovese: You may or may not know that my Institute for Women's Studies has just cosponsored the second of three forums with the Georgia branch of the National Association of Scholars.

Cheney: (laughter) Oh, that'll ruin your reputation fast.

Fox-Genovese: Yes.

Cheney: Finish it forever.

Fox-Genovese: No. I have taken a stand on open intellectual discussion. I will not have orthodoxy and I want people to talk to each other.

Cheney: I do too. But the question is, how much pressure is there to conform to an orthodoxy? You know, I get stories in my in-box every day, and they all have this common theme, which is that if you don't agree, you had better not express your dissent, or you will be professionally damaged. You may even be sent away from the university in one way or another. But maybe I'm a lightning rod for this. You're on the ground out there.

Fox-Genovese: Once again, I want to choose my words carefully. I have a very, very strong sense that the limits

are shrinking. There unquestionably are things that most people would find it not worth saying. There is a great deal of pressure to accept a new agenda, a new sense of what is correct, but it's almost morally correct. It does exist. Dinesh D'Souza has quoted me—in various ways, and it gets misquoted back to me—but I think the original quote was that there probably isn't a women's studies program in the country in which an anti-feminist could speak.

Cheney: That strikes me as true.

Fox-Genovese: I think that's true, although I have had a serious conservative woman speak in my program and no one challenged her about whether she was a feminist or not. She cares about women's issues. But as for the assumption that we're not hierarchical, an assumption that we look only at women's perspective and that we assume a sort of modernized vision of what we know women's perspective to be, that sexual preference is high on the list of subjects worth discussing about women, fill in the blanks—I'm afraid there's a great deal of that. What drives me up the walls is that it is not necessary. There is a great deal of scholarship on women, some of it very good. There is important work to be done. Our introductory women's studies course at Emory is taught by a classicist who works with me to develop it. She teaches Euripides' *Medea* in conjunction with Toni Morrison's *Beloved*. She takes themes: motherhood, women and war, marriage, and more. She weaves the classics in so that they deal with motherhood and war, and she includes philosophers, contemporary writers of different backgrounds, and classical and eighteenth-century writers, and it's wonderful. And it is a different perspective on our common tradition than we would get in the

Western civilization course if I were teaching Western civilization.

Cheney: That's such an important point to make—how much we know now about women and their contributions not just to this society, but to all of Western civilization, other cultures as well, that we didn't know twenty years ago, and that is a wonderful thing. I can remember the first time I read a book by Carroll Smith-Rosenberg—there was a coauthor who was male. It was about female gynecology in the nineteenth century. It was fascinating.

Fox-Genovese: Charles Rosenberg, her former husband.

Cheney: It was just an amazing book because it reported on a kind of experience that only women have, and it put it back in another time, and it was simply fascinating. That kind of scholarship, not just about gynecology but about women's lives, is such a contribution, just as the kind of scholarship Skip Gates is doing that's uncovering African American fiction of various kinds. That's so important. And somehow it needs to be separated from what I think of as the nonsense that goes on both under the guise of feminism and under the guise of ethnic studies.

Fox-Genovese: I couldn't agree with you more. That's why I devoted the energy I have to building a women's studies program in a period in my life in which I could very easily have been doing other things. I think it matters and I think it is very important to have a different kind of model.

Cheney: Can you major in women's studies at Emory in your institute?

Fox-Genovese: You can. You can also get a Ph.D. If you do, you're required to take a minor field in a department. You're in women's studies but you have to do history or art history or sociology or whatever it is, so you have

*There is a great deal of pressure
to accept a new agenda, a new sense
of what is correct....*

—Fox-Genovese

some grounding. If you're in any department in the social sciences or the humanities, you can get a certificate in women's studies.

Cheney: That must make you feel very proud, when you think of the impact that they will have on the world in the years ahead.

Well, I can't let you go without asking you to talk about your childhood ambitions. I thought that was a charming part of your book, the personal chapter you appended. You said there were three things that you wanted to do when you were . . .

Fox-Genovese: Yes. When I was a little girl, I wanted to be President of the United States, I wanted to marry a black man because I'd read a biography of George Washington Carver before the civil rights movement and that seemed the way to make a contribution to race relations, and I wanted to have twenty-three children.

Cheney: And, of course, all of these things would be done with great ease.

Fox-Genovese: Of course, of course.

Cheney: Well, I hope our daughters have more realistic expectations than we did. I didn't have any specific goals. I just wanted to be great. Absolutely no focus there.

Fox-Genovese: Since mine were all fantasy, it probably wasn't so dissimilar. I had no real idea about how I could make a contribution. These were things I could pick out that mattered.

Cheney: Graduate school was a good thing for me for a number of reasons. It gave me time to get a little older, and to look around and see what other things there were to do.

Fox-Genovese: I think the whole thing about the canon or a common culture is a debate unto itself in a sense. I raised it in the book because I think the problem of women's relation to the dominant culture, the national culture, the Western tradition, is extremely important, and I think it's easy to forget how many women took that as a standard in their imaginations.

Cheney: That's right. You didn't have to see women there in order to be nurtured by it. But once you do see women there, it becomes even more meaningful.

Fox-Genovese: It becomes yours. It itself becomes enriched.

Cheney: I have promised myself not to use the word "canon" any more,

but I will, to make the point that has been so skewed. It's sometimes presented as though there's a group on one side that wants to read the same books now that we were reading in 1930, and a group on the other side that wants to read only works that will absolutely enlighten our lives and times, and better they should all be by women and minorities. I don't think that there are really many people at either of those extremes, and I certainly sense from your book that you're somewhere between those, as I am.

Fox-Genovese: I'm somewhere in between them.

Cheney: That we should read the good old books and we should read the good new books.

Fox-Genovese: And read them together.

Cheney: Yes. That whole canon debate I think has run out of energy, partly because people's positions have been misconstrued so often that everyone's exhausted.

Fox-Genovese: What remains to be seen is this new association.

Cheney: Of the politically correct scholars who are declaring that political correctness doesn't exist?

Fox-Genovese: Well, notice they call themselves teachers, not scholars.

Cheney: That is interesting. That's good PR.

Fox-Genovese: Yes. I thought that was a certain kind of political on-upmanship there.

Cheney: But, you know, the funniest thing about it is there's a certain time-span limit on how much, how long the media will pay attention. The media will move on. And I think that their interest in political correctness had just about run its course until this new group organized. So there's a sense in which they're having a consequence they did not intend, which is that they are keeping media interest in the PC debate alive. It's terrific as far as I'm concerned. I'd love to fight that fight for another year.

Fox-Genovese: I think it's going to be right out there. I was reading your conversation with Catharine Stimpson and was very much struck by all kinds of things in it. But one in particular, the defense of great books, of timeless and transcendent values, which I am very comfortable with, but I am also an historian. And I believe there is a

sense in which some of the people who are most strongly defending the great books are not sufficiently emphasizing a kind of Burkean sense of transmission between generations, that even great works of art do get reread, rethought, and part of their greatness is that they are rooted in a particular moment. We all know that the genius of Homer and Shakespeare lies in the combination of transcendent values and the gravedigger scene, the absolute completeness of it. But I wonder how you feel about a historical dimension that doesn't demean great literature but is quite different from the more reductionist insistence on historicism.

Cheney: Well, I think if you don't recognize that, you're guilty of one of the great sins that conservatives like to talk about, which is presentism. There is a way in which we need to understand these things as they were understood in their own times. But there's also a sense in which you pick up a Shakespeare play and come across lines that just are human beings speaking to human beings. When Shakespeare talks about the transience of life in *The Tempest*—"We are such stuff as dreams are made on"—I can't imagine that there is much that will be gained by historicizing that or lost by not. There is, though, this important sense in which many of the things he talks about—and a lot of them have to do with things like gender identity—are better understood if we have steeped ourselves in Elizabethan culture.

Fox-Genovese: I certainly would agree with you that we are the stuff that dreams are made on.

Cheney: There's a wonderful poem I was just reading by Jorge Luis Borges, in which he was talking about studying Anglo-Saxon. He was such an amazing man. I think he must have been seventy-five when he decided to start Anglo-Saxon. Spanish, of course, was his native language, so it was even a greater leap than it is for those of us who are native English speakers. But he talks about studying Anglo-Saxon and suddenly one day having this sense that those words he was using, he was struggling with and learning, were once used by other men in this other place, and that fellow feeling that crosses centuries and continents is such an important gift that the humanities can bring us. When I talk about transcendence, that's what I'm talking about. □



BREAKING the BARRIERS BETWEEN SCIENCE and the HUMANITIES

BY HARVEY FLAUMENHAFT
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THE TERM "the humanities" did not originate in contradistinction to "the sciences." It originated when human letters were distinguished from those that are divine, and "human letters" *included* scientific writings. A distinction between the humanities and science has come to be taken for granted only somewhat recently. Nowadays the student of human letters is not expected to be a reader of classics of scientific thought. An educated person may be expected to read for himself or herself the writings of Plato, Shakespeare, or Rousseau—but not those of Euclid, Copernicus, or Newton.

It is sometimes said that there is nothing wrong with this, because the difference between science and the humanities is that scientific books simply become outdated. But is this so?

Consider the testimony of some great scientists. Clerk Maxwell, in the

The Rosette Nebula lies about 2,600 light years from Earth, in the obscure constellation of Monoceros, the Unicorn, just east of Orion. It is one of the most massive nebulae known. (Photos by Geoff Chester, Albert Einstein Planetarium, Smithsonian Institution)

preface to his treatise on electricity and magnetism, said: "It is of great advantage to the student of any subject to read the original memoirs on that subject, for science is always most completely assimilated when it is in the nascent state." And Niels Abel, when asked how he had managed in so short a time to accomplish so much in mathematics, replied: "By studying the masters, not the pupils." It seems that masters of discovery may best learn to do their own work by studying work by earlier masters.

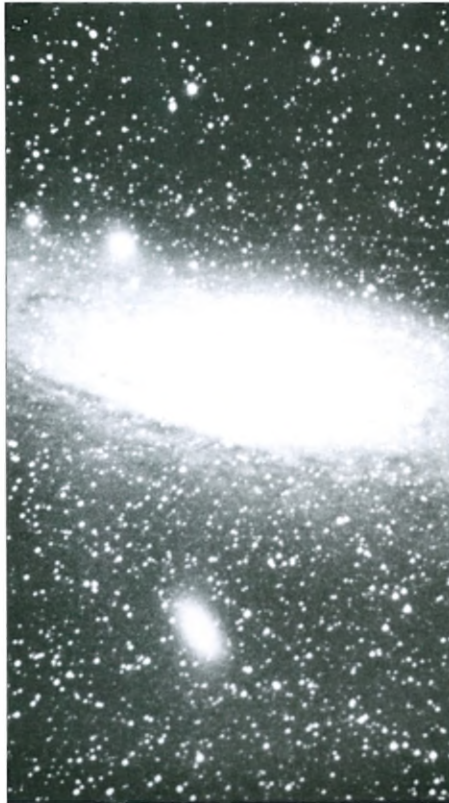
The classics of science are built upon by later scientific classics; and though the earlier may be covered over by the later, the later are still somehow supported by the learning that was laid down earlier. We who later come upon the scene, even if we do not aspire to make original contributions as masters of discovery, nonetheless can make ourselves masters of the memoirs of those great masters of discovery who have shaped the world around us and still shape our minds as well.

We should try not to be the passive recipients and even prisoners of whatever ready-made terms, premises, and methods happen to prevail in our time and place. A good way to free ourselves from being merely tools of others' thoughts is to make their thoughts our own, by seeing how the answers of today arise from the questions of yesterday, which themselves in turn embody answers to the questions of the day before. To do this, we must go to the sources of the thoughts that form our world—the records left by leading thinkers of the past. There could be no activity more proper to the thoughtful inhabitants of a polity that stands for liberty and equality in a civilization founded upon scientific progress.

Even if we did not live in a democracy, we could not claim to understand our humanity if we did not get some firsthand experience of how it is that human beings have come to think what they now think about the world of which they are a part—a world continually transformed by their scientific technology. Precisely if our science is progressive, we cannot understand it if we do not understand exactly what it is for science to be progressive. Progress can be seen by us *as* progress only if we ourselves somehow move through its progressive stages. We must think through

the process of thought that gave us what we otherwise would thoughtlessly accept as given. We must learn firsthand about the greatest acts of learning by the human race if we are truly to be learned in the humanities.

It has been said that scientists in Europe a generation or two ago looked upon themselves not as mere technicians but as "culture-bearers." If it is rare enough to find an American humanist these days who regards himself or herself as such a culture-bearer, what can be expected of the scientists? Science is progressive.



The Great Spiral Galaxy in Andromeda is the closest large galaxy (more than 400 billion stars) to the Milky Way.

Progress, no doubt, is needed; but preservation is needed too. This does not mean that we should, at whatever cost, embalm the bodies and exhibit the relics of the dead. It does mean that we should help to keep alive the roots from which we grow.

Scientists, whatever else they are, should be experts in seeking the roots of things. Humanists, whatever else they are, should be experts in reading books—in making the dead letter come alive in a thoughtful mind. There is no more appropriate work for humanists in science, and for scientists in the humanities, than this: to consider the roots of scientific thought by reading the classic writings of master scientists.

The classics of scientific thought are not *passé* if we think through them. We need to think through them—to keep alive our knowledge of the foundations that we build upon while we rip down, repair, and renovate our dwelling place. If we do think through the classics of scientific thought, then the past becomes a living source of wisdom that prepares us for the future—a more solid source of wisdom than vague attempts at being "interdisciplinary" which all too often merely provide an excuse for avoiding the study of hard science. *Interdisciplinary* work will not make us wise unless we study the thoughts that are the *sources* of the prevailing boundaries between disciplines as well as of the arrangements within them.

A few decades ago, it was thought that the history of science might become a source of integration for the sciences and the humanities, but the love of wisdom in its wholeness which that hope inspired remains unsatisfied.

If the study of scientific thought through the reading of classic texts became more fashionable in our centers of higher learning, it could help to broaden and deepen the learning of technical experts, who might come to appreciate what can be learned from reading good old books with care; it could also help to overcome the lamentable ignorance and fear of science found among nonscientists. This study might help us to avoid both blind reaction against the scientific enterprise and blind submission to it, by fostering a proper appreciation of science as a part of human thought.

If educational institutions are not to degenerate into playpens or mere training centers, the sciences must be seriously studied as something more than the transmission of up-to-date bodies of concepts and information, and the humanities must be seriously studied as something more than what is left over in the world of learning after technicians have done the solid work.

Memory is the mother of the Muses. The forward-looking vision of the planner requires the insight of an educated eye—an eye that sees much for itself because it has looked at what has been seen and pointed out by the greatest educators. We can become somehow masters of discovery ourselves by becoming students of the greatest masters of discovery. □

Quest for ORDER

BY HARVEY FLAUMENHAFT
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I. Looking Upward, Making Up Our Minds

Speaking astronomically, man is but a speck of dust. On the other hand, man is the astronomer. Can we speak very well humanistically *unless* we do some speaking astronomically?

The study of our study of the stars must be a part of any liberal education. A liberal education liberates our minds by bringing out the thinking that went into the accepted notions which we're taught. What we're taught, we often cannot fully understand unless we see it as an answer to a question that we never thought to ask. And embedded in such questions there are answers to even earlier questions. And so back we go through a sequence of questions that are answers, answers that are questions—until the world that we took at first as simply given becomes the outcome of a quest. The supports that have seemed so firm to us become so questionable that we seek for something deeper to support them, something comprehensive of which they form a part.

Thinking through the thoughts that have been handed down to them, human beings can think new thoughts. The older thoughts are often then forgotten, while the

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newer thoughts, handed down to newer generations, become in turn the old thoughts. Eventually, the transformations of the transformations cover over what they're built upon. The enterprise itself becomes obscure, even when the enterprise consists in bringing things to light and clarity.

To understand the world of light around us, and within us, we must retrieve what underlies the story of that thoughtful looking. We might well begin by looking at the classic statement that first tried to set in order what we need to learn to understand the wondrous tale shining forth around and about us. The classic statement was in Greek written near Alexandria some eighteen centuries ago. The author's name was Ptolemy and his book, *The Mathematical Syntaxis*, "syntaxis" being Greek for setting together in order.

Let us consider the views and suppositions that give rise to and inform that Ptolemaic composition. This was the form of astronomy during its first millennium and a half as a systematic branch of mathematical science—it was this that was transformed, and then transformed again, to give to us the universe as we conceive it now. We cannot understand our world unless we understand our understanding of the world, and our understanding of the world cannot itself be understood unless we think through the thoughts that gave it to us.

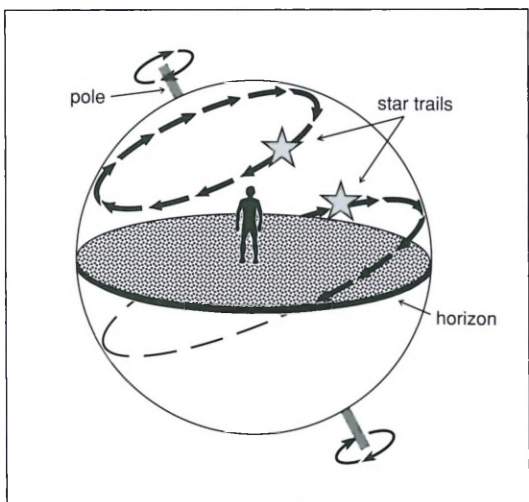
II. Cosmic Views

We begin by looking up. What's in view? We may see clouds—they form, and change their forms and change their colors; they shift about and pass away. From up there, down comes rain; and so does lightning. Clouds of locusts come and go aloft. Although the variation in occurrences like these may be somewhat bounded by the rhythm of the seasons, they seem to happen, nonetheless, without much rhyme or reason. But up there *are* happenings that go on and on, in orderly repeated sequence. We are surrounded by what is beautifully in order: that is, to say it in Greek, we live within *cosmos*.

The sun comes up over where we may expect it to; it crosses the sky, rising as high as it's going to do in the course of the day; and then it sets down and disappears. In the darkness afterward, the canopy of sky is spangled with multitudinous spots of light, differing in brightness and in how densely they are scattered. In the course of the night, they mostly move from over near where the sun comes up, across the sky toward over near where the sun goes down. Some of them never rise or set—but when it's dark and clear enough to see the stars at all, those stars that never seem to perish may be found at a spot up there, the pivot-point at which a pole might be imagined to support that star-bespangled canopy stretched out above us through the night. Night passes—and whatever stars are in the sky then fade away as day comes back with the rising sun.

The sun, like each of the stars, seems to follow a circular path across the sky, daily. We see the scattered stars as placed together, in fixed configurations, moving above us. If we stand in a wide open field and look around and upward, the rim of the field, and of the sky above, seems to be one immense circle, with its midpoint where we stand. To the intersection of the earth spread out around us and the sky stretched out above we give a Greek name

meaning "that which makes a boundary," the *horizon*. Every night the stars move all together above us, as if fixed upon a sphere that steadily rotates—so that they keep the same positions relative to each other, while



A starry sphere rotating around observer.

each star seems to go along a portion of a circle, the circle being smaller the closer that we find it to that single spot in the sky, marked by a nearby star, that doesn't seem to move at all. That star is at the axle-pole of the rotating starry sphere. We speak of the sphere, though what seems to be above us is an inverted bowl, whose rim is the horizon. What we see at any time, that is, is never more than half a sphere—because the earth, so large compared to us, blocks the downward view that we would have if there were beneath our feet a transparent ball of earth.

If we walk in the direction of the pole-star, we find it climbing higher in the sky—the tilt of our imagined axle-pole changing one degree for every seventy miles that we travel.

Again and again, there is this same story of the nightly motion of the constellations and the daytime motion of the sun—all of them moving daily in the same way from region of rising, to the region of setting. But there is another story, too, a more complicated one.

How long the daytime lasts compared with night will gradually change with the changing seasons. Another part of the story is a matter not of time but place. The sun does not rise or set every day at the same place on the rim of the field. There is a gradual change as well in how high up we find the sun at midday, when it is highest. As the season of the greatest

heat comes round, the sun comes up as near as it ever gets to the region of the rim of earth over which we see the spot of stand-still in the starry sky—heaven's pole. The point of sunrise seems for several days to stand

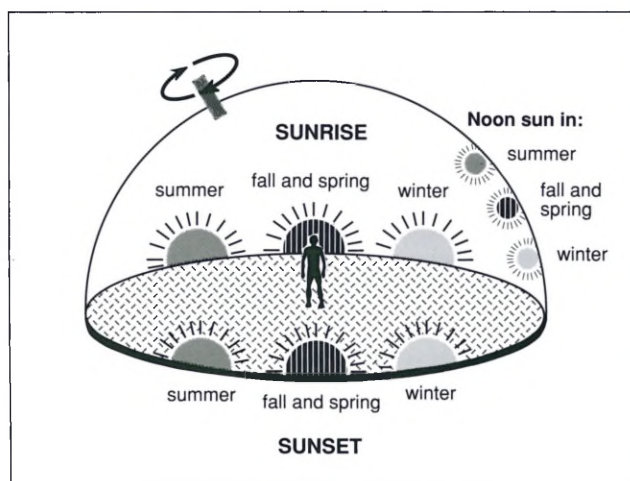
still there. It then begins to creep along the rim, away from the region over which we see the pole, until it reaches its position farthest from that region as the season of the greatest cold returns. It seems to stand still there for several days, and then creeps back again to its limit in the opposite direction. This movement of the point of sunrise back and forth along the horizon is endlessly repeated as the seasons repeat. And likewise for the setting point, there occur such stand-stills of the sun, or (to use the Latin term) such *sol-stices*, as summer and winter come. Twice a year, the sunrise and the sunset points are midway between their opposite extremes. On these days, the duration of the nighttime is equal to the time that daylight lasts. When the season comes for buds to spring forth, and when the season comes for leaves to fall, these *equi-noxes* then take place.

The night sky shows at different seasons stars of different constellations—when a certain star *does* show, then it always seems to move along the same circular path; but which of the constellations show at night changes gradually as the seasons pass. As the seasons change, so change the stars that rise at sunset.

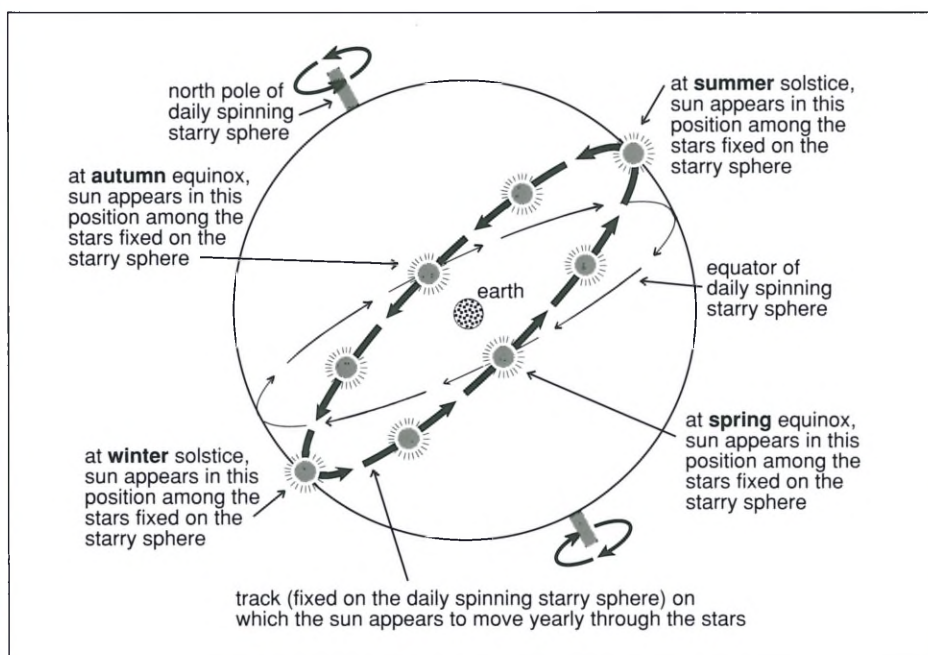
The sun moves not only daily *with* the stars but also yearly *through* the stars. But how can we find the sun's path yearly through the stars? We cannot see the sun against that backdrop of the stars fixed in constellations which rotate nightly all together. When we see the sun, we cannot see the stars; the stars will only shine for us at night. What we can do is look to see which stars will show themselves right after sunset just above the place where the sun has passed below the rim. Or we may look to see

which stars will show themselves just before dawn at the place where we expect the sun to rise above the rim. And so, which stars we'll see *at all* on any given night will be decided by where the sun may be just then in its yearly movement across the backdrop of the dark and starry sphere.

The sun, in addition to moving every day with the same motion as the rotating sphere of fixed stars, moves also with this other motion, a motion in which the sun takes as long to come round the starry sphere as the seasons take to complete their round. The motion that is the same for everything which goes round up there is a daily motion. The other motion of the sun is yearly. It is as if the sun goes yearly round a track, a track encircling the starry sphere, to which the track stays fixed while the sphere itself goes round in daily motion. The circular track of the sun's yearly motion twice crosses (at an angle of 23.5 degrees) the line encircling the middle of the daily rotating starry sphere. The sun moves slowly along the track crosswise *against* the direction of the daily rotation. We can imagine this suntrack, like the stars in their constellations, being fixed to the rotating sphere, and so, like the fixed stars, moving with it. Every single spot on the track, then, goes round on its own circle daily. And the sun, as it goes slowly on its round *through* the starry places that it visits in its yearly trek around the sphere, also, while it visits *in* each place, goes round a daily circle *with* whatever place on the track it currently is visiting. We may imagine that the sun, before it rises every day and circles across the sky in the same direction as the stars do at night, first moves a degree or so in the opposite direction along a crosswise



Sun's position relating to observer at different seasons of the year.



Sun's positions on the starry sphere through the year.

circle through the constellations—only after which it goes daily 360 degrees around the axle-pole along with all the other lights aloft. The combination of these two motions—one in which the sun moves the same as all those stars, and one in which it moves crosswise the other way—is a kind of spiral.

Now, that starry zone which forms the backdrop to the yearly story of the sun is a lively place, for the sun is not alone in wandering slowly through the stars. The sun is only one of seven wanderers that our eyes detect in their scanning of the starry sky. The others do not wander along the sun's path—but each goes wandering through the constellations on its own circular path, which itself is fixed among the constellations, so as never to be further than about eight degrees from the sun's circular path. The band around the starry sphere which contains all those paths, by making a ring eight degrees wide on either side of the sun's yearly path among the constellations, is called the zodiac.

The year, the stretch of time that is taken by the sun to complete its circle round the zodiac, is a bit more than 365 days. Circling round the zodiac much faster—almost thirteen times a year—is the moon—the only one besides the sun that is not a mere spot of light. While when full it is round like the sun, its shape—unlike the sun's—doesn't always stay the same: It waxes and it wanes. Besides the two great lights, there are five tiny lights that wander through the stars that are

fixed in constellations. Because the Greek word for "wanderer" is *planetes*, we speak of the planets.

And now begins a tangled tale. The motion that is the same for all those lofty lights—the sun, the moon, the other wandering stars, as well as the stars that appear fixed in constellations on the sphere—this is a motion that is the self-same motion all the time: always in the same direction daily from the region of the rising sun, across the sky and toward the region of the setting sun—and always at the self-same speed, passing through, in equal passages of time, equal portions of its daily circle. The other motion that each wanderer combines with this is *not* always the same, even with itself, let alone with all the others. In two equal passages of time, any one of them will not necessarily pass through equal portions of its path through the stars. It may in ten days move through five degrees, and later on in ten days only move through three degrees. It may appear not only to be moving sometimes faster, sometimes slower—it may sometimes even seem to slow down to a stand-still, and even sometimes then go backwards, not only changing its speed but even its direction between its stand-stills.

Something that stays self-same, that is alike at different times, in Greek may be said to be *homalos*; and what is *not* so is said to be *anomalos*. In English we have the word "anomaly." The trouble with the wanderers up there is this: Though each wanders through the constellations along a

path that is a circle, that circle is ridden with anomaly.

III. The Problem Posed in Classic Form

From this confrontation with what is both cosmic and anomalous, there arises a problem. The posing of the problem in its classic form is reported in an old commentary on Aristotle's book, *About Heaven*. There we are told that Plato set the mathematicians a certain problem: From what suppositions can the appearances about the wanderers be thoroughly saved through motions that are self-same, circular, and orderly? The mathematicians, that is, were to figure out *exactly* what to suppose so that the wanderers' apparent movements could be explained by the right combination of circular motions that do not change speed or reverse direction.

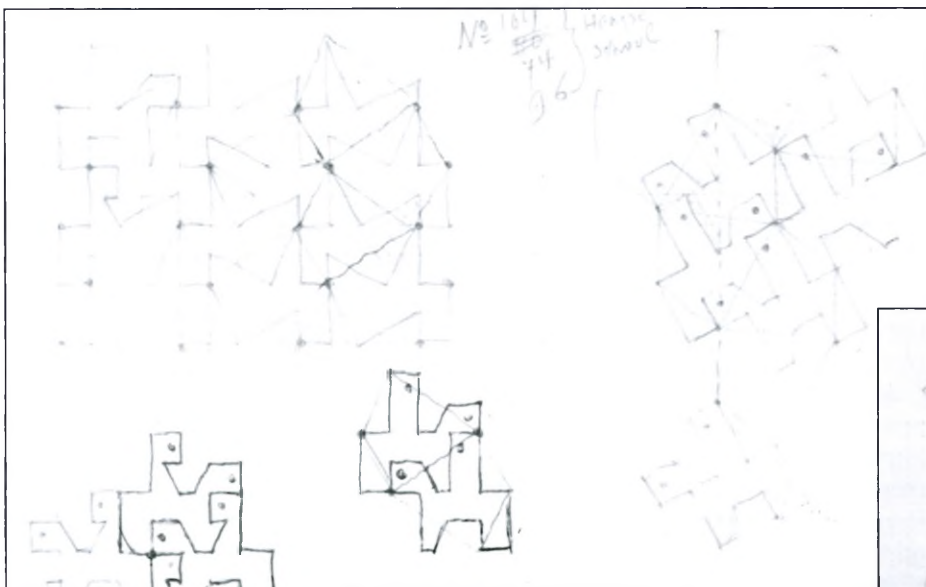
The solution would have to say just what circles were to be laid down (that is, how many, where, and of what sizes) and just what motions were to take place on them (that is, at what constant speeds and in what irreversible directions) so that the wanderers would then shine forth just as they appear.

To figure out all this, we would have to consider various possible combinations of devices. We would have to examine what would happen to appearances if motion took place on a circle that is located off center from the point of viewing—and also what would happen to appearances if there were a motion around a circle whose center itself moves around another circle. We would have to examine the many possible variations on these themes of circles off center, and of circles upon circles. In Greek, a wheel or a circle is a *kuklos*; its center is a *kentron*; and so we have in English a "cycle" and its "center." "Out of" is *ek*; "upon" is *epi*; and so in English we have "eccentric" and "epicycle." We would have to examine different sorts of eccentric circles and of epicycles to see what different sorts of appearances are given by different sorts of devices. We would also have to learn about which different sorts of devices might give the same sorts of appearances—that is, be *equivalent* devices. All of this is to be placed within the all-containing starry sphere

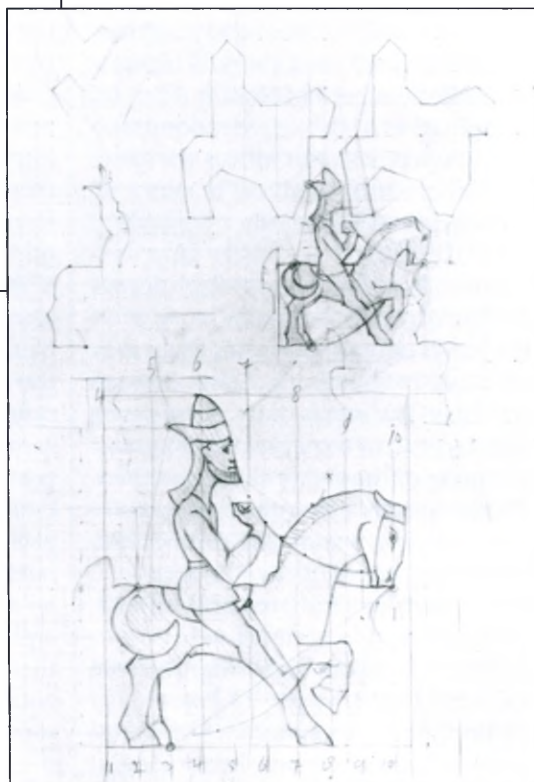
continued on page 30

VISIONS OF SYMMETRY

BY CONSTANCE BURR



Preliminary sketches in pencil and ink for *Horseman* (opposite), in india ink, colored pencil, and watercolor (detail).



"It is a painstaking process of groping and fumbling about. Sometimes not a single one of the patterns that appear at the end were consciously sought at the start. It dawns on you slowly. Then comes the moment you recognize it, when you suddenly realize—and here we shift from a general impression to a specific one—it is a man on a horse! After this, he develops rapidly under the impact of certainty. At the end he stands out clear as crystal, obeying unshakable laws, clenching on all sides by his own mirror image. Note how each contour has a double function: a single line borders the mane as well as the belly of the horse; also the face of the rider as well as the neck of the animal are defined by one and the same line. See him riding through a landscape that is himself. He is alone by himself and yet he completely fills the entire two-dimensional world in which he lives."

—M. C. Escher

"I'M ALWAYS CROSSING the border between math and art," wrote the Dutch graphic artist M. C. Escher (1898-1972). Escher's drawings and prints give visual form to mathematical abstractions. They unlock the secrets of symmetry.

Symmetry is the rhythmic repetition of like shapes in nature or in art. Both science and art use this fundamental

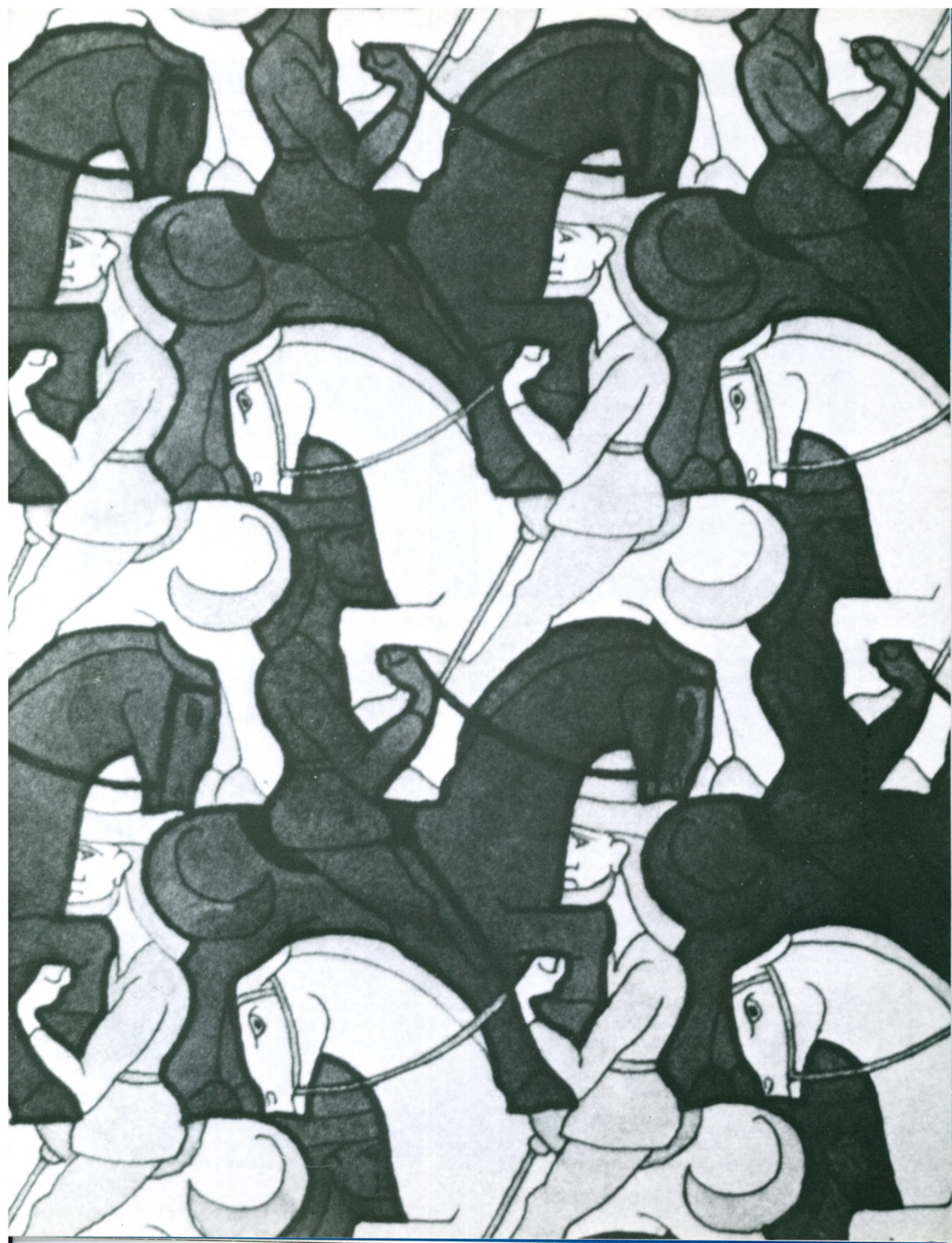
Constance Burr is a freelance writer in Washington, D.C.

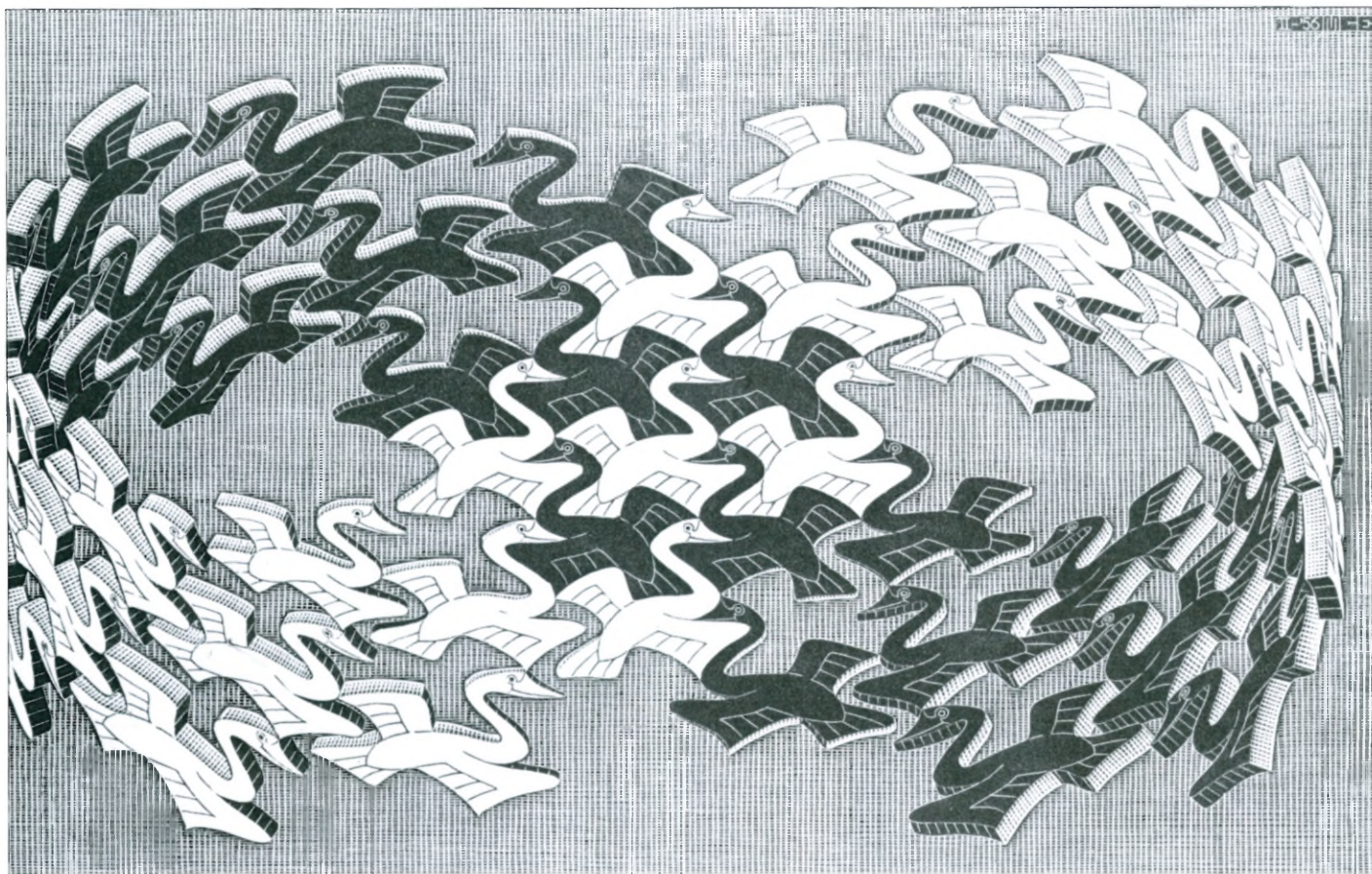
concept to analyze, to create, to order, to classify, and to explain. Escher found in the mathematics of symmetry the keys to creating congruent, interlocking shapes, or tiles, that form recognizable, decorative patterns.

In *Visions of Symmetry: Notebooks, Periodic Drawings, and Related Works of M. C. Escher* (New York: W. H. Freeman and Company, 1990), Doris Schattschneider discusses how Escher did it, documenting and analyzing his highly complex techniques of

design. The book includes a comprehensive body of Escher's color symmetry drawings, as well as excerpts from Escher's texts of symbolic notations and diagrams.

A trip to Spain in 1922 inspired Escher to devise mathematical theories that classify and explain periodic designs. Fascinated by the "great intricacy and geometric artistry" of ceramic tiles in the Alhambra, the fourteenth-century Islamic palace in Granada, he began to seek the





Swans (ink, watercolor)

"When an element of plane division suggests to me the form of an animal, I immediately think of a volume. The 'flat shape' irritates me—I feel as if I were shouting to my figures, 'You are too fictitious for me; you just lie there static and frozen together; do something, come out of there and show me what you are capable of!' So I make them come out of the plane. But do they really do that? On the contrary, I am deliberately inconsistent, suggesting plasticity in the plane by means of light and shadow.... My objects, fictitiously brought to life, can now make their own way as independent plastic beings. If they want to, for example, they can eventually return to the plane and disappear into their place of origin." —Escher

rules that governed such patterns, so he could create his own designs through regular division of the plane, or tiling.

An underlying geometric structure is present in every tiling. Escher learned how each tile relates to adjacent congruent tiles by using three geometric motions that preserve exact shape: translation, rotation, and glide reflection. Contrasting colors are integral to his theory, as they identify individual tiles and clarify periodic designs.

It is impossible to look at Escher's notebooks of symbolic notations and 150 colored, finished drawings and not conclude that he was a mathematician, Schattschneider says. Escher denied being a theoretical mathematician, although he dealt with crystallography.

The theories of crystallographers and mathematicians differ from

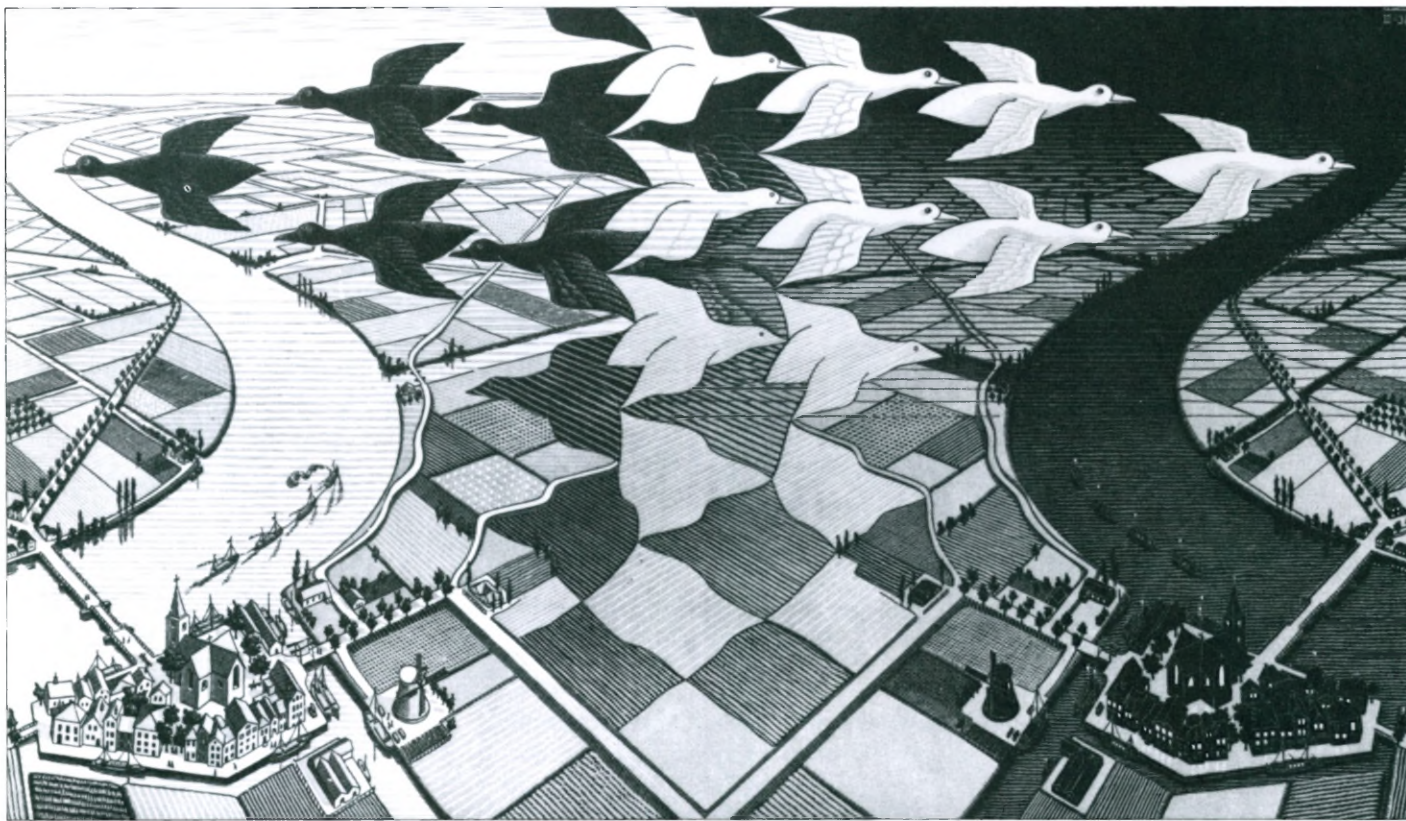
Escher's in significant ways. Their quest is for a logical analysis of a given structure, Schattschneider writes. Escher's quest was to discover rules to create periodic patterns in the plane. They begin with a pattern; he began with a blank sheet of paper. Their search is global—what is the structure of the whole molecular array, and what are the symmetries of the entire pattern? Escher's was local—how can a single shape be surrounded by copies of itself?

Escher began his drawings with geometrical skeletons and transformed them into living forms, although he never viewed these colorful, penciled drawings of interlocking whimsical figures as finished works of art. Schattschneider notes that his subjects are often playful, as he entwines two and three dimensionality, mixes up flatness and spatiality, and pokes fun at gravity.

Today, computers can be programmed to apply geometric motions to any squiggle or shape and produce instant regular divisions of the plane. But the art of finding just the right squiggle, of discerning an imaginative creature in rudimentary form, is not programmable. It is a special gift of observation, ingenuity, and wit.

Through the visual expression of abstract concepts in his prints, Escher invites viewers to question their perception of space and dimension. His periodic designs suggest limitless boundaries, invoke infinity, tease the mind, and delight the eye. □

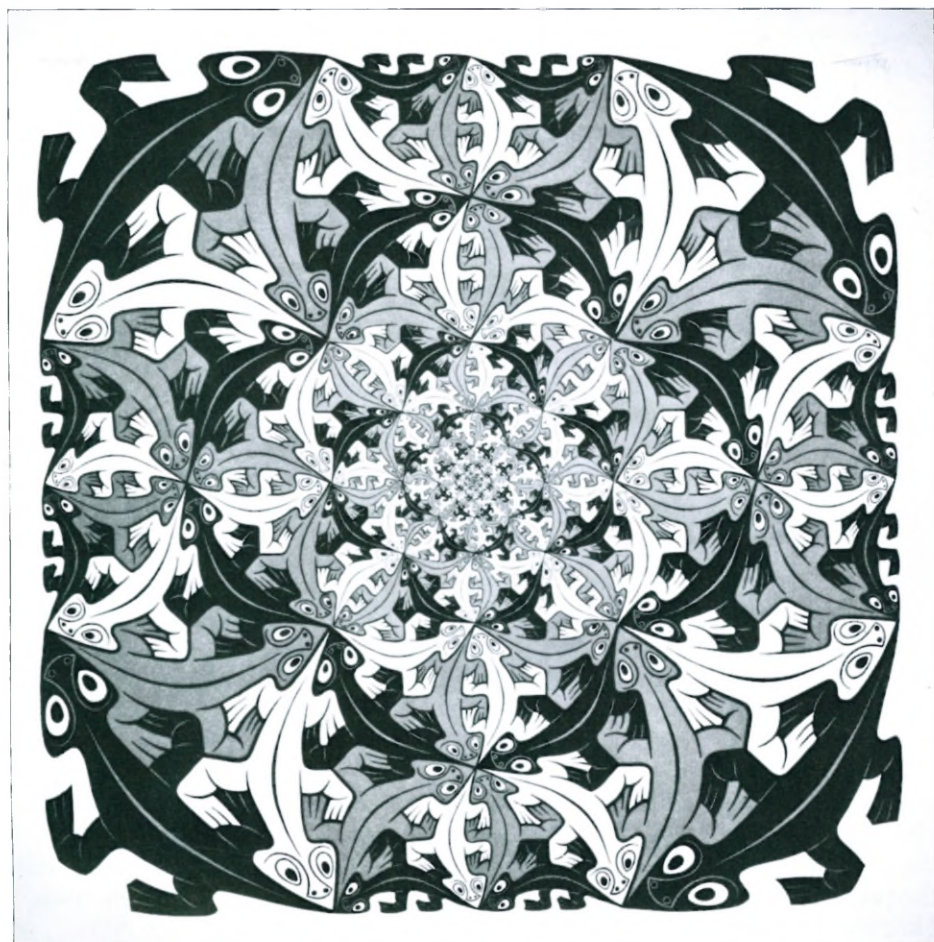
In 1988 Doris Schattschneider, chairman of the mathematics department at Moravian College in Bethlehem, Pennsylvania, was awarded \$73,251 from the Division of Research Programs to analyze the notebooks and designs of M. C. Escher and prepare a book manuscript.



© 1938 M. C. Escher/Cordon Art-Baarn-Holland

Day and Night (woodcut in black and gray)

"Here the representation of all kinds of opposites comes to the fore. Isn't it obvious for one to arrive at a subject such as Day and Night as the result of the double function possessed by both the white and the black motifs? It is night when the white, as object, stands out against the black as a background; day when the black figures are set off against the white as ground." —Escher



Smaller and Smaller (wood engraving and woodcut)



Plane-filling Motif with Reptiles (woodcut)

"What has been achieved by the regular division of the plane?" He answers: "Not yet true infinity but nevertheless a fragment of it; a piece of the universe of reptiles." —Escher

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© 1941 M. C. Escher/Cordon Art-Baarn-Holland

Langston Hughes

The Undergraduate Years

BY ARNOLD RAMPERSAD

"LINCOLN IS WONDERFUL," Langston Hughes wrote to Countee Cullen after a week at the little university of just over 300 students, located amidst "trees and rolling hills and plenty of country" about forty-five miles southwest of Philadelphia. Life was "crude," but comfortable, the food "plain and solid": there was "nothing out here but the school and therefore the place has a spirit of its own, and it makes you feel as though you 'belonged,' a feeling new to me because I never seemed to belong anywhere." For the first time since the segregated third grade in Kansas, Hughes was in school among his own people. His first impressions were all favorable. "Out here with the trees and rolling hills and open sky, in old clothes, and this do-as-you-please atmosphere, I rest content." After three weeks he was still happy: "I like Lincoln so well that I expect to be about six years in graduating."

He had reached the university on the cold late afternoon of Sunday, February 14, after a train ride from Philadelphia past sleepy towns that yielded to forest and brown farms stretching to the winter woodline. (The evening before, Hughes had read his poems in Baltimore before enthusiastic members of V. F. Calverton's *Modern Quarterly* set.) At Lincoln, a

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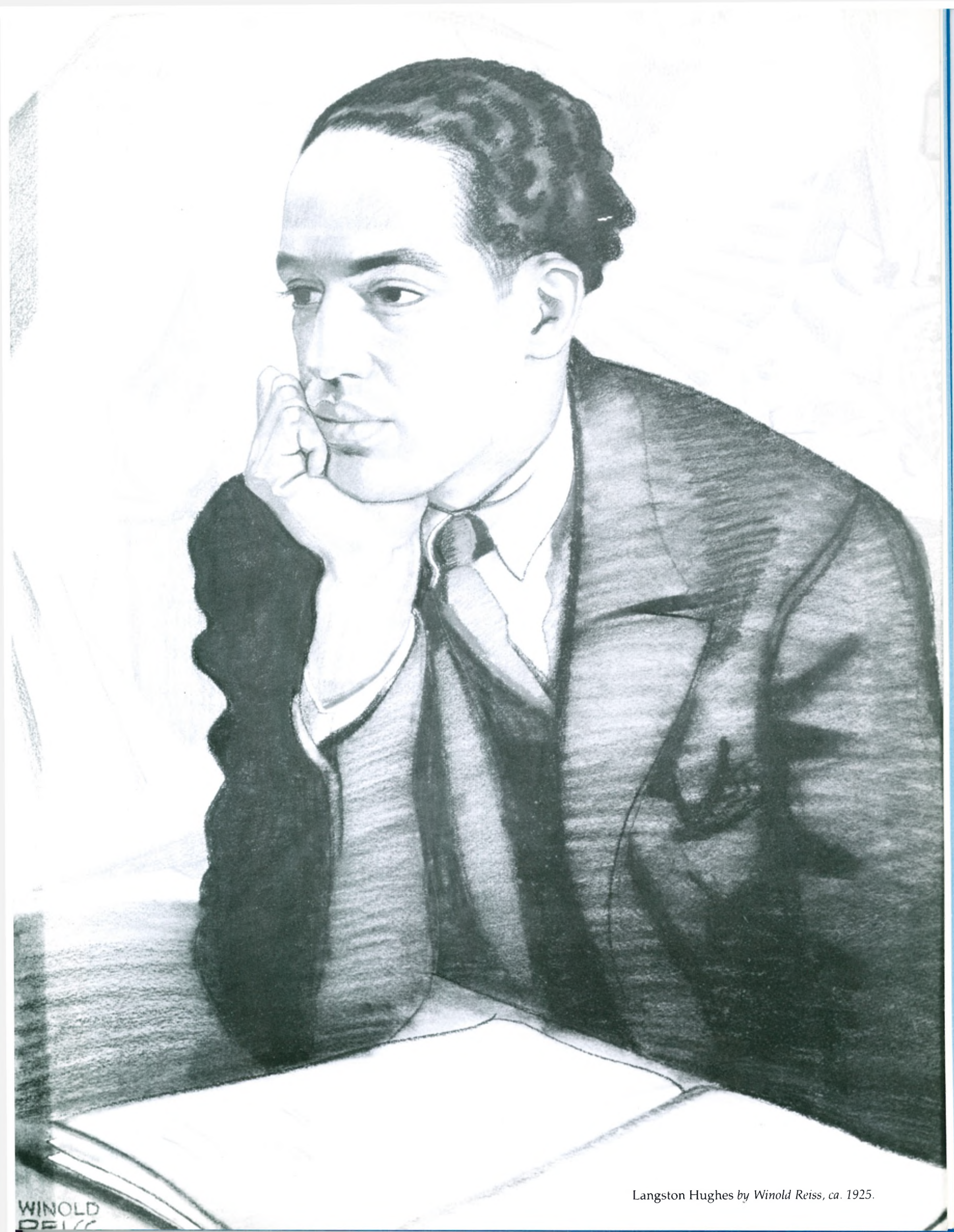
farewell party for a departing senior turned into a welcome for Lincoln's most glamorous newcomer. Outside the night was cold and the ground was white with snow, but the party grew raucous as the students, fueled by liquor in spite of Prohibition, celebrated their last evening before the start of a new term. That night, Hughes went to bed elated by the new life before him.

The school was prestigious. Since its founding as Ashmun Institute in 1854 by John Miller Dickey, a white Abolitionist minister from the nearby town of Oxford, the all-male school, comprising undergraduates and a small seminary, had helped to educate more doctors, lawyers, and ministers than any other black college. Lincoln's religious ties were firm but not oppressive. Seven of the nine tenured professors were ordained ministers, most with some connection to the white Presbyterian stronghold of Princeton University; Lincoln men liked to call their school "the black Princeton." Curiously, but only increasing its prestige among many blacks, the tenured faculty was exclusively white; in spite of its many professional alumni, no black had ever served on the board of trustees. And yet, in an era of unrest on major black campuses, Lincoln was virtually exempt from trouble, although there was strong alumni protest when the presidency, still vacant when Langston arrived, had been offered to a Philadelphia minister who turned

out to be a sympathizer of the Ku Klux Klan. So important was Lincoln that the head of the Phelps-Stokes Fund, an authoritative voice on black schools, warned that a mistake in the appointment would have "a most unfortunate effect on the college education for Negroes, not only in America, but throughout the world."

For all its prestige, however, Lincoln was falling on hard times. A substantial endowment had been depleted by weak management and by other factors beyond its control. The students were mostly poor, the alumni hardly rich. On the charming 145-acre campus, most of the buildings were "in very very poor condition." The faculty was uneven in quality and too small. The curriculum still stressed the classics; no courses were offered in black American or African culture, although Professor Robert Labaree discussed race and culture liberally in his popular lectures on sociology. Professor Harold Fetter Grim was worshipped by the pre-medical students, and Professor Walter Livingston Wright, who astonished alumni by remembering their names decades after he had last seen them, was thought by the students to be one of America's greatest mathematicians. On the whole, Lincoln men held their teachers in high regard.

"To set foot on dozens of Negro campuses," Hughes wrote later about student freedom, "is like going back to mid-Victorian England," or Massachusetts in the days of the witch-



Langston Hughes by Winold Reiss, ca. 1925.

hunting Puritans. This was not true of Lincoln. Student freedom was part of the gentlemen's agreement between the white faculty and its black students, out of which had grown a robust school spirit. With little supervision and no counseling, and with women absent except on gala weekends, the dining hall sometimes resembled a bear pit; theatrical ventures dissolved easily into pandemonium. The students disciplined themselves in other ways, however; compared to later generations, one of them would reflect, "their morals were higher, their purpose in living was higher, and they took their work seriously." Neither crime (except for genteel bootlegging) nor bad grammar was tolerated, studying was fashionable, and the threat of flunking out real. At midyear, more than one unfortunate Lincolnite was summoned by the dean, quietly handed a Wanamaker Bible and train fare to Philadelphia, and sent on his sorrowful way. The next morning only his tracks in the snow told his brothers that he was gone. But the administrators were almost always forgiving. Lincoln policy was to let the men do as they chose, Wright declared as acting president, "because then one is always likely to do right."

The generosity of the men touched Hughes. "One can use, wear, or borrow anything anyone has," he noted happily; "there's a fine spirit of comradeship and helpfulness here." With his meager wardrobe, he was also glad that dress was far more casual than at Columbia; except on Sunday, most of the men wore thick boots and comfortable old jackets and ties. The fraternity system, all-powerful in student life, claimed him quickly. Passing up Alpha Phi Alpha, which favored light-skinned students, he pledged Omega Psi Phi, somewhat less fashionable but more democratic and the current leader in scholarship among the fraternities. In arriving at midyear, Hughes had escaped much of the terror unleashed upon freshmen, but he did not escape, or wish to escape, fraternity hazing. He would be inducted into the Beta chapter of Omega Psi Phi in the spring.

"Lincoln is more like what home ought to be than any place I've ever seen," he judged. To Leroy D. Johnson, later dean of students at the school, Hughes was "a very quiet, very nice guy who never made an issue of anything with other students." He was

by no means the only gifted person there. While he attended Lincoln, the school also trained respected future academic humanists such as William V. Fontaine and Therman B. O'Daniel; Toye Davis would earn a doctorate in science at Harvard in addition to becoming a physician; the loquacious, high-spirited Thurgood Marshall would become the first black justice of the U.S. Supreme Court; eloquent Benjamin Nnamdi Azikiwe would be inaugurated as the first African governor-general of Nigeria; not many years after Azikiwe, the future leader of the African independence movement Kwame Nkrumah arrived as a student. Still, Hughes made his mark; in his senior year he would be acclaimed the "most popular" student at Lincoln.

Although he would admit privately that about two years passed before he was fully comfortable among the young black men, few saw his effort. "Langston was a remarkable person," Therman O'Daniel remembered. "He fitted in very easily—he could fit in anywhere. He had the personality to get along with other people, without the slightest pretentiousness. No doubt he had his private opinions and his private thoughts as a poet needing to create, but he was certainly one of us."

In this first term he enrolled in mandatory Bible, took two courses in English and American literature, two others in French and Spanish, and one in algebra. But Hughes had not come to Lincoln to be a scholar—he had chosen a wilderness from which he could commute to New York. On his second weekend he was in Manhattan, reading at the Civic Club on Friday, February 26, with Jessie Faucet in the chair and Bruce Nugent and Wallace Thurman grinning encouragement from the floor. After dinner on Saturday night he visited the cabarets.

With two of his Lincoln schoolmates as secretary and manager, he sought engagements for performances with the university's excellent vocal quartet. Hughes read with them in black churches in towns nearby. At Easter, however, he went alone to Manhattan for a Friday, April 2 reading at Martin's Bookshop, a little place at 97 Fourth Avenue. Two weeks later, with *The Weary Blues* now in its second printing, Hughes and the quartet went out to Cleveland, which he had not seen since 1920. His program was a triumph. Teachers and former students from

Central High packed the hall. Most saw the same smiling, boyish Langston Hughes of old—until he began to read. Then [Sartur] Andrzejewski [his best friend as a student] was amazed by his friend's poise. "I liked that you on the platform," he wrote Langston, "that you which you had never shown us before. You wear a mask so that you can keep that you for work. Not quite that either. It's terrifying to weaklings and weakness—that you, not the mask. It perhaps should make men weep some day."

In his various appearances, Hughes capitalized on the flow of generally favorable reviews of *The Weary Blues*. The *New York Times* regretted that the earthier poems were placed before the more traditional, but judged Hughes a poet of promise, as did the *New Republic*. In the *New York Herald-Tribune*, however, Du Bose Heyward, the white South Carolina-born poet and author of the popular novel of black life, *Porgy*, lauded Hughes's musical sense and predicted a career "well worth watching." To Langston's surprise, the white southern papers were almost all enthusiastic; the *New Orleans Times-Picayune* called him "sensitive and intelligent," and judged his book one of the most interesting of the year.

BY SPRINGTIME, HUGHES knew for sure that he had done the right thing in choosing Lincoln. Limbering up around the college track, he looked for the old speed, then settled for long walks across the fields. As much as he liked Lincoln, however, Langston was restless as the spring ripened. "I've been home too long," he fretted to [writer-critic Alain] Locke. He thought of the deep South, which he had never seen, and Haiti. As for his first examinations, he studied hard and earned Group One—the best of five groups—in four courses. In the Bible he was Group Two; in algebra, from acting president John Wright, he almost fell on his face.

Hughes might have done better, but in the middle of these tests came a greater challenge. Freda Kirchwey, managing editor of the *Nation*, sent him proofs of an essay by George Schuyler called "The Negro-Art Hokum," in which the journalist, who prided himself on being the black H. L. Mencken, ridiculed the idea of a separate black American culture and aesthetic.

IN FEBRUARY OF 1967, poet Langston Hughes visited a Washington, D.C., area private school—the first African American ever to lecture there. Just after the visit, the headmistress wrote him: “Our first thought of you was as a writer who would talk about writing, but we also got the writer as a human being who spoke with compassion, detachment and even gentle humor about the deep tragic division that currently baffles all men of good will—and men of bad will, too, I suppose.” In May, Hughes—a leading light of the Harlem Renaissance of the 1920s and 1930s and a sort of literary guru for African American writers throughout his life—died from complications associated with prostate surgery at the age of 65.

On March 26-28 this year, in commemoration of the twenty-fifth anniversary of Hughes’s death, an NEH-supported series of public programs on the life and work of Langston Hughes will take place at Lincoln University in Chester County, Pennsylvania, where Hughes attended college, and at the Chester County District Library at Exton.

“He was the most prolific writer of the Harlem Renaissance,” says Emery Wimbish, director of the Langston Hughes Memorial Library at Lincoln University and the project’s director. “He was one of the first writers to portray the black experience in a positive way, drawing from the blues and folk traditions to shape a new black aesthetic.”

The post-Reconstruction traditions of African American literature did not celebrate black life for its own sake, Wimbish explains. The emphasis was rather on innocuous, stereotypical portrayals of blacks aimed at a hoped-for admission into a racially integrated society. By 1920, however, poverty and racial violence had generated a poetry of social protest in the African American community. With the massive black migration to northern cities after the First World War, a group of young and talented black writers congregated in New York City’s Harlem section and made it the cultural and intellectual capital of black America. Rising to prominence among them was Langston Hughes, whose *Weary Blues* (1926) and *Fine Clothes to the Jew* (1927) quickly gained notoriety for their use of blues rhythms,



Langston Hughes at Lincoln University, 1928.

The Langston Hughes ◆ Commemoration ◆

at 7:30 P.M. at the Chester County Library, the program’s opening lecture—“The Legacy of Langston Hughes”—will be delivered by Ja Jahannas, dean of the School of Humanities and Social Sciences at Savannah State College in Georgia. On Friday, March 27, at 10:00 A.M. in Dickey Hall at Lincoln University, the keynote address—“International Dimensions: Hughes’s Continuing Influence”—will be delivered by Arnold Rampersad, Woodrow Wilson Professor of Literature and director of American studies at Princeton and author of *The Life of Langston Hughes*.

Other events include panel discussions, viewings of the hourlong Langston Hughes segment of the acclaimed PBS series *Voices and Visions*, a book fair, and dramatic readings of Hughes’s writings followed by discussion.

—James S. Turner

To support a conference and lecture-discussion series on “Langston Hughes: The Man and the Writer,” Lincoln University in Pennsylvania received \$70,000 in outright funds from the Humanities Projects in Libraries and Archives program of the Division of Public Programs.

irony, and humor, as against the tradition that censured the blues as devoid of cultural import.

Inspired by Walt Whitman and Carl Sandburg to seek a genuinely African American poetic form, Hughes began exploring the significance of race by the time he was nineteen in poems such as “The Negro Speaks of Rivers”:

“I’ve known rivers

*I’ve known rivers ancient as
the world and older than
the flow of human blood
in human veins.*

*My soul has grown deep like
the rivers.”**

* © 1953 Bookman

Through portrayals, both tragic and humorous, of the actual conditions of black life, character, and experience, the Harlem Renaissance became the first intellectual and artistic movement to bring black America to the attention of the entire nation. And by helping the Negro community define itself through awareness of its own lively blues and folk traditions, Langston Hughes, says Wimbish, helped lead African Americans into the modern world through his poetry.

On Thursday, March 26,

Calling his essay "rather flippant in tone and provocative in its point of view," Kirchwey obviously hoped to provoke Hughes, who had been recommended to her by James Weldon Johnson. She wanted not so much a rebuttal of Schuyler as "rather an independent positive statement of the case for a true Negro racial art."

Within a week, the *Nation* had the finest essay of Hughes' life, "The Negro Artist and the Racial Mountain." With its tone quite personal, the main argument was against blacks who would surrender racial pride in the name of a false integration. A talented young Negro poet (undoubtedly Countee Cullen) wanted to be "'a poet—not a Negro poet.'" Which meant, Hughes went on, "'I want to write like a white poet'; meaning subconsciously, 'I would like to be a white poet'; meaning behind that, 'I would like to be white.'" But the young man would never be a great poet, "for no great poet has ever been afraid of being himself." To Hughes, "the mountain standing in the way of any true Negro art in America" was precisely "this urge within the race toward whiteness, the desire to pour racial individuality into the mold of American standardization, and to be as little Negro and as much American as possible. The younger artist must cast off racial shame and ask, 'Why should I want to be white? I am a Negro—and beautiful.'" Hughes ended with a hosanna:

Let the blare of Negro jazz bands and the bellowing voice of Bessie Smith singing Blues penetrate the closed ears of the colored near-intellectuals until they listen and perhaps understand. Let Paul Robeson singing "Water Boy" and Rudolph Fisher writing about the streets of Harlem, and Jean Toomer holding the heart of Georgia in his hands, and Aaron Douglas drawing strange black fantasies cause the smug Negro middle class to turn from their white, respectable, ordinary books and papers to catch a glimmer of their own beauty. We younger Negro artists who create now intend to express our individual dark-skinned selves without fear or shame. If white people are pleased we are glad. If they are not, it doesn't matter. We know we are beautiful. And ugly too. The tom-tom cries and the tom-tom laughs. If colored people are pleased we are glad. If they are not, their displeasure doesn't matter either. We build our temples for tomorrow, strong as we know how, and we stand on top of the mountain, free within ourselves.

These brave words were soon tested. Leaving Lincoln for his summer vacation, Hughes visited his mother, who was now living with Gwyn Clark in Atlantic City, New Jersey, and working as a servant for a white family. Securing a reading at a local black church, he was chanting a section of blues verse when a deacon approached the rostrum with a note from the minister: "Do not read any more blues in my pulpit." This was his first encounter—but not his last—with censorship.

After a few days, Langston headed for Manhattan to enjoy a summer in "the nicest town in the world." Hughes lodged in a room at Wallace Thurman's home. Wherever Thurman lived was the center of a whirlwind of activity, of laughter and carousing but also of intense, rebellious creativity among the "Niggerati," Zora Neale Hurston's term for the hustling young writers who now seemed to be everywhere in Harlem. Hurston was the intelligent but earthy young woman who had caught Langston's eye the previous year. Aaron Douglas was painting and sketching with authority; John P. Davis had just replaced Jessie Faucet as literary editor of the *Crisis*; Cullen, a member of the "Niggerati" in spite of his Harvard degree and his propriety, had joined the editorial board of *Opportunity*. The poet and artist Gwendolyn Bennett was back from Europe (where she had met both Claude McKay and Hughes's old flame, Anne Coussey); from Boston had come the talented young writer Dorothy West and her friend, the equally promising poet Helene Johnson, whose work was beginning to appear in the journals. Beautiful Dorothy Peterson, fluent in Spanish, eager for the stage, and with money of her own, was less often in Harlem but was still counted as one of them.

IN THE SUMMER of 1926, Langston was hard at work. By early August he was writing lyrics and sketches for a show first proposed by Caroline Dudley Reagan, who hoped to stage a black revue starring Paul Robeson. Since the enormous success of *Shuffle Along* in 1921, Broadway had welcomed a number of black musicals. Paul Robeson was the most commanding black male performer, as well as the one perhaps most sensitive to the depiction of blacks on the stage. Hughes, who deeply admired Robeson, was

eager to work with him on the revue, as well as with the musician Ford Dabney. Soon Langston was traveling every day downtown to Mrs. Reagan's apartment in Greenwich Village. Slipping behind the jaunty name "Jimmy" Hughes, as he had done in his days at sea, Langston soon finished a "dramatico-musical composition" called "Leaves: A novelty song number for singer and chorus." "Leaves" was either a trial run or an eventually discarded number from the Reagan revue, called *O Blues!*, which included some broad satire and even low comedy but also revealed elements of fantasy, pathos, and social protest, all of which Langston saw as significant in the often despised blues form.

"Jimmy" Hughes's lyrics did not entirely please Langston Hughes. By midsummer, he and Zora Hurston had begun to plan a more ambitious venture—a black opera based on blues and jazz. Although Scott Joplin, Paul Laurence Dunbar, and others had helped to compose dignified black operas, the form had deteriorated into the strut-and-leer that marred many of the Broadway revues. Hughes wanted to lift the general level of the black musical. Hurston would be an invaluable collaborator: while their enthusiasm for folklore and the black masses was almost equal, she had both a bookish and a native knowledge of the rural South. Hurston also had a particular musician in mind—Clarence Cameron White, who had trained as a concert violinist.

In steamy August, however, none of the musical projects flourished. The enthusiasm for *O Blues!* wilted. Neither it nor the folk opera was ever finished, but Hughes's association with musicians was not wasted. All through the summer he worked hard on new poems that brought his art to a remarkable new level of proficiency. For inspiration he depended not on romantic melancholy and traditional forms but on a now classical respect for the art of the blues; unquestionably, Hughes had been toughened in his resolve to celebrate the lives of the black masses both by his months at Lincoln and by the heady confidence of the Harlem group. □

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FEW AFRICAN AMERICAN men teach European languages at historically black colleges and universities, says James J. Davis, who is one of the few.

In 1990, after eleven years of teaching Spanish language and literature at Howard University in Washington, D.C., Davis, with NEH support, completed a Ph.D. in Latin American literature at the University of Maryland, College Park. Not only did attaining this goal open the way for his appointment as interim chairman of Howard's Department of Romance Languages for the 1991-92 academic year; it also defied a curious stereotype on campus.

"My students think I must be Afro-Hispanic, because regular black folk in this country just don't get Ph.D.'s in things like foreign languages," he says with a laugh. "They believe that I have changed my name and somehow covered up my accent."

In fact, Davis grew up in rural Virginia in a tobacco-farming community, discovered by chance a love for the Spanish language, and followed his natural interests to their fruition: "From the moment of getting the doctorate my life ballooned. I was suddenly promoted from instructor to associate professor within a year and became a member of the graduate faculty. And my sitting here in the chairman's office, less than two years after getting the doctoral degree, speaks to just what this has done for my career in such a short while."

Through a fellowship provided by the NEH Faculty Graduate Study Program for Historically Black Colleges and Universities (HBCUs), Davis was able to take a yearlong leave of absence in 1987 to do research on his dissertation. This Endowment program supports outstanding instructors at HBCUs for a year of doctorate-oriented research free of teaching and committee duties.

What Davis learned in the course of researching his dissertation, titled "A Study of Student Attitudes toward Foreign Language Programs and Study at Historically Black Institutions," is that African American students are generally ambivalent about foreign language study. Focusing on the seventy-six four-year HBCUs offering at least one year of foreign language study (the total number of two- and

James S. Turner is assistant editor of Humanities.



Courtesy of James Davis

Foreign Language Study at Black Colleges

*Views From
Howard University's
James J. Davis*

BY
JAMES S. TURNER

four-year HBCUs nationwide is 120), Davis noticed a discrepancy between students' expressed interests and what they actually sign up for.

On the one hand, he says, many students indicated a preference for studying African languages rather than European ones. "I think this has to do with our history in this country of being isolated in a sense, in terms of our background and language. The consciousness of solidarity in the African American community—a feeling built up over centuries, perhaps—helps explain why the attitude toward other cultures is somewhat negative."

On the other hand, he points out, enrollment in African language courses at HBCUs tends to be low. "Students think they should want to know African languages, but when given the opportunity to sign up, they don't jump at the chance. Some students even refer to African languages as dialects. They seem to be grasping to become part of mainstream America, and at mainstream American colleges that usually means fulfilling a language requirement in the European languages."

At Howard, Davis notes, the program in African languages is not large. The language requirement for students in the College of Arts and Sciences is four semesters in either French, Spanish, German, Russian, or one of the classical languages—Greek and Latin. But Davis believes that study of any foreign language is invaluable: "I advise students to study a foreign language regardless of which one it is, because foreign language study is not just about learning a second language but about opening your mind to a larger world."

The main challenge in teaching foreign languages at HBCUs, he says, is getting students to see the relevance of foreign language study to their lives. "Many students come from small towns, as I did, and they're terribly intimidated by the fact that they have to study something as seemingly useless as a foreign language. But it's ironic when you study slavery in this country and realize that Africans from many different language communities were brought together here and then created their own language in order to communicate. They were polyglots from the beginning, and that should reinforce the idea of relevance. But somehow that idea has been mistranslated along the way, and students feel that they have no real connection to foreign languages and other cultures. It's the total opposite of the reality."

Davis understands inhibitions about studying foreign languages. Since his high school days, he himself has had to combat barriers that discouraged his interest in studying Spanish. During the late sixties and early seventies, for example, the school system in his small southern Virginia hometown of South Boston was *de facto* segregated. At the white school, foreign languages were taught starting in the ninth grade. At the black school, they were not taught until the eleventh grade. "I think

school officials believed that black students were not capable of mastering a foreign language," Davis says.

Intrigued by his older sister's recitation of the Pledge of Allegiance in Spanish, Davis quickly picked it up himself. And after appealing to school officials, he got himself enrolled in the Spanish class at his school when he was only a sophomore. "The teacher was Cuban, and somehow she picked me out as her star pupil," he recalls. By the time he went off to college—the first in his family to do so—he was eager to further his language study.

"In my community it was unusual enough to want to go to college in the first place," says Davis, whose family expected him to remain at home and enter the tobacco industry. "But if one did go to college, it was assumed that one would at least study business in order to do something practical and make some money." True to himself, he majored in Spanish, although he was uncertain where that course of study would lead.

A decisive moment for him came in 1974, when as a college sophomore he first attended a meeting of the College Language Association, a professional organization for scholars in language and literature. "When I was in school, less than one percent of students from historically black colleges graduated with degrees in foreign languages, so I was maybe one of ten nationwide. At the meeting, I was impressed that nearly all of the African Americans teaching foreign languages were gathered in that one place. Right then and there I felt that I needed to do something to promote foreign languages for all students but particularly those at the historically black colleges."

Thus motivated, he spent his junior year in college abroad, studying Spanish and Portuguese at the University of Madrid. "Students there came from all over the world to study Spanish," Davis says, and his immersion in an international arena deepened his feeling for language as an expression of culture—a sensibility that informs his teaching to this day.

"We tend to look at culture in the foreign language context in terms of the big icons of civilization such as the Eiffel tower—culture with a big 'C,'" says Davis. "But what foreign language teachers need to do is teach culture with a little 'c' by taking students inside

The Faculty Graduate Study Program for Historically Black Colleges and Universities (HBCUs) began in 1983 in response to a presidential initiative aimed at strengthening the teaching of the humanities at HBCUs. Since the Reconstruction era, HBCUs have provided African Americans with educational opportunities not always available otherwise.

This program, administered through the Division of Fellowships and Seminars, provides one year of support for teachers at HBCUs to work toward the completion of a Ph.D. in a humanities discipline. Preference is given to applicants who have completed coursework and have arrived at the dissertation stage. Since its inception, the program has received 218 applications from faculty at 66 HBCUs and has funded 87 from 40 of the schools.

Of the 87 faculty recipients, 65 have completed their year of study to date, and 25 have received the Ph.D.

Faculty Graduate fellowships are currently in the amount of up to \$30,000 for study during an academic year. The annual application deadline is March 15. For more information, call 202/786-0466. □

the map to the people who inhabit other places, to learn what makes them tick, how they behave. Students usually think that foreign language study is only about conjugating verbs and memorizing vocabulary, and I try to dispel that misconception at the outset. Language is really about culture. If I could have any influence in teaching foreign languages at Howard, I would work toward getting culture taught as a primary goal, and the other things such as grammar and vocabulary will fall into place."

In one classroom exercise, Davis asks his students to think about their own gestures, expressions, and taken-for-granted mannerisms, and he then suggests that the same gesture might mean something entirely different in the Spanish-speaking world. Drawing from his own experience, Davis tells of a lesson he learned while on a Fulbright in Brazil in 1983. In thanking a hotel launderer, Davis couldn't figure out why the man always shrank in embarrassment when Davis gave

the A-OK gesture. Only later did he learn that the gesture was considered rude in that culture.

"Once you get students thinking about these things, you can begin showing how language encompasses subtle cultural differences. For instance, in Spanish you say, 'I have hunger,' not 'I am hungry.' It's not a state of being."

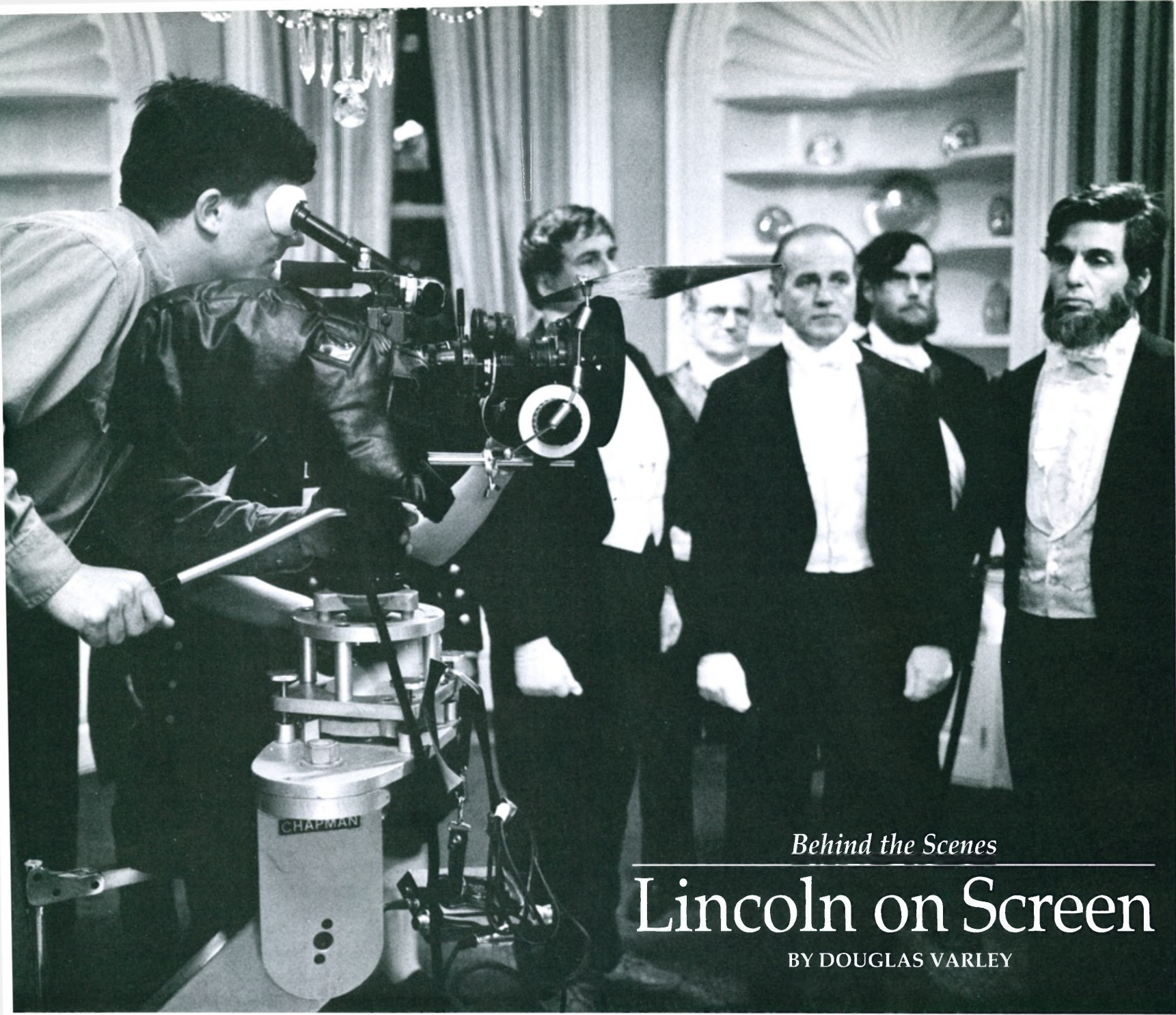
To make foreign language come alive, Davis sees a marriage between teacher training and the humanities as essential. "Any person who's being considered for certification in foreign language teaching should have 'x' amount of hours in sociology and cultural anthropology to be able to understand the dynamics of culture," he says, adding that revamping foreign language education to focus on culture would go a long way toward engaging students who dislike the rote, noncontextual way in which foreign languages are often taught.

Furthermore, he says, being steeped in the language's literature is equally indispensable as a way of drawing parallels between cultures in the classroom. His own expertise is in Latin American literature.

"Latin American literature portrays human experience that speaks to the struggles of all people. I think people of African descent in Latin America and other places have the same history as the black man in this country—of being outsiders, of losing one's culture. And in many ways I look at the Hispanic, or Latin American, population in this country as being very similar to that of the African American population." For these reasons, he finds Latin American literature particularly amenable to the interests of his students.

Listening to Davis talk, it's clear that he loves teaching. But his commitment to education goes beyond the classroom: "I see myself as a role model, regardless of my subject area. You read all the time about the problems of African American males, and I like to think that some students might see me as someone who got somewhere by dedication to a goal. They just might be inspired to aim high at something they want to do." □

To study Spanish American literature and culture, in 1986 James J. Davis received a \$27,500 Faculty Graduate Study fellowship from the Division of Fellowships and Seminars.



Behind the Scenes

Lincoln on Screen

BY DOUGLAS VARLEY

Michael Spiller, director of photography, filming Lincoln and Seward. At far right is Chris Sarandon as Abraham Lincoln. (Photos courtesy of WGBY-TV)

HALFWAY UP THE tree-lined drive to Buenavista, the pavement has been covered with dirt. The columns of the stately eighteenth-century mansion are decked out with red, white, and blue bunting for a patriotic celebration. Around the side entrance, a small crowd of people dressed in waistcoats and hoopskirts mill around aimlessly. For a few brief days, the Delaware conference center has become again the home of a wealthy family—this time

Douglas Varley is a freelance writer in Charlottesville, Virginia.

the owner is William Henry Seward.

On the set of an upcoming PBS historical drama about Abraham Lincoln and his secretary of state, a film crew has hidden all traces of modernity. What the set designers cannot conceal—telephone poles, a nearby street—the crew works around, using tight camera angles. No indication of the contemporary world is allowed to intrude upon the carefully constructed image of the past.

In making "Lincoln and Seward," historian Robert Toplin of the University of North Carolina and director Calvin Skaggs collaborate to portray

the two political leaders in a way that is both factual and engaging. Toplin and Skaggs agree that one of the hardest and most important aspects of their work is portraying individual motivation and personality. "People aren't just responding to facts; there are egos, jealousies, dreams, and frustrations involved," Toplin says.

The film's action centers on the decision to risk war by reprovisioning Fort Sumter where rebel Southerners had blockaded federal troops. Beginning from the premise that Lincoln came to the presidency with no set plan for dealing with the

secessionists, it depicts his personal struggle to choose a course between hawkish advisers eager for a fight and those willing to give in on any issue rather than go to war. Toplin points out that there was considerable anxiety in Washington in the spring of 1861 over the new President's ability to deal with the mounting crisis. "It wasn't long before people began to feel frustrated with Lincoln. They began to say, 'He can't make up his mind; there's no one at the helm.'"

Many in the capital looked to Seward to take control of the situation. "He was a dominant figure in Washington," Toplin says, "the man many had expected to win the Republican nomination in 1860." As the film makes clear, the secretary of state was quite willing to set himself up as a kind of premier. In one scene he remarks to Stephen Douglas, "Lincoln doesn't need to lead. All he has to do is listen." The resulting personality conflict is the core of the film, Toplin says.

The focus on Seward is part of what makes this film different from other treatments of the events that led to war. Picking up on questions raised in Daniel Crofts' *Reluctant Confederates*, Toplin decided to explore Seward's side of the story as part of a fuller account of Lincoln's development in office. "Seward was willing to go to great lengths to avoid a clash of arms," Toplin says. By showing that his side of the debate was a genuine option which Lincoln had to take seriously, the film gives the viewer a more realistic understanding of how difficult Lincoln's position actually was. "We let the viewer wonder, was Lincoln right, was Seward right?" Toplin says. The decision to reprovision the fort was "Lincoln's first moment of greatness," a clear signal of who was running the government, he says. But the film is careful to show that it was a victory hard won and not at all unambiguous at the time.

As *dramatis personae*, Lincoln and Seward present different kinds of problems for both the historian and the director. "Lincoln is difficult because he's more of a monument," says Toplin. "So we've worked hard to create dialogue that reflects what we know about him as a person, his humor, his sadness, some of the pain

he felt, some of his indecisiveness at this period in his life."

Toplin says his sense of Lincoln developed over time spent immersed in his letters, speeches, and the records of what other people said about him. Ironically some of the difficulty in dealing with Lincoln results from how copiously his life has been documented. As Lincoln's fame increased, his contemporaries recorded their experiences with him in detail. The problem is that their recollections often conflict. "The records of some of the meetings we focus on in the film reflect different perspectives, and there is disagreement as to what was said or implied," Toplin says. The challenge then is to sift through the varying accounts and come up with a faithful treatment that best reflects what Toplin and the other consulting historians think actually went on. "We go through many revisions," he says.

Seward is more of an unknown quantity for the public than Lincoln, and therefore popular preconceptions are less of a problem, Toplin says. "Most people think only of Seward's Folly," he says, referring to the purchase of Alaska from Russia in 1867. "He is a confusing man to an outsider, a radical on the evils of slavery who maintained there was a law higher than the Constitution but also a conservative fellow who ultimately advocated compromise with the South." The motivation for his character, Toplin says, lies in his "dealing with the shock of losing the nomination while still trying to be on the President's team."

From the director's perspective, characterization is an abstract, multifaceted process, says Skaggs, whose cinematic credits include the award-winning PBS series, *American Short Story*. "It's the way someone looks, the way they carry themselves," he says. For Lincoln, Skaggs relies on "reminders" to create a credible portrayal. "Something as simple as a way of speaking or interacting with another character can recall the ruralness and poverty of where Lincoln came from," he says. Subtle use of makeup and presentation can also affect the viewers' perception of a character. For example, a difference in hairstyle reinforces the contrast between Seward's abolitionist wife, Francis, and his mistress, actress

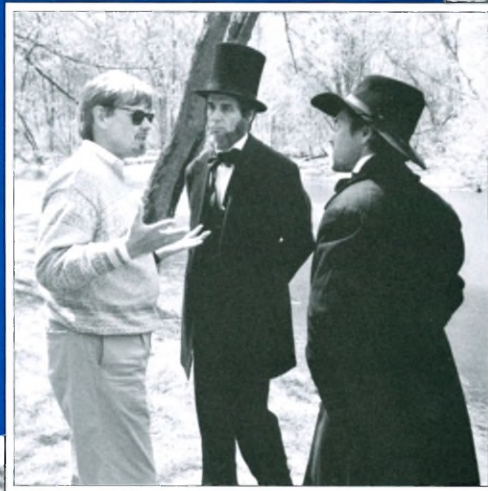
Charlotte Cushman. Francis wears her hair pulled severely back in a bun, while Charlotte has hers done in Scarlett O'Hara curls.

To insure that these and countless other telling details come together in a way that accurately recalls the past, Toplin, who also worked on the PBS series *A House Divided*, remains on the set throughout the shooting. His most important contribution, however, is made in the early stages when the general conception of the film is worked out. "The historian's role," he says, "is the messages that you're presenting to the public, the interpretation of history."

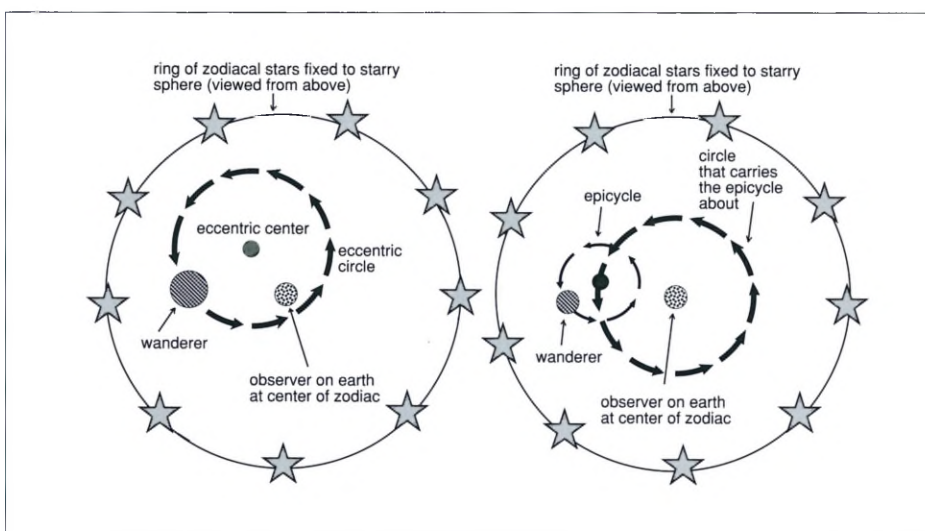
A measure of interpretation is unavoidable in dealing with historical material in any format, he says. In drama the risks involve having a script writer fabricate language for situations where historians do not know precisely what was said. Toplin is quick to point out, however, that these risks are not necessarily greater than those run by the makers of documentaries. "There, too, you're juxtaposing images and suggesting connections; narration can be quite biased and loaded with opinions. There's a lot of potential for interpretation either way."

Toplin's approach to interpreting history on screen is to let the drama bring out the complexity and ambiguity of the events portrayed. "The dramatic medium lets us give viewers a sense of different perspectives," he says. Scenes depicting cabinet meetings and private consultations with other political leaders show how Lincoln's advisers differed among themselves about the best response to Southern insurrection. "We see him learning along the way," he says. "You are exposed to the same kind of evidence that Lincoln was obtaining." This technique lets the process of decision making itself become the forum for presenting the issues involved. The dimensions of Lincoln's problem emerge without the film becoming didactic. "You never realize you're getting what we call historiography," Toplin says. □

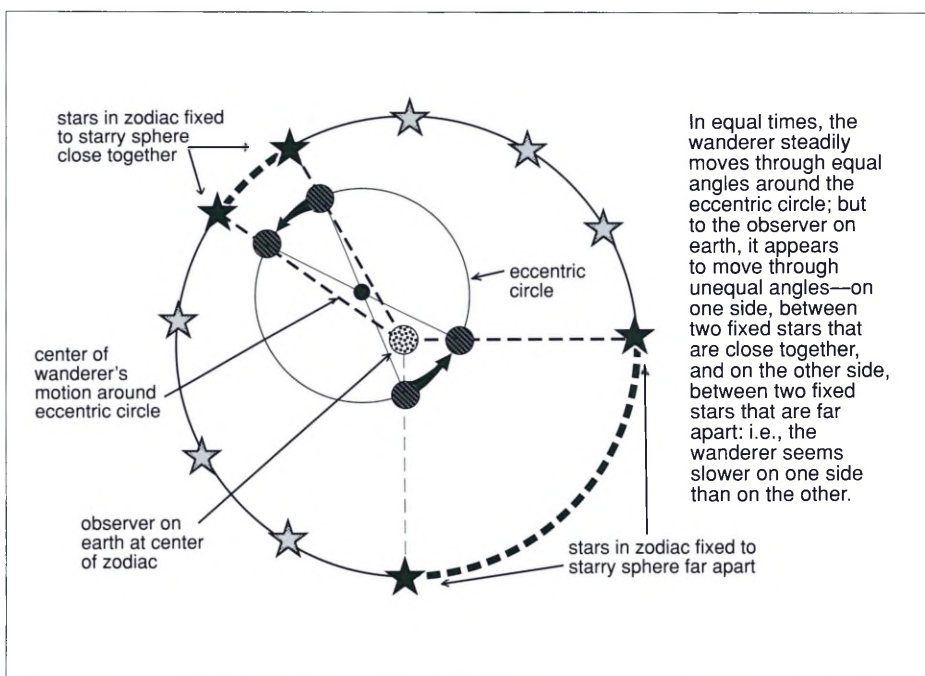
To produce "Lincoln and Seward," WGBY-TV in Springfield, Massachusetts, received \$900,197 in outright funds from the Division of Public Programs.



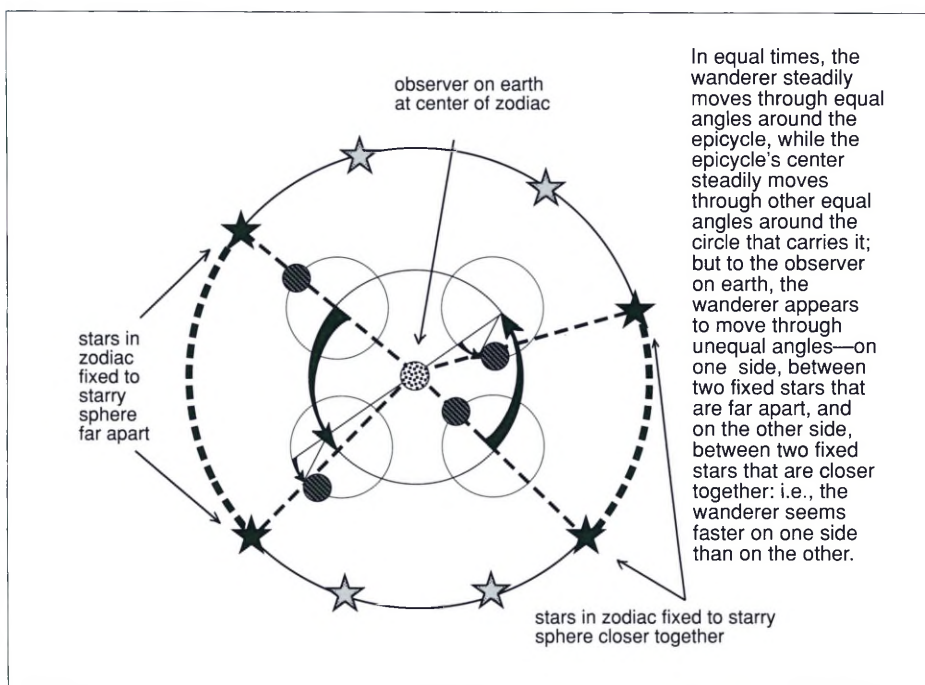
Top: Alan North as General Winfield Scott, Chris Sarandon as Lincoln, and Tom Aldredge as Seward. Inset: Director Calvin Skaggs with Chris Sarandon and Will Patton as Ward Lamon. Lamon was Lincoln's aide de camp and bodyguard. Below: Veronica Cartwright as Charlotte Cushman, Seward's mistress, and Joan MacIntosh as Mrs. Seward.



Circles eccentric and epicyclic.



Uniform motion on an eccentric circle appears nonuniform.



Uniform motion on an epicycle appears nonuniform.

QUEST FOR ORDER

continued from page 15

of heaven which rotates daily around the centrally positioned ball of earth.

The case of the *sun's* anomaly is relatively simple. It can be handled by an eccentric circle: Let the sun move around a circle which is placed off-center from our earthly standpoint at the center of the starry sphere; to save the appearances of the sun, its circle must be put off-center from the earth in just the right direction, and at just the right distance as compared to its radius. Or the sun's anomaly can be handled by making a different but equivalent epicyclic supposition. To get it all just right takes some looking, counting, measurement, and demonstration.

When we consider motions up there other than the sun's, we have then to deal with a much more complicated story that requires trickier work with Ptolemy's devices. But before examining how such devices work, we should consider why someone might want to use them.

IV. Classic Suppositions

What is the question?—that's our question now. That is, *why* the question to which these epicycles and eccentrics are the answer? If we take it for granted that we're looking at something as it truly *is*, then we do not distinguish the appearances of that something from that something itself. Only if we suppose something else underlying what we see, do we distinguish the appearance from the underlying something that is appearing. What appears, or shows itself, or shines forth, is, in Greek, a *phenomenon*. There won't be theorizing to account for phenomena unless phenomena have been noted and recorded; and for this, there must be some criteria for selecting what is noteworthy and for arranging what is recorded. We do not simply record appearances and only then begin to think. Implicit in the very recording of appearances is some thought.

But we can go a long way before getting theoretical. The Babylonians of old assembled star tables and used them to predict *when* a wanderer through the zodiac would be *where* and what would go along with this. Their ability to do so was impressive.

The way in which the ancient Babylonians managed to foretell the movements in the sky was similar to the way that men in modern times have managed to foretell the movements of the tides. Even after Newton supplied physical principles to determine the tides, it was nonetheless not from these principles that forecasts were derived. The matter was too complicated. What were used instead were tables that recorded what had happened in the past. The forecast-makers, scanning the tabulated tidal numbers, detected gross patterns in the variations, and finer sub-patterns within the gross patterns, and even finer sub-sub-patterns. This study of the recorded numbers enabled them to make tidal predictions. And it was thus that the Babylonians predicted heavenly motions, summing up the starry numbers they had labored to set down in tables.

They were led to do this because some visibly circular movements are associated with some relatively obvious cycles of numbers. Overhead the stars fixed in constellations circle uniformly; the planets also circle, and though they do not do so uniformly, their motions, when we do some counting, give recurrent sequences and coincidences of numbers. The cycles in the numbers are associated with the circling of the zodiac by the sun, which is associated with the cyclic patterns of the seasons.

All those motions in the sky were of great import to human life on earth. Men made a place in civic life for that to which they all looked up in wonder. One of Plato's characters speaks of the gods who appear as they please—that is, the gods in animal or human form—and the gods who simply appear—that is, the heavenly lights. And Aristotle speaks of a tradition ancient even in his day, handed down from long before in story. To use his Greek terms: the *archaic* lore was handed down in *myth*. It said, he says, that what shine forth in motion up above are the divinities, and also that what *contains* the whole of what comes into being is also something divine. And he adds that the rest of the stories, presenting the divinities in animal and in human form, were added only later, for their persuasive power, useful in making the multitude of human beings law-abiding. The foundation of mythology, for

Aristotle, was archaeo-astronomy; according to him, a later politic theology made the anthropomorphic and zoomorphic additions to the archaeo-theology, which was astral. The Greeks reported of themselves that as a people they, compared to older peoples to their east and south, were very young—latecomers to learning, initiates to a wisdom that preceded them. Scholars nowadays give evidence that the ancient myths of many peoples are vestiges of records made before the time of written records; tales that recount the counting that makes up the stories in the sky, tales sometimes embodied more solidly in temples—in the lines of sight those buildings furnish, or in the numbers of their bricks and models. All over the world, special numbers strangely recur; strange details related to those countings of what happens in the sky are found in accounts that do not seem to be related to the sky, or related to each other. Before the people of the book, it seems that cosmic bookkeepers did their work, impressing in the memories of men their celestial accountancy.

That is why the Bible says in the beginning that what shines forth from up above is not divinities themselves but mere creations of divinity. What the heavens recount is the glory of that unique divinity which made them, we are told, and the worship of what shines forth in the heavens is the lot of all the peoples other than the recipients of this instruction given in the Bible. In the biblical instruction, idol worship is associated with the worship of the stars. Both are forms of what is rejected by the biblical instruction with its awesome either-or. Divinity, seen by some as everlasting beauty, to others rather is benevolent power. For some, an image of divinity is a statue, a graceful, static form to look at. For others, divinity is rather found calling out from fire—ever lively in its formlessness, but having power to transform; what calls is something not to look at but to listen to, its word recorded in a book for those to read who, lively though perishable, are made in the image of the one whose glory is recounted by the shining in the sky. Abraham had his origin in a city of the Chaldees, Ur, a center for that culture which was preeminently attentive to the heavenly lights. The Sumerians, who dwelled there earlier, were watchers of the skies, observant keepers of the

times; those who followed these night-watchmen became observers too. The story of humanity in its beginning is a Mesopotamian story.

The Babylonians, however, while they had elaborate tables of numbers, did not put together those circular configurations that were developed later on by the Greeks. But why *not* do it?—why not take the orderly recurring numbers and associate them in a thoroughgoing way with the recurring figure of the wheel, the *kuklos*, the cycle? We speak of things coming around again; the paradigmatic pattern of periodicity is the rotating wheel. The startling motions that started us gazing at the sky are wheelings. We gaze, and we ask ourselves whether appearances that take a path that goes around us, the appearances that have a motion that is wheel-like—we ask whether these can be preserved by moving wheels off center (making them eccentric) or by moving wheels upon wheels, cycles upon cycles (making them epicycles). Keeping the wheels in mind, why not go from taking in the views to seeing how the views could be preserved if we suppose *only* thoroughly steady circular motion? The Babylonian numbers are periodic, and they refer to places on a heavenly circle. Why not show them to be the seemings, the appearances, of beings that are doing nothing as they shine but circling steadily? This may not seem to be so big a step—but it is a step that the Babylonians did not take. The Greeks, however, did.

The Greeks wedded the Babylonian recording of heavenly numbers to the Egyptian measurement of earthly figures. Classical astronomy, the geometrization of cosmic motion, seems to have as its prerequisite more than men's impressing into tables a numerical record of their watching of the lights that move above us so impressively. What it also seems to need is *theory*. But what *is* theory?

To those who originated its meaning, the word did not mean a conceptual scheme compactly storing observations for rapidly reckoning out predictions. It meant, rather, a kind of activity. A *theoros* was someone sent as an ambassador by one city to view another city's religious procession. *Theoria* is the activity of viewing the divine things, the beautiful and lofty things that abide. Such viewing was thought to

constitute a higher and a steadier way of life than doing noble and just deeds, let alone making and getting things that are useful. At the athletic contests which the Greeks held sacred, the lowest rank of men were said to be the ones who came to sell and buy refreshments and the like; better men were those who came to be contestants seeking glory in the spectacle; best of all were those who came to view the beautiful bodily forms in motion.

It is not enough, however, merely to view divinity in the sky—this the Babylonians did. What matters is what you think divinity is. For Homer and for those who followed him, *theos* was a term of contrast. The gods were thought of in contrast to the mortals, the ones who die. A god is an immortal; a god stays beautifully the same while other things change with age and perish in commotion. Theory is a viewing of what beautifully persists.

Looking about and looking aloft, what do we see? Down here, we make many things change, and some things change very much by themselves. Up there, we don't make anything change, but some things change themselves and even pass away—like clouds. But there are things up there that don't change what they are—what changes about them is only where they are. Their change is local motion—that is, they change only in place.

What kind of local motion is most like staying the same, staying in the same place, standing still? The motion that we speak of should recur, be periodic, come round again—be circular. A circle is everywhere self-same; and something always moving on a circle gets nowhere. When a circle rotates in itself, every part is always changing place, yet always returning to the same place, while the whole place occupied always stays the same. And if a circle rotates, not in itself but otherwise—that is, out of itself—then what comes about is a sphere; and if the sphere rotates in itself, then there is, once again as with the circle, rotation in itself. Rotation thus is total motion that is total stand-still. An insightful person might view such rotation as a moving likeness of what is everlasting.

A proponent of the great alternative to the circle might object: A straight line is also everywhere self-same—and it never swerves from going directly ahead, never changes that direction.

But, one might reply, though the circle does not keep on in that direction straight ahead, what changes it from going straight ahead is directed toward what is most inside itself: It does not change its distance from its center. The motion that is most like standing-still should be a bounded motion; it should be self-contained, not directed outward.

An objection might come back: In this circular reasoning, it is claimed that heavenly motion is divine *because* it is circular—and yet it is also claimed that heavenly motion is divine although it is nonuniform.

An answer to this would require at least showing how the appearances could be preserved by complicated devices of wheels off center and wheels upon wheels. Periodicity is primarily circular. From circular motions modern mathematicians generated sine and cosine curves, and then showed that by putting together enough sine and cosine functions, properly selected, you can get as close as you please to *any* periodicity. Thus, if motions show themselves recurrently, even if not uniformly, then we may rest assured that the appearances can be saved by uniform circular motion—if this is all that we insist upon.

Even when Ptolemy was at last deposed, his work was rejected by Copernicus in the very name of Ptolemy's own principle: Copernicus sought to return more radically to uniform circular motion, and in doing so he kept on using epicycles. Copernicus was not so much the beginning of the end as he was the end of the beginning of the story. Only afterward was Kepler driven to some kind of *noncircular* periodicity, making the planetary path an ellipse. And then Descartes, with Newton following, took straight-line elements to be what, put together, made up *all* paths. But let us return now to the story of everlasting return.

We were considering why it might be thought that uniform circular motion is the most unchanging change. In such a change, something new is always happening, while in another respect nothing new ever happens. It might with equal suitability be called stand-still that changes or change that stands still. It is a whole that combines extremes of sameness and difference.

We begin to get some glimpse of why it was said by men of old that

love for wisdom grows out of staring at the stars. The primary astronomical concern was the change which is only locomotion, and which is periodic. Astronomy's first concern was what stands still in change. And it considered this in what was seen as comprehensive, what was all-inclusive by surrounding everything, what ultimately bounded and thus made a whole of everything within—and which itself had parts which were so easily seen to be in order, yet so difficult to put together, that wonder was provoked, and, with it, thought.

The greatest motions show themselves as circular. They invite us to see other motions as lofty ones composed of circles, and lowly ones contained by circles.

Astronomy, which fits moving sights together, is a counterpart to harmony, the study which fits together sounds that move us. In the study of harmony, pitches on a scale are associated with lengths of strings. Mathematical physics arose among the Greeks when it was discovered that fitting sounds together correlates with relating the numbers that come from measuring the stretched-out strings that are plucked to give the sounds. Pitch, in some sense, is recurrent, and this recurrence is related to relations among the numbers that are measurements of strings—but, unlike the stars in their courses, sounds and strings don't trace out circles.

Order and measure may be found in songs—or even in colored beads upon a string—but these do not call forth from us what the starry dance above calls forth, with its numbers and its circles. That's why that show up there, that dancing on the ceiling of the world, seemed to men of old to be the school of humanity. The cosmic dance-show was just right for training us in seeing patterns while we're counting time. Like some divine gift, things up there were both simple and complex enough to attract and hold attention—and thus to turn humanity toward loving wisdom. □

This article is extracted from Cosmic Views and Classic Suppositions, to be published by Rutgers University Press as part of the Masterworks of Discovery series of guidebooks for the study of great texts in the sciences. Harvey Flaumenhaft is general editor of the series and the author as well of the series guide on texts of classical geometry, No Royal Road.

Visit to the Children's Hospital (Käthe Kollwitz).



MEDICINE

BY DIANA PABST

and the Humanities

WHEN CHRISTOPHER Nolan was born with cerebral palsy twenty-five years ago, the prognosis was a lifetime of mental retardation. None of his doctors saw much hope that he would lead a normal life, much less write a couple of

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compelling books about the experience of chronic illness.

And yet last spring, for ten weeks, a group of faculty at Pennsylvania State University's College of Medicine in Hershey met in a seminar titled "Chronic Illness and the Self" to discuss Nolan's works, among others. *Dam-Burst of Dreams* (1981) is a collection of Nolan's poems and short

prose, published when he was fifteen, and *Under the Eye of the Clock* (1987) is an autobiographical novel. Both works articulate his deep emotions of love, loss, isolation, participation, grief, and celebration. He wrote by picking out letters on a typewriter with a stick attached to his forehead while his mother supported his head in her hands.

According to seminar leader David Barnard, professor and acting chairman of the Department of the Humanities at the College of Medicine, one physician in the group, who saw himself as a responsible and thorough practitioner, expressed doubt that he would have "caught what was there" in the boy's mind had he been the attending physician. Another marveled at the incredible dedication of the boy's mother and wondered aloud whether he himself would be capable of such self-sacrifice.

"A disability, while at the forefront of physician concerns at the hospital, is only part of the patient's total life," Barnard says. "There is not much the physician can do to change the nature of a disability, but what's important is how the patient gets on with life. If you're going to be helpful, you need to hear from the patient: How does this affect you? How does your world change? The answer is different for everybody."

Barnard is project director of a seminar program, supported by the National Endowment for the Humanities, designed to enable medical school faculty to step back from their teaching and their own practices and explore aspects of medical treatment through readings in the humanities. With such reflection, they may be able to transmit to their students—tomorrow's doctors—some leavening insights about the human dimensions of their work in a world in which patients are more and more being left to the care of machines. Two humanities seminars for the medical faculty were held last year, and four more are planned over the next two years. Future topics include "Disease and Modern American Culture," "Suffering and Hope," "Physician/Writers," and "Philosophy of Science and Medicine."

With the aging of the population, the projected increase in multiple infirmities and illnesses, and the increased emphasis on technology-intensive interventions, the seminars are intended to call attention to patient experiences and emotions that

may be overlooked by physicians. Faced with the need to master complex medical knowledge and expertise, physicians today must guard against losing touch with the patient as a person.

"When we think about suffering and loss and disability, we're dealing with an area of human experience that doesn't come randomly but is shaped by religious experience, psychological history, family context, and cultural milieu," says Barnard. "As a result, everyone's suffering is of a certain texture or coloration." Although the tension between working with a patient as a person and as a clinical case is an old one, Barnard says, every generation of doctors has to wrestle with finding a balance in order to optimize their restorative powers.

These faculty seminars are an outgrowth of a pioneering program at Penn State that integrates humanities instruction with medical education. When the medical school opened its doors in 1967, its founder, Dr. George T. Harrell, saw an opportunity to apply systematically the humanistic tradition of medicine that dates from Hippocrates and other early physician-philosophers who viewed medicine as a study of the total person in his or her environment. Acting on his belief that medical practice must be based on an understanding of a patient's personal and social context, Harrell insisted that the new medical school incorporate a behavioral sciences department, a humanities department, and an emphasis on family medicine. It was the first medical school in the nation to establish a Department of Humanities alongside the basic science and clinical programs, with a faculty of six representing the disciplines of literature, history, religious studies, and philosophy. The College of Medicine received NEH funding to help develop and later expand the humanities program to its present level.

Following Penn State's example, many other medical schools have also adopted formal instruction in ethics and the humanities. The trend is the

result of growing concern that the increasing emphasis on medical technology and the need to keep abreast of it educationally threaten to preempt medicine's traditional concern for human values.

The humanities program at Penn State's College of Medicine differs from most other such programs in its broad vision and scope. In many cases, medical ethics is taught in a single isolated course or as a series of lectures injected into standard medical school classes. But at the Penn State medical school, students are required to take at least two humanities courses, out of some fifteen offered by the school's humanities department, in their first two years. Unlike the large lecture format characteristic of most basic science teaching in medical school, these humanities courses are organized as small group seminars limited to sixteen students each. Readings in philosophy, psychology, literature, religion, and other disciplines are chosen to help students develop critical awareness of the underlying values and assumptions in the biomedical sciences, empathy toward patients, moral reasoning, and an understanding of the social and cultural contexts of illness and medical care. Among the topics covered are religious and spiritual dimensions of medicine and healing, ethical issues, views of health and disease in American society, the mind/body problem, and the art of practicing medicine. During their residencies, students also meet regularly with humanities and clinical faculty to discuss ethical issues they confront in their work with patients.

The new faculty seminars are intended in part to make clinical and scientific colleagues more effective collaborators in humanities teaching and to stimulate them to incorporate humanities perspectives in their own teaching. Extensive discussion between humanities and medical faculty in these seminars should also generate ideas for humanities courses for students, suggest new topics of research in the area of physician-patient rela-



The Consultation (Italian school, 16th century).

A New Endeavor with the Sciences

THE ENDOWMENT is joining the National Science Foundation (NSF) and the Department of Education's Fund for the Improvement of Post-secondary Education (FIPSE) in a new grant program to help colleges and universities develop undergraduate courses that link the sciences and the humanities.

"The new grants will explore connections between the humanities, the natural sciences, and the social sciences, and will help make these disciplines more accessible to a broader range of students," says NEH Deputy Chairman Celeste Colgan.

The three federal agencies are calling for proposals that promote

scientific literacy and humanistic inquiry among students, include multidisciplinary collaboration among faculty, and can serve as models for colleges and universities nationwide.

The Endowment, NSF, and FIPSE plan to award a total of \$1 million for five to eight grants in fiscal year 1992 and \$1.8 million for as many as fifteen grants annually in the next three years. All three partner agencies will review applications.

The deadline for the program's first year is April 1, 1992, with funded projects beginning in fall 1992. For more information, contact the Division of Education Programs, NEH, Room 302, 1100 Pennsylvania Avenue, N.W., Washington, D.C. 20506.

—Constance Burr

tions, and point to new directions for the humanities program as a whole.

One challenge for the faculty seminar program is scheduling. Medical school teaching and clinical responsibilities are so rigorous that faculty do not have even a single lunch hour free; these duties can extend well into evening hours. Although last spring's

medical ethics seminar met only once a week from 5:30 to 7 P.M., physicians in the class were frequently summoned by beepers. One participant, a transplant surgeon, was able to attend only one session because he had to travel regularly to pick up donated organs. Philosophy professor K. Danner Clouser says the interruptions made it

difficult for him as a teacher to develop some continuity of ideas.

Early in the seminar, Clouser asked participants to select topics they were most interested in discussing. Although they agreed on four—the doctor-patient relationship, abatement of treatment, allocation of resources, and moral theory—Clouser says that the latter was of primary concern because of the physicians' desire to acquire some kind of structural framework for considering ethical issues. "They want to be consistent in ethical decision making instead of just making it up as they go along," Clouser says.

The humanities department plans to survey the physicians who completed the two faculty seminars last year to learn what value the studies had for them in their personal and professional lives. According to David Barnard, one commonly expressed regret is the lack of time to reflect on ethical and humanistic issues. On the positive side, he adds, some of the physicians have expressed satisfaction at "seeing the light go on" as they make connections with their patients.

Barnard says the physicians in his seminar on chronic illness represented nearly a dozen medical specialties. This interdisciplinary nature brought a wide range of experience and perspectives to discussions of the various issues. For his part, Barnard found the seminar stimulating because it centered on real situations faced by experienced clinicians. This rooting of philosophical questions in practical, day-to-day medical concerns is exactly what the seminars are designed to do, says Barnard. "It gives the physicians a chance to refresh and deepen what they're already doing with patients." □

To support a series of seminars enabling medical faculty to incorporate humanities perspectives and works in their teaching, Pennsylvania State University's Hershey Medical Center received \$77,000 in outright funds from the Higher Education program of the Division of Education Programs.

Harold K. Skramstad, Jr.

History That Does Work In The World

MOST PEOPLE THINK of history museums as places for documenting and preserving the past, as centers for scholarly research, and as forums for public education. But for Harold K. Skramstad, Jr., president of the Henry Ford Museum & Greenfield Village in Dearborn, Michigan, museums are potentially much more than the sum of their parts.

History museums, he says, are capable of becoming primary value-giving institutions in American society: "Lacking the traditional sanctions of the church or a king or someone who has a divine right to tell you what you must think, it redounds to the humanities to help people in a democratic and secular society extrapolate values and commonalities from the past that sustain one's life in the world. And increasingly, museums are going to play an integrative and mediating role in that process."

What gives history museums their special power, says Skramstad, is their experiential mode of communication. Through a carefully planned presentation of objects in context, museums can shape experiences for visitors, allowing them to make connections across space and time. "There are certain values in human experience that tend to resonate throughout history, and museums can evoke in visitors a sense of how changes and continuities in these values have shaped their personal present," he says. "This is a fundamentally integrative experience in a world in which the authority of the church, the family, and the schools has eroded away."

Henry Ford Museum's recent exhibition, "The Automobile in American Life," is an example of this evocative structuring of space. Rather than attempting to present the history of cars, Skramstad says, it focused on the experience of roadside architecture,

including an original McDonald's arch and an original Texaco station. "It shifted the emphasis from a boring emphasis on cars to a thought-provoking look at their impact on society. People were amazed to find out that one of every six people in the United States is employed in organizations that have grown up in response to the automobile."

Henry Ford Museum, with its twelve acres of exhibits, and Greenfield Village, a seventy-acre site containing eighty historic structures, are particularly well equipped to show the resonance of the past. The museum houses one of the world's premier collections of power and industrial artifacts and includes exhibitions on agriculture and industry, leisure and entertainment, domestic life, and transportation and communication. Among the structures transplanted in Greenfield Village are an 1840s plantation house from tidewater Maryland; a turn-of-the-century Ohio farm; Thomas Edison's Menlo Park, New Jersey, laboratory in which he invented the light bulb; and the Wright brothers' Dayton, Ohio, bicycle shop in which they built their first airplane.

"It's conventional wisdom in this field that one should always leave things on their original site," says Skramstad. "While that may have some validity, by gathering things from around the United States we can help visitors see things they haven't seen before. Just as in a classroom you can bring together ideas not normally associated with each other to spark new insights, visitors here can make connections they couldn't make if the objects were in situ."

The museum is currently preparing, with NEH support, an exhibition titled "Made in America," which is scheduled to open late in 1992. Focusing on questions of productivity, product quality, quality of work-life, and environmental responsibility, the exhibition seeks to address



Courtesy of Henry Ford Museum & Greenfield Village

public concerns about the social and environmental consequences of technological decisions.

"The public wants to make informed decisions as voters, investors, and consumers," Skramstad says. "By helping people see the historical relationships between values, social choices, and industrial systems, this exhibition is an example of what historian Carl Becker called 'history that does work in the world.' It shapes experiences and encourages reflection that can actually have an impact on social policy."

In its service to the community, Henry Ford Museum & Greenfield Village, in conjunction with the University of Michigan at Dearborn, has adopted an elementary school in inner-city Detroit. "It's made up of an entirely at-risk school population. We try to enlarge the range of fundamental affective experiences of these kids, many of whom have never been outside their own neighborhood. Some become apprenticed in our various trade and craft programs. Others have experiences thinking of themselves as innovators at Edison's laboratory or the Wright brothers' shop."

Not all history museums can attract 1.2 million visitors a year, as does Henry Ford Museum & Greenfield Village. But Skramstad does not take that level of public attention lightly: "The purpose of our institution, I think, is to enlarge the richness of human possibility, in the end—a possibility informed very much by the experience of people who have gone before." □

—James S. Turner

CALENDAR

January ♦ February



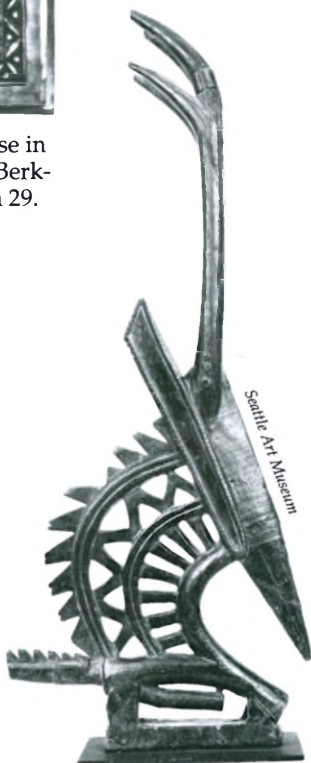
Museum of Fine Arts, Boston

"The Here and the Hereafter: Images of Paradise in Islamic Art" is at the University Art Museum, Berkeley, California, from January 1 through March 29.



Seattle Art Museum

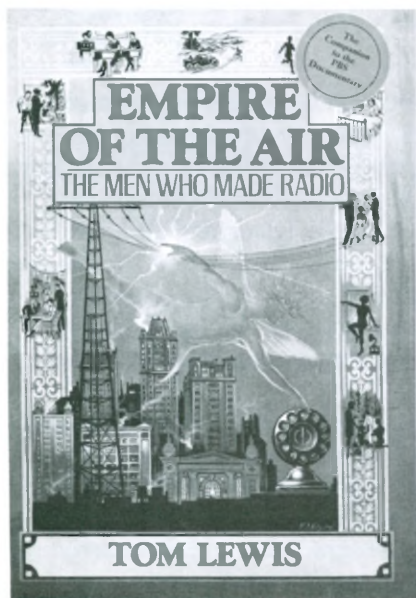
A sixteenth-century monk's portable shrine of lacquer and wood from Japan is on display at the Seattle Art Museum's recently reinstalled Asian art collections.



Seattle Art Museum

"Confucianism and Late Choson Korea, 17th to 19th Centuries" will be discussed at a conference January 5-8 at the University of California, Los Angeles.

"Empire of the Air: The Men Who Made Radio" is Ken Burns's two-hour film on radio's early pioneers, who developed the medium and shaped an era. It airs on PBS January 29.



Edward Burlingame Books

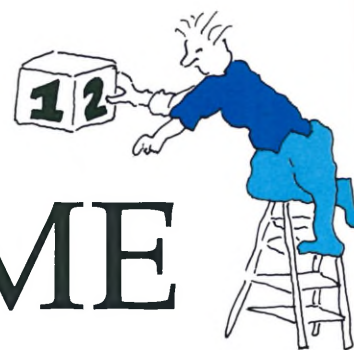
A male antelope headdress carved in wood from Mali is part of the permanent collection of the Seattle Art Museum, which reinstalled "Arts of Africa, Oceania, and the Americas" in December.



Museum of International Folk Art

Holy week ceremony with Judío figures in Mochicahui, Sinaloa, Mexico. "Behind the Mask in Mexico" continues at the Heard Museum in Phoenix, Arizona, through August 31.

THE NUMBERS GAME



New Humanities Ph.D.'s Jump 7 Percent Largest Increase Since 1970s

BY JEFFREY THOMAS

MORE HUMANITIES DOCTORATES were awarded in 1989-90 than any previous year in the last decade, according to the Survey of Earned Doctorates.

The figure was 3,820, a 7 percent increase over the previous year's 3,554. The current number, however, is still below the peak academic year of 1973, when 5,364 humanities Ph.D.'s were conferred. The annual survey, supported by NEH, is conducted by the National Research Council. It collects information on racial/ethnic group, citizenship, field of study, sources of financial support in graduate school, and postgraduation plans.

In 1989-90, 181 universities awarded doctorates in the humanities, with twenty-five of the 181 accounting for 48 percent of the degrees (Figure 1). The University of California at Berkeley led the way with 108 doctorates. The University of Chicago conferred the greatest number in the field of history (28), the University of Washington the greatest number in English (25), and Harvard University the greatest number in foreign languages and literatures (28).

The overall increase in Ph.D.'s was not distributed evenly across the various humanities disciplines (Figure 2). On the increase were the number of doctorates in foreign languages (up 18 percent over the previous year), history (up 14 percent), and English (up 11 percent); on the decrease were the number of Ph.D.'s in linguistics (down 11 percent from the previous year), philosophy (down 10 percent), and art history (down 7 percent).

Since 1980, the number of humanities doctorates awarded to women has approached that for men. This pattern, however, is more a function of the declining number of men being awarded doctorates than of increases in the number of women. Women outnumber men in many humanities disciplines, with the differences being most pronounced in art history and criticism, linguistics, and languages and literatures. Conversely, disciplines such as philosophy, history, and religion continue to draw greater proportions of men.

Jeffrey Thomas is assistant director for humanities studies in the Office of Planning and Budget.

FIGURE 1: Institutions Conferring the Greatest Number of Doctorates in the Humanities, 1989-1990 (Ranked)

INSTITUTION	TOTAL	Field of Doctorate			
		History	English & American Language & Literature	Foreign Literature	Other Humanities
California, Berkeley	108	22	21	22	43
New York University	97	12	8	15	62
California, Los Angeles	96	16	9	23	48
Harvard	93	21	7	28	37
Michigan	92	10	20	13	49
Columbia	91	18	20	11	42
Wisconsin, Madison	91	19	16	21	35
Yale	90	15	11	21	43
Texas, Austin	90	8	14	11	57
Washington	89	7	25	17	40
Chicago	86	28	9	10	39
Stanford	75	18	14	11	32
Pennsylvania	70	9	13	16	32
Indiana, Bloomington	70	9	17	16	28
Princeton	58	13	9	13	23
Minnesota, Minneapolis	58	7	10	9	32
Iowa	57	3	13	7	34
Illinois, Urbana-Champaign	56	5	8	12	31
Cuny Grad. School & Univ. Ctr.	54	5	6	8	35
Ohio State	54	8	10	9	27
Virginia	54	14	16	12	12
Cornell	49	9	12	8	20
Rochester	48	3	6	--	39
Northwestern	47	6	6	2	33
North Carolina, Chapel Hill	47	8	14	10	15

Although minority representation among the ranks of new doctorates remains relatively small, the humanities appear to be attracting greater proportions of racial and ethnic minorities than are the science and engineering fields. The proportion of blacks, Hispanics, and native Americans awarded humanities doctorates is greater than their corresponding proportions in the life sciences, physical sciences, and engineering. Only among Asians was there a greater propensity to earn science and engineering doctorates.

Although the percentage of Ph.D.'s pursuing academic careers declined in the 1970s, by the end of the eighties the decline had reversed (Figure 3). Ph.D.'s in English were the most likely to take a position in a college or university (with nine in ten graduates in the most recent cohort doing so), while historians were somewhat more likely to look elsewhere. □

FIGURE 2: Number of Doctorate Recipients in the Humanities, by Fine Field, 1980-1990

<i>Year of Doctorate:</i>	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
HUMANITIES	3872	3751	3561	3500	3536	3429	3460	3500	3556	3554	3820
American Studies	81	87	64	99	76	87	68	75	70	76	72
Archaeology	26	28	21	30	31	24	28	31	23	26	22
Art History and Criticism	144	158	138	150	141	137	126	143	134	145	135
Classics	54	62	60	44	57	44	51	55	56	51	59
Comparative Literature	107	132	118	124	133	133	101	121	139	103	97
History, American	285	228	271	224	240	176	197	198	209	206	212
History, European	196	166	158	168	150	143	121	121	127	107	151
History of Science	21	26	29	13	24	23	24	25	22	20	26
History, General	-	-	-	58	76	85	83	94	103	85	110
History, Other	243	272	234	153	127	116	138	148	142	120	112
Humanities, General	12	23	28	17	22	27	23	23	25	19	28
Humanities, Other	46	46	52	50	44	59	68	58	61	61	74
Language and Literature	1487	1396	1260	1219	1225	1164	1164	1112	1147	1153	1308
American	209	145	154	173	190	204	215	190	186	192	229
English	743	675	616	542	543	525	504	478	531	528	567
French	162	167	119	121	108	86	102	103	101	106	123
German	99	88	74	77	80	62	79	77	76	73	78
Italian	10	16	17	22	17	14	15	21	14	20	25
Spanish	145	184	177	161	144	145	122	133	137	134	173
Russian	32	28	24	24	33	28	28	19	13	13	19
Slavic	-	-	-	9	12	10	8	5	5	7	7
Chinese	-	-	-	16	13	14	13	13	12	9	16
Japanese	-	-	-	5	12	13	9	9	6	13	9
Hebrew	-	-	-	11	13	9	11	13	12	11	14
Arabic	-	-	-	8	8	5	9	8	14	6	7
Other Languages	87	93	79	50	52	49	49	43	40	41	41
Letters, General	-	-	-	3	14	13	19	25	16	13	19
Letters, Other	-	-	1	19	31	26	37	39	43	60	52
Linguistics	182	176	191	164	160	176	189	199	166	188	167
Music	402	368	402	391	445	447	476	499	505	522	571
Philosophy	255	277	251	241	215	238	247	233	222	270	243
Religion	173	165	151	177	183	181	182	182	217	215	218
Speech and Debate	64	38	38	48	41	38	30	37	37	35	38
Theatre	94	103	94	108	101	92	88	82	92	79	106

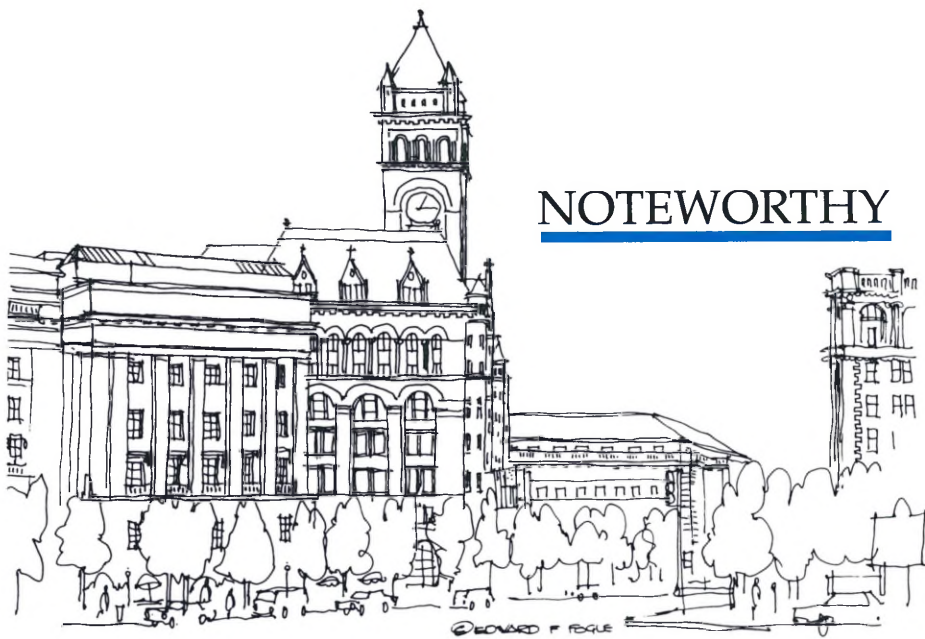
Source: Summary Report 1990, National Research Council

FIGURE 3: Employment Sector Commitments of Doctorate Recipients, by Gender and Field of Doctorate, 1961-1990

(All citizenship groups, definite plans only)

	<i>Year of Doctorate</i>							<i>Year of Doctorate</i>					
	1961-1965	1966-1970	1971-1975	1976-1980	1981-1985	1986-1990		1961-1965	1966-1970	1971-1975	1976-1980	1981-1985	1986-1990
TOTAL, MEN AND WOMEN													
TOTAL ALL FIELDS							Eng/Amer. Lang. & Lit.						
Academe	58.6	64.0	64.9	57.2	51.6	52.5	Academe	92.0	94.8	94.3	86.7	86.4	89.5
Industry/Self-employed	14.8	14.4	11.5	14.6	19.2	20.1	Industry/Self-employed	0.8	0.3	1.6	4.9	5.4	4.0
Government	7.0	7.8	12.3	13.3	12.3	11.1	Government	0.1	0.3	1.1	2.1	1.8	1.1
Elementary/Secondary							Elementary/Secondary,						
Nonprofit, Other	19.6	13.7	11.4	14.9	16.9	16.4	Nonprofit, Other	7.1	4.6	2.9	6.4	6.3	5.4
HUMANITIES							Foreign Languages						
Academe	86.7	91.2	90.7	82.4	79.3	81.2	Academe	92.8	94.8	93.1	85.3	83.7	87.6
Industry/Self-employed	0.9	0.6	1.6	4.3	6.3	5.5	Industry/Self-employed	0.0	0.2	0.9	3.8	5.0	4.5
Government	1.2	1.2	2.2	4.0	3.9	3.2	Government	0.6	0.6	1.5	2.5	3.5	1.6
Elementary/Secondary,							Elementary/Secondary,						
Nonprofit, Other	11.2	7.1	5.5	9.3	10.5	10.2	Nonprofit, Other	6.6	4.4	4.5	8.4	7.8	6.4
History							Other Humanities						
Academe	86.1	90.7	87.3	74.1	68.8	75.3	Academe	80.0	85.9	87.5	82.0	77.5	76.4
Industry/Self-employed	0.8	0.4	1.8	4.7	6.9	5.1	Industry/Self-employed	1.3	1.0	1.7	4.1	6.7	6.6
Government	2.5	2.6	5.1	9.6	10.0	8.5	Government	1.6	1.2	1.7	2.8	2.7	2.9
Elementary/Secondary,							Elementary/Secondary,						
Nonprofit, Other	10.6	6.3	5.8	11.6	14.3	11.1	Nonprofit, Other	17.2	11.9	9.1	11.2	13.1	14.1
Philosophy													
Academe	89.6	92.5	94.3	88.2	83.9	87.0							
Industry/Self-employed	1.4	0.7	2.2	4.2	7.8	5.3							
Government	0.5	0.6	0.8	2.8	3.5	2.3							
Elementary/Secondary,													
Nonprofit, Other	8.4	6.1	2.7	4.8	4.8	5.4							

Source: Unpublished tabulations from the National Research Council's Survey of Earned Doctorates.



NOTEWORTHY

Old Main Rededicated

An academic procession, carillon, jazz concert, and the Razorback band regaled guests at the University of Arkansas's Old Main rededication ceremony this past fall in Fayetteville.

An NEH challenge grant supported the renovation of Old Main, which was built in the 1870s. Now serving as the campus center devoted to the humanities, it is the historic home of the J. William Fulbright College of Arts and Sciences, named for the former U.S. senator from the state and legislative originator of the Fulbright



Old Main, University of Arkansas.

Scholar program. Fulbright was among those speaking at the occasion.

To restore the bricks and mortar of Old Main, Arkansans more than doubled the campaign goal of \$2,485,000, raising \$5,557,000. Both the university's undergraduate humanities program and the Center for Arkansas and Regional Studies are housed in the building.

A Kaleidoscope of Awards

Passages to India, a ten-part series of radio documentaries on Indian culture and society, won the 1991 Corporation for Public Broadcasting gold medal for best documentary. Written by Julian Crandall Hollick and produced by Independent Broadcasting Associates, Inc., the NEH-supported project first aired in February 1990.

"A Kaleidoscope of Cultures," the first program in the series, won Best of Festival Grand Award for best program, gold medals for best sound and best educational program, and a silver for best scriptwriting. Individual programs captured gold, silver, bronze, and Cindy Awards from the Association of Visual Communicators.

The series portrays ancient and contemporary India through on-site reporting, musical performances, and dramatized readings of philosophy, poetry, religion, and literature.

The Tenement as Museum

"For seventy-two years immigrants used 97 Orchard Street as a launching pad to American life," says Ruth Abrams, director of the Lower East Side Tenement Museum in Manhattan. Located in the middle of the still-teeming immigrant district, this five-story tenement was home to 10,000 immigrants from twenty-five countries over the years. The building was condemned in 1935 and its four upper floors were sealed. It was transformed into a museum on the history of immigrant life in 1988.

A current exhibition, "Meddling with Peddling: The Pushcart Wars, 1906-1941," addresses ethnic diversity, disparities of wealth, political participation, competition, and economic mobility.

The Tenement Museum offers a verisimilitude that many museums struggle—often at great expense—to achieve. In its current dilapidated state, the 25-foot-wide by 68-foot-deep building is a tangible record of urban history.

"This is the first time anyone has tried to preserve a tenement, but it won't be the last. Every urban center needs one," Abrams maintains, "to interpret the history of immigrant pioneers on the municipal frontier."

Recreations of households from six immigrant groups provide a frame-



© Photo by Wynanda Deroo

Interior of 97 Orchard Street.

work for visitors to explore a family's or individual's place of origin, values, religion, work, education, diet, and health. NEH-supported walking tours introduce markets, houses of worship, and places of business and entertainment important to the life of the particular community.

The Tenement Museum has received an NEH self-study grant to synthesize historical inquiry on immigrant life, expand programs, and identify the tenement's current role as artifact, as well as its place in the past. "The main story is attitudinal," Abrams says, "how people got along with alien neighbors, how they found jobs using their native language, and how they survived."

Interpreting 97 Orchard Street itself—its twelve separate apartments, dim hallways, hall toilets, and backyard—represents an equal challenge for historians, museum planners, curators, and preservation specialists.

—Constance Burr

HUMANITIES GUIDE

FOR THOSE WHO ARE THINKING OF APPLYING FOR AN NEH GRANT

IN HOUSTON, PUBLIC school teachers meet with faculty from the University of Houston to discuss classic and contemporary texts in American literature. In South Carolina, three universities are cooperating in a statewide project in which teachers from rural areas study southern history and literature over three years. And in Virginia, teachers from throughout the state convene with scholars from the University of Virginia in several institutes, workshops, and seminars on various topics such as Greek tragedy and new interpretations in American history.

These collaborative projects, funded through the Division of Education Programs, promote ongoing partnerships between schools and institutions of higher learning, as well as libraries, museums, and repertory theaters. While their form and activities may vary, they all involve an ongoing dialogue between teachers and scholars in the humanities.

Most collaborative projects involve extensive activities throughout the year. These might include summer institutes, follow-up site visits by scholars to local schools, monthly seminars for the teachers on related topics in the humanities, visits to museums, attendance at plays or other cultural events, workshops or curriculum sessions to share teaching strategies and the implementation of lesson plans, and the writing of substantive curriculum units. The form that a project takes reflects the particular needs of the teachers.

In the project at the University of Virginia, scholars travel throughout the state during the school year, conducting seminars and workshops in history, literature, classics, art, and foreign languages. In Maine, teachers participating in the Portland-Falmouth Teachers Academy hold several sessions at a local art museum. The Yale-New Haven Teachers Institute does not have a summer institute component. Instead, fifty teachers each year choose from five different seminars

Michael L. Lanza is a program officer in the Division of Education Programs.

Collaborative Projects for Teachers

BY MICHAEL L. LANZA

and meet from March to July to deepen their knowledge in a subject area and to research and write detailed curriculum units under the guidance of senior faculty at Yale University. This local effort is planned and governed by the New Haven teachers, who choose the subjects of the seminars they wish to see offered each year. The Yale-New Haven fellows have studied American regions and regionalism, the family in art and material culture, recent American poetry, and African American autobiography.

Because collaborative projects include a wide variety of activities over a prolonged period (a typical grant runs from two to three years), they are usually limited to a particular locality or state. The project in Houston, for example, includes only Houston schoolteachers. On the other hand, similar projects hosted by the University of Virginia, the Academic and Cultural Collaborative of Maine, the University of South Carolina, and the University of Maryland are statewide efforts, with extensive outreach activities carried out in various locations throughout each state.

Collaborative projects benefit all partners. Teachers take the initiative to advance their own professional development and to deepen their knowledge of the subjects they teach.

School systems can boast of a well-prepared corps of teachers who, in turn, bring a love of learning to their students. And scholars learn more about the concerns and problems facing teachers and are better able to help in addressing them. A scholar who led a Yale seminar admitted, "I have no doubt that teaching in the Institute has contributed both to my scholarship and to my regular teaching at Yale."

After participating in one of the Virginia foreign language institutes, one teacher declared, "Never, in all my twenty-seven years of teaching French in the public schools, have I had the privilege of being exposed to such stimulating and exciting sessions!" One New Haven teacher admitted that the Yale seminar convinced him to stay in teaching: "The confidence, knowledge, and experience I have gained as a participant make me certain I will continue in my profession, rather than quit."

The Endowment supports collaborative projects at various stages in their evolution. Projects may begin with a series of preliminary meetings between members of an academic department at a local university and teachers in the same discipline from the adjacent school district. This can then lead to the development of multifaceted plans to involve senior faculty from various humanities disciplines in an endeavor to reach over several years a larger number of teachers in a particular school or across the entire state. Or funding through an NEH challenge grant could help to endow an ongoing collaborative effort for that final phase when the project has a track record and institutional commitments from the collaborating partners to continue its work on a permanent basis.

Applicants should contact an NEH program officer several months before the deadlines (December 15 and March 15) to discuss their proposals. Application forms and further information can be obtained from the Division of Education Programs, Room 302, 1100 Pennsylvania Avenue, N.W., Washington, D.C. 20506, 202/786-0377.

RECENT NEH GRANTS

BY DISCIPLINE

Archaeology & Anthropology

Educational Broadcasting Corporation, NYC; Rhoda S. Grauer: \$413,225. Production and postproduction of "Dance at Court," a program in an eight-part documentary series exploring the function and aesthetics of dance throughout the world. **GN**

U. of California Press, Berkeley; Lynne E. Withey: \$7,000. Publication of an atlas presenting for the first time an aerial view of the 44 major archaeological sites on Crete, including palaces, tombs, and settlements from the Bronze Age through the Greek and Roman periods. **RP**

U. of Illinois Press, Urbana; Judith M. McCulloh: \$14,000. Publication of four volumes of English-language folktales gathered in Newfoundland. **RP**

U. of Wisconsin, Madison; Jack Kugelmass: \$125,000. A five-week summer institute for 25 college and university faculty members, who will study folk narratives and the approaches used by folklorists, anthropologists, historians, and comparative literature scholars. **EH**

Arts—History & Criticism

651/Kings Majestic Corporation, Brooklyn, NY; Leonard Goines: \$60,400. A series of lectures and workshops on the history of American jazz and blues. **GP**

92nd Street YM-YWHA, NYC; Raymond T. Grant: \$45,400 OR; \$10,000 FM. A symposium, publication, gallery exhibition, and pre-concert lectures on the life and works of Franz Schubert. **GP**

A-R Editions, Inc., Madison, WI; Christopher C. Hill: \$7,000. Publication of a volume of instrumental chamber music by John Jenkins, the 17th-century English composer. **RP**

American Dance Festival, Inc., Durham, NC; Gerald E. Myers: \$80,400 OR; \$7,000 FM. A series of nationwide public programs, in conjunction with a tour of performances, examining African American contributions to the evolution of modern concert dance. **GP**

Architectural History Foundation, NYC; Karen W. Banks: \$7,000. Publication of a study of the Gothic cathedral of Amiens. **RP**

Benedict College, Columbia, SC; William T. Dargan: \$15,600. Planning for a symposium focusing on the congregational singing tradition among African Americans. **GP**

Boston College, Chestnut Hill, MA; Anne D. Shapiro: \$150,000. A six-week institute for 25

Some of the items in this list are offers, not final awards. *Grant amounts* in each listing are designated as FM (Federal Match) and OR (Outright Funds). *Division and program* are designated by the two-letter code at the end of each listing.

Division of Education Programs

- EH Higher Education in the Humanities
- ES Elementary and Secondary Education in the Humanities

Division of Public Programs

- GN Humanities Projects in Media
- GM Humanities Projects in Museums and Historical Organizations
- GP Public Humanities Projects
- GL Humanities Programs in Libraries and Archives

Division of Research Programs

- RO Interpretive Research Projects
- RX Conferences
- RH Humanities, Science and Technology
- RP Publication Subvention
- RA Centers for Advanced Study
- RI International Research
- RT Tools
- RE Editions
- RL Translations
- RC Access

Division of Preservation and Access

- PS Preservation
- PS U.S. Newspaper Program
- PH National Heritage Preservation Program

Office of Challenge Grants

- CG Challenge Grants

college teachers under the auspices of the College Music Society on neglected aspects of American music. **EH**

CT Players Association, Inc./Long Wharf Theatre, New Haven, CT; James D. Luse: \$60,400 OR; \$10,000 FM. Postperformance forums and publications on the historical, cultural, and literary contexts for plays produced at a regional theater. **GP**

Cambridge U. Press, NYC; Julie L. Greenblatt: \$7,000. Publication of a study of scenography (scene, costume, and lighting design) used in 20th-century productions of Shakespeare's plays in America, Great Britain, and Europe. **RP**

Columbia U., NYC; Vidya J. Dehejia: \$178,194. A six-week summer institute for 25 college teachers on the sacred and secular art of India. **EH**

Harvard U., Cambridge, MA; Robert Scanlan: \$50,600 OR; \$25,000 FM. Symposia and publi-

cations on themes emerging from the productions mounted at a regional theater. **GP**

Harvard U. Press, Cambridge, MA; Margaretta L. Fulton: \$7,000. Publication of a general history of musical thought in the late baroque and early classical periods. **RP**

New York Foundation for the Arts, NYC; Daria E. Sommers: \$19,776. Planning of a one-hour documentary film on American composer Charles Ives. **GN**

Northeast Historic Film, Blue Hill Falls, ME; Karan Sheldon: \$15,700. Planning for an exhibition on moviegoing in its New England community context. **GP**

Portland Stage Company, ME; Richard Hamburger: \$35,700. Discussion forums and publications on issues emerging from plays produced at a regional theater. **GP**

Southern Illinois U. Press, Carbondale; Kenney Withers: \$14,000. Publication of the final two volumes in a 16-volume biographical dictionary of actors, actresses, musicians, and others who worked in London theaters, opera houses, and concert halls from 1660 to 1800. **RP**

Syracuse U. Press, NY; Charles Backus: \$7,000. Publication of the first comprehensive study of Winslow Homer's illustrations of prose and poetry published in books and literary magazines. **RP**

U. of California Press, Berkeley; Lynne E. Withey: \$7,000. Publication of a study of the Chapel of Eleonora in the Palazzo Vecchio in Florence, decorated by the Medici court artist, Agnolo Bronzino. **RP**

U. of California Press, Berkeley; Lynne E. Withey: \$7,000. Publication of a study of the influence of Russian folklore on the early music of Igor Stravinsky. **RP**

U. of Chicago Press, IL; Gabriel M. Dotto: \$7,000. Publication of a study of the keyboard sonatas of Joseph Haydn. **RP**

U. of Missouri Press, Columbia; Jane H. Lago: \$7,000. Publication of a study of the Florentine sculptor Bertoldo di Giovanni, a disciple of Donatello, mentor of Michelangelo, and member of the household of Lorenzo de' Medici. **RP**

U. of Notre Dame, IN; Paula Higgins: \$34,518 OR; \$4,000 FM. An international conference on the musical legacy of Renaissance composer Antoine Busnoys. **RX**

University Community Concerts, College Park, MD; Jeffrey C. Mumford: \$35,000 OR; \$10,000 FM. A series of seminars on music history, theory, and criticism, in conjunction with concerts of early, contemporary, and world music. **GP**

Washington Drama Society, Inc./Arena Stage, Washington, DC; Laurence Maslon: \$50,000 OR; \$10,000 FM. Symposia, articles in the theater newsletter, and program notes on themes in the plays produced at a theater. **GP**

Yale U. Press, New Haven, CT; Judy Metro: \$7,000. Publication of a study of American genre painting, including works by artists such as William Sydney Mount and George Caleb Bingham, during the period 1830-60. **RP**



Classics

American School of Classical Studies, NYC; Josiah Ober: \$300,000. An exhibition, catalogue, gallery guide, and educational materials on ancient Athenian democracy and its links to American democracy. **GL**

American School of Classical Studies, NYC; Josiah Ober: \$48,398. An international interdisciplinary conference on the nature of classical Athenian democracy. **RX**



History—Non-U.S.

American Focus, Inc., Washington, DC; Paul R. Wagner: \$796,238. Production of a feature-length documentary film on the history of Irish emigration to America. **GN**

American Library Association, Chicago, IL; Deborah A. Robertson: \$311,460. A traveling panel exhibition and promotional and programmatic material on the impact of the Columbian voyages on European thought. **GL**

California State U., Long Beach; Donald R. Schwartz: \$147,000. A four-week national institute on the Enlightenment for 30 high school teachers of world history. **ES**

Cambridge U. Press, NYC; Julie L. Greenblatt: \$7,000. Publication of a study of literary theory as it was understood in the early Middle Ages. **RP**

Chemeketa Community College, Salem, OR; Marjorie A. Ferry: \$82,700. A one-year development project to enable 20 faculty members to study the European Age of Exploration, 1400-1650, especially encounters between European and Islamic, Japanese, and Aztec cultures. **EH**

Folger Shakespeare Library, Washington, DC; Rachel H. Doggett: \$198,700. An exhibition, interpretive catalogue, lectures, gallery tours, and curriculum materials about how Europeans in the 16th and 17th centuries formed their initial images of the New World. **GL**

Harvard U., Cambridge, MA; Benjamin I. Schwartz: \$25,069. An international conference on the history of communities of Jews who migrated to China between 1100 and 1949. **RX**

Johns Hopkins U. Press, Baltimore, MD; Henry Y. K. Tom: \$7,000. Publication of a comparative study of the "rediscovery of the individual" in six late medieval Italian cities. **RP**

Loyola U., Chicago, IL; Joseph A. Gagliano: \$37,207 OR; \$8,000 FM. An international, interdisciplinary conference on the activities of the Jesuits in the New World in the three centuries after Columbus's contact. **RX**

Mount Holyoke College, South Hadley, MA; Margaret L. Switten: \$98,610. A curriculum materials project to videotape a performance of Jean Renart's *The Romance of the Rose* or of *Guillaume de Dole* and to develop associated materials for teaching medieval romance. **EH**

National Humanities Center, Research Triangle Park, NC; Richard R. Schramm: \$101,269 OR; \$21,700 FM. A three-week national institute for 20 secondary school social studies teachers on the history of colonialism in Latin America, India, and Africa. **ES**

Ohio Wesleyan U., Delaware; James W. Biehl: \$218,720. A regional six-week summer institute on Florentine Renaissance humanism for 35 high school humanities teachers to be held in Columbus, Ohio, and Florence, Italy. **ES**

Princeton U. Press, NJ; Margaret H. Case: \$7,000. Publication of a study of Elizabeth I's reign during the years 1588 to 1603, focusing primarily on the war against Spain, the Irish problem, and the rise of the Earl of Essex. **RP**

Stanford U. Press, CA; Grant Barnes: \$7,000. Publication of a study of the Nahuas of Mexico after the coming of the Spanish. **RP**

U. of Arizona, Tucson; Peter E. Medine: \$150,000. A six-week institute for 24 college faculty members on Milton's *Areopagitica*, *Paradise Lost*, and *Samson Agonistes*. **EH**

U. of California, Los Angeles; Dora B. Weiner: \$26,100. A series of lectures, exhibitions, displays, and brochures on the history of medicine during the Age of Columbus. **GP**

U. of California, Santa Cruz; Charles Hedrick: \$174,460. A six-week summer institute for 25 college and university teachers on Athenian democracy. **EH**

U. of Chicago Press, IL; Alan G. Thomas: \$7,000. Publication of an interdisciplinary study of England's transition in the 16th and 17th centuries from dynasty to nation. **RP**

U. of Kentucky Research Foundation, Lexington; Jeremy D. Popkin: \$38,149 OR; \$1,000 FM. An international, interdisciplinary conference on the role of the communications media in political and social revolutions from the 17th century to the present. **RX**

U. of Minnesota-Twin Cities, Minneapolis; John K. Munholland: \$13,432. An international, interdisciplinary conference on the resurgence of the radical right in post-1945 Europe. **RX**

U. of Oregon, Eugene; David J. Curland: \$127,400. A four-week national institute on the literature and history of modern Mexico for 26 secondary school teachers of Spanish. **EH**

U. of Southern California, Los Angeles; Moshe Lazar: \$32,061 OR; \$15,000 FM. An international conference on the 1492 expulsion of the Jews from Spain. **RX**

U. of Wisconsin Press, Madison; Barbara J. Hanrahan: \$7,000. Publication of a study of how authors of medieval French romances viewed their art. **RP**

Virginia Commonwealth U., Richmond; George E. Munro: \$170,458. A six-week summer institute for 25 college and university teachers on Russian art and material culture, using the collections of the State Hermitage Museum and the Russian State Museum in Leningrad. **EH**

Yale U. Press, New Haven, CT; Judith A. Calvert: \$7,000. Publication of the third of three volumes in an edition of the private journals of British members of Parliament on the eve of the English civil war. **RP**



History—U.S.

Dartmouth College, Hanover, NH; John R. James: \$37,448. Completion of the New Hampshire Newspaper Project by creating catalogue records for approximately 1,800 newspaper titles. **PS**

ETV Endowment of South Carolina, Spartanburg; Daniel B. Polin: \$98,740. Lengthening of a film on George C. Marshall from 60 to 90 minutes. **GN**

George Washington U., Washington, DC; Maurice A. East: \$219,537. A five-week summer institute for 30 social studies teachers from the eastern United States on America's role in post-1945 world affairs. **ES**

GWETA, Inc., Washington, DC; Ken Burns: \$1,500,000 FM. Production of a multipart

television series on baseball, which synthesizes aspects of American history, character, and culture. **GN**

GWETA, Inc., Washington, DC; Tamara E. Robinson: \$90,000. Scripting of a 90-minute documentary on the life and times of Asa Philip Randolph, 1889-1979, labor leader and civil rights activist. **GN**

New England Foundation for the Humanities, Boston, MA; Christine Compston: \$123,280. Reading and discussion programs and publication of an anthology of readings about the Bill of Rights and the Fourteenth Amendment. **GL**

New York Public Library, NYC; Irene M. Percelli: \$58,996. Continuation of the cataloguing of newspapers in the New York Public Library, part of the U.S. Newspaper Program. **PS**

North Texas Public Broadcasting, Inc., Dallas; Patricia P. Perini: \$350,808. Completion of a four-hour film on the political career of Lyndon Baines Johnson. **GN**

U. of Kansas, Lawrence; Donna P. Koepp: \$90,000. Preparation of a checklist and index to all maps that appeared in the U.S. Congressional Serial Set between 1789 and 1969. **RC**

U. of Nebraska Press, Lincoln; Daniel J. Ross: \$7,000. Publication of volume 7 of the journals of the Lewis and Clark expedition, which covers the beginning of the return journey from the Pacific Coast. **RP**

U. of North Carolina Press, Chapel Hill; Lewis A. Bateman: \$7,000. Publication of the fourth of five volumes in a collection of selected and annotated papers that document the role of blacks in the American antislavery movement. **RP**

U. of North Carolina Press, Chapel Hill; Lewis A. Bateman: \$7,000. Publication of the fifth and last volume in a collection of selected and annotated papers that document the role of blacks in the American antislavery movement. **RP**

U. of Oklahoma Press, Norman; John N. Drayton: \$7,000. Publication of a new interpretive history of the American West. **RP**

Utah State U., Logan; F. Ross Peterson: \$37,365. A conference on the history of the American West. **RX**

White House Historical Association, Washington, DC; Bernard R. Meyer: \$150,000 OR; \$25,000 FM. A symposium, monthly discussion programs, a traveling exhibit with education programs, and a publication on the political, social, architectural, and cultural history of the White House. **GP**



Interdisciplinary

American Association of Community and Junior Colleges, Washington, DC; James F. Gollattscheck: \$73,115. A project bringing together foreign language specialists and community college leaders to recommend directions in foreign language teaching in two-year colleges. **EH**

Auburn U., AL; Harry M. Solomon: \$126,792 OR; \$15,000 FM. Two faculty seminars in 1992 and 1993 that will prepare 50 faculty members to teach the first course in a required two-course Great Books sequence. **EH**

Berkshire Community College, Pittsfield, MA; Sandra L. Kurtinitis: \$53,818. A one-year study project for 20 faculty members on 17th-century Puritanism and interpretations of Puritanism in the 19th and 20th centuries. **EH**

Center for Educational Telecommunications, Inc., San Francisco, CA; Loni Ding: \$20,000. Planning for a series of six one-hour television

programs on Asian American history, and writing of two scripts on the Chinese American experience. **GN**

Clinton-Essex-Franklin Library System, Plattsburgh, NY; Diantha D. Schull: \$25,000. Planning for book and video discussions about diversity and shared values in 20th-century America, with training workshops for discussion leaders and a directory of scholars. **GL**

College of the Holy Cross, Worcester, MA; David L. Schaefer: \$190,000. A four-week national institute for 30 high school social studies and Latin teachers on the relationship between classical political thought and the U.S. Constitution. **ES**

Community College Humanities Association, Philadelphia, PA; Lyle E. Linville: \$139,440. A four-week summer institute for 25 college faculty members on archetypal human roles in ancient Greek culture through interdisciplinary study of literature, classics, history, and philosophy. **EH**

Community College Humanities Association, Philadelphia, PA; George L. Scheper: \$162,718. A five-week summer institute for 25 faculty members from two-year and four-year colleges to study major texts from four areas of Latin America in the pre-Columbian and the encounter periods. **EH**

Community College of Philadelphia, PA; Edward Forman: \$80,400. A two-year project enabling faculty members to integrate study of Western and other cultures into a new introductory sequence of courses. **EH**

East Tennessee Historical Society, Knoxville; W. Todd Groce: \$70,650. A two-year series of reading and film discussion programs in 11 senior citizens centers on the changing myths and realities of Appalachia. **GP**

Eastern Kentucky U., Richmond; Bonnie J. Gray: \$102,074. A 16-month development project to strengthen faculty members' expertise in teaching existing honors courses and to establish a mentoring program for new honors program faculty members. **EH**

Eckerd College, St. Petersburg, FL; Lloyd W. Chapin: \$59,975 OR; \$10,000 FM. A two-year curriculum development project including seminars, workshops, and symposia on the cultural heritage of Asia and its connections with that of the West. **EH**

Educational Broadcasting Corporation, NYC; Rhoda Grauer: \$120,000. One script and three treatments for a four-part documentary series on Asian art. **GN**

Franklin Pierce College, Rindge, NH; Richard Weeks: \$68,000. A three-year project to implement a six-course core curriculum focused on the theme of the individual and the community. **EH**

Franklin and Eleanor Roosevelt Institute, Hyde Park, NY; F. Kevin Simon: \$134,229. A four-week national institute for 20 secondary school humanities teachers on U.S. history from the Great Depression to the end of World War II. **ES**

Galveston College, TX; William R. Cozart: \$88,564. A two-year development project enabling faculty members to incorporate Hispanic and African American humanities texts into the core curriculum. **EH**

Genesee Community College, Batavia, NY; Raylene Corgiat: \$79,200. A curriculum development project enabling humanities and occupational faculty members to hold two seminars, "Myth and the Living World" and "The Written Text and Human Dialogue," and to design two humanities courses. **EH**

Jewish Theological Seminary of America, NYC; Benjamin R. Gampel: \$14,213 OR; \$15,000 FM. An international, interdisciplinary

conference on the history of Sephardic culture between 1391 and 1648, focusing on the causes and effects of the diaspora. **RX**

Johns Hopkins U. Press, Baltimore, MD; Robert J. Brugger: \$7,000. Publication of a volume of the papers of Thomas A. Edison, covering the years 1873 to 1876, when the inventor established his first research laboratories in New Jersey. **RP**

Laboratory for Icon and Idiom, Inc., NYC; Eric Breitbart: \$61,425. Scripting of a one-hour documentary on the St. Louis World's Fair of 1904 and its significance as an expression of American attitudes, interests, accomplishments, and values. **GN**

Museum of the City of New York, NYC; Rick Beard: \$185,400 OR; \$40,000 FM. A project on the life, work, cultural context, and legacy of 19th-century American poet Walt Whitman. **GP**

NAFEO, Washington, DC; Samuel L. Myers: \$35,000 OR; \$15,000 FM. A four-day conference for 50 faculty members from four-year member institutions, who will focus on the integration of African American culture into the teaching of the humanities. **EH**

Northeast Document Conservation Center, Andover, MA; Ann E. Russell: \$60,000 OR; \$24,925 FM. Continuation of the Field Services Program, which provides reference services, preservation workshops, disaster assistance, and on-site preservation surveys for humanities institutions in the Northeast. **PS**

Pennsylvania Center for the Book, Harrisburg; Faye Glick: \$19,470. Planning for library reading and discussion programs on a variety of themes. **GL**

Pennsylvania State U. Press, University Park; Sanford C. Thatcher: \$7,000. Publication of a study of industrialization in Harrisburg, Pennsylvania, during the late 19th century. **RP**

Pennsylvania State U. Press, University Park; Sanford G. Thatcher: \$7,000. Publication of a study of the persistence of European and Asian ethnic cultures by analyzing patterns of conquest, emigration, and assimilation. **RP**

U. of Illinois, Urbana; Donald E. Crummey: \$125,000. A six-week summer institute on African literature and film for 24 professors from member institutions of the Associated Colleges of the Midwest. **EH**

U. of Maryland, College Park; Saul Sosnowski: \$195,655. A five-week institute in Brazil for 25 participants on the interaction of Amerindian, European, and African civilizations. **EH**

U. of North Carolina, Asheville; Ronald J. Manheimer: \$158,035. A series of lectures, reading and discussion programs, and film discussion programs on the social, cultural, and economic history of railroads. **GL**

U. of Richmond, VA; David E. Leary: \$80,000 OR; \$40,000 FM. Preparation of faculty members to teach a basic yearlong freshman course, "Exploring Human Experience." The course will provide a coherent foundation for later studies. **EH**

U. of Washington, Seattle; Naomi B. Pascal: \$7,000. Publication of a biography of a leading contemporary Chinese painter, Li Huasheng. **RP**

Vassar College, Poughkeepsie, NY; H. Daniel Peck: \$64,722. A national conference for 150 American studies professors on the role of their discipline in the undergraduate humanities curriculum. **EH**

Vermont Library Association, Chester; Sally Anderson: \$171,890. Library reading and discussion groups for new adult readers and training workshops for scholars, librarians, and tutors. **GL**

Western Kentucky U., Bowling Green; Arvin G. Vos: \$175,378. A four-week summer institute on Dante's *Divine Comedy* for 42 middle and secondary school humanities teachers from Indiana, Kentucky, and Tennessee. **ES**



Jurisprudence

New Images Productions, Inc., Berkeley, CA; Avon Kirkland: \$350,000. A two-hour drama about the legal challenge to racial discrimination that culminated in *Brown v. Board of Education*, 1954. **GN**



Language & Linguistics

Brandeis U., Waltham, MA; Ruth Gollan: \$80,000. A four-week institute for 25 secondary- and college-level teachers to improve the teaching of modern Hebrew and develop literary texts for introductory language courses. **EH**

Checkerboard Foundation, Inc., NYC; Alexandra M. Isles: \$19,850. The planning of a 90-minute documentary about the image of African-Americans on television between 1948 and 1957. **GN**

College Board, NYC; Gretchen W. Rigol: \$49,633. The development and administration of a listening test as part of the Japanese Achievement Test. **ES**

College of William and Mary, Williamsburg, VA; James A. Bill: \$107,545 OR; \$5,000 FM. A three-year faculty development project to introduce an Arabic language component into the Middle Eastern studies program. **EH**

Friends School of Baltimore, Inc., MD; Zita D. Dabars: \$525,000. A three-year national project of summer institutes on Russian language and culture for 75 high school and college teachers. **ES**

Luther College, Decorah, IA; Bruce Wrightsman: \$50,425 OR; \$10,000 FM. A two-year curriculum project to develop a Russian studies program that will add a new faculty position, enhance teaching resources, and develop faculty across disciplines. **EH**

Macalester College, Saint Paul, MN; Phyllis H. Larson: \$54,000 OR; \$30,000 FM. A three-year curriculum development project in Japanese that will integrate a two-year intensive sequence with study abroad and three "foreign language across the curriculum" (FLAC) course offerings. **EH**

Middlebury College, VT; James Maddox: \$172,500. A seven-week national institute on dramatic literature for 20 high school teachers of literature and drama. **ES**

Montgomery County Public Schools, Rockville, MD; Myriam Met: \$480,000. A three-year project for 60 Washington, D.C., area elementary school teachers to attend summer institutes and weekend seminars for developing instructional guidelines and materials in Spanish and French. **ES**

Northern Arizona U., Flagstaff; Manuel C. Rodriguez: \$211,301. A two-year project for 415 Arizona teachers of Spanish in kindergarten through the eighth grades to integrate the humanities into the foreign language curriculum. **ES**

Ohio State U., Columbus; Leon I. Twarog: \$113,674. A six-month national program of video-based telephone instruction and a six-

day institute for 30 secondary school teachers of Russian. **ES**

Pacific Lutheran U., Tacoma, WA; Janet E. Rasmussen: \$175,000 OR; \$15,000 FM. A two-year curriculum project to integrate foreign language study into programs in Chinese studies, global studies, integrated studies, international business, and Scandinavian area studies. **EH**

Saint Mary's U., San Antonio, TX; Charles H. Miller: \$19,238. A one-year project to plan and initiate closer integration of foreign language use in the curriculum, focusing on three courses in which Spanish is used. **EH**

San Francisco State U., CA; Yoshiko Mishima: \$321,000. Two summer institutes in Japanese, each for 30 secondary school teachers from five Western states, to be held in San Francisco and in Tokyo, Japan. **ES**

U. of New Mexico Press, Albuquerque; David V. Holtby: \$7,000. Publication of a lexicon of Navajo, the most widely spoken native American language in the United States. **RP**

U. of Texas, Austin; Michael R. Katz: \$520,000. A three-year regional and national project for 30 high school Russian teachers to enhance their proficiency and cultural competence in language. **ES**

U. of Texas Press, Austin; Theresa J. May: \$7,000. Publication of a bilingual dictionary of a native American language of the Muskogean family. **RP**



Literature

Columbia U. Press, NYC; Jennifer Crewe: \$7,000. Publication of volume 8 in an edition of the letters of Ralph Waldo Emerson, covering the years between 1845 and 1859. **RP**

Cornell U. Press, Ithaca, NY; Bernhard Kendler: \$7,000. Publication of one volume in the complete edition of W. B. Yeats's surviving manuscripts of poems and plays. **RP**

Cornell U. Press, Ithaca, NY; Bernhard Kendler: \$7,000. Publication of an edition of Wordsworth's *Lyrical Ballads* and other poems written in the same period. **RP**

Feminist Press at CUNY, NYC; Florence Howe: \$7,000. Publication of a translated anthology of 20th-century writings by women in India. **RP**

Folger Shakespeare Library, Washington, DC; Lena C. Orlin: \$240,000. A one-year program on Shakespeare for 15 professors, consisting of an institute on "Shakespeare and the Languages of Performance," workshops, a seminar, and lecture-discussion sessions. **EH**

Harvard U. Press, Cambridge, MA; Thomas D'Evelyn: \$7,000. Publication of a biographical study of Emily Dickinson based on new archival evidence and metaphors drawn from contemporary painting and literature. **RP**

Hawaii Literary Arts Council, Honolulu; Nancy K. Mower: \$63,755. A conference and reading and discussion programs offering a critical examination of children's literature. **GL**

Johns Hopkins U. Press, Baltimore, MD; Eric Halpern: \$7,000. Publication of a study of the career of Lord Byron in the context of romanticism and 19th-century British history. **RP**

KCRW Foundation, Santa Monica, CA; Marjorie R. Leet: \$9,000. The repackaging, promotion, and distribution of 13 half-hour radio programs in which contemporary California writers read their short stories and comment on the creative process. **GN**

Keats-Shelley Association of America, Inc., NYC; Betty T. Bennett: \$33,050. An international conference on Percy Bysshe Shelley. **RX**

Lincoln U., PA; Emery Wimbish, Jr.: \$70,000. Programs on poet and author Langston Hughes. **GL**

National Council on the Aging, Inc., Washington, DC; Sylvia R. Liroff: \$178,000. Reading and discussion programs on cultural perspectives of the family at libraries and senior centers in Florida, Oregon, Pennsylvania, and Texas. **GL**

National Humanities Center, Research Triangle Park, NC; Richard R. Schramm: \$92,960 OR; \$19,920 FM. A three-week national institute for 20 secondary school English teachers on the relationships between authors' biographies and their texts. **ES**

Northwestern U. Press, Evanston, IL; Susan Harris: \$7,000. Publication of volume 3 of a translation of Witold Gombrowicz's *Diary*, a 20th-century work of contemplative prose written by an expatriate Polish novelist and playwright. **RP**

Northwestern U. Press, Evanston, IL; Susan Harris: \$7,000. Publication of volume 1 in a translation of Fyodor Dostoevsky's *A Writer's Diary*. **RP**

Northwestern U. Press, Evanston, IL; Susan Harris: \$7,000. Publication of volume 2 in a translation of Fyodor Dostoevsky's *A Writer's Diary*. **RP**

Pittsburgh Board of Public Education, PA; Richard Donato: \$81,000. A special project on Francophone West African literature for 24 elementary and middle school teachers of French. **ES**

Rutgers U. Press, New Brunswick, NJ; Leslie Mitchner: \$7,000. Publication of the second volume in a three-volume biography of the 18th-century English artist William Hogarth. **RP**

Social Science Research Council, NYC; Toby A. Volkman: \$196,000. A six-week summer institute for 25 professors on modern Indonesian, Thai, Filipino, and Vietnamese literature that will provide insights into the cultures of Southeast Asia. **EH**

Southern Oregon State College, Ashland; Alan R. Armstrong: \$93,908. A four-week national institute for 25 high school English teachers on four plays of Shakespeare. **ES**

Syracuse U. Press, NY; Charles Backus: \$14,000. Publication of two parts of a volume on the 19th century in a bibliography of French literature. **RP**

U. of Kansas, Lawrence; George Woodyard: \$34,051. An international conference on Latin American theater. **RX**

U. of Missouri Press, Columbia; Clair E. Willcox: \$7,000. Publication of the third of four volumes in an edition of Ralph Waldo Emerson's sermons. **RP**

U. of Virginia, Charlottesville; David T. Gies: \$179,311. A five-week summer institute, to be held in Virginia and Madrid, for 20 high school teachers of the Spanish language and culture from across the country. **ES**

Virginia Commonwealth U., Richmond; Boyd M. Berry: \$116,000. A four-week national institute for 24 high school English teachers on writing by and about women from the English Renaissance. **ES**

Westminster College, New Wilmington, PA; Jake Erhardt: \$154,667. A five-week national institute, with study in Berlin, for 25 high school German teachers on German literature, language, and culture. **ES**

Wolfe-Carter Productions, Inc., Birmingham, AL; William C. Carter: \$180,000 OR; \$25,000 FM. Completion costs of a one-hour film on the life and work of Marcel Proust, 1871-1922. **GN**

Yale U. Press, New Haven, CT; Charles Grench: \$7,000. Publication of a one-volume history of Russian literature. **RP**



Philosophy

Catholic U. of America, Washington, DC; Jude P. Dougherty: \$34,575. An international research conference on Hispanic philosophy in the late 16th and early 17th centuries. **RX**

Marquette U., Milwaukee, WI; Robert B. Ashmore: \$194,622. A two-year regional institute for 20 college teachers from the Midwest on classical ethical theories and their application to contemporary professional life. **EH**

U. of California, Santa Cruz; David C. Hoy: \$198,000 OR; \$5,000 FM. A five-week institute for 25 professors on the theoretical opposition between moral principles and practices, and possible strategies for overcoming the conflicts. **EH**

U. of Wisconsin, Madison; William J. Courtenay: \$14,976. An international conference on the meaning and origin of medieval nominalism from the 12th to the 15th century. **RX**

Virginia Polytechnic Institute & State U., Blacksburg; Roger Ariew: \$7,450. An international conference on Descartes's relationships with other philosophers of his time through a study of the "Objections and Replies" to the *Meditations*. **RX**



Religion

WGBH Educational Foundation, Boston, MA; Brigid Sullivan: \$621,850. Production of a one-hour program on Buddhism and the writing of five additional scripts for a six-part documentary series on the major religions of the world and their presence in contemporary American society. **GN**

Yale U. Press, New Haven, CT; Charles Grench: \$7,000. Publication of the first general history of the Shakers in the United States. **RP**



Social Science

American Council on Education, Washington, DC; Barbara Turlington: \$411,047. A two-year project to advance foreign language study in colleges and universities through a conference focused on exemplary foreign language programs, a mentoring system, consultants, and a publication. **EH**

Association of American Colleges, Washington, DC; Joseph S. Johnston: \$327,300. A two-year national project linking mentor institutions that have strong teacher training programs with colleges seeking to improve their programs. **EH**

Stanford U. Press, CA; Grant Barnes: \$7,000. Publication of a study of the Truman administration's foreign policy and the origins of the Cold War. **RP**

Stanford U. Press, CA; Grant Barnes: \$7,000. Publication of a general study of American partisan politics from 1838 to 1893. **RP**

Stanford U. Press, CA; Grant Barnes: \$7,000. Publication of the second volume in a general history of the Russian revolution of 1905. **RP**

Temple U., Philadelphia, PA; Ellis Katz: \$75,400. A conference on the historical and contemporary dimensions of the relationships between federalism and rights. **GP**

U. of Chicago Press, IL; Penelope J. Kaiserlian: \$7,000. Publication of volume 2 in a multivolume history of cartography from prehistoric times to the present. **RP**

DEADLINES ♦ DEADLINES ♦ DEADLINES

DIVISION OF EDUCATION PROGRAMS

James C. Herbert, Director • 786-0373

Area code for all telephone numbers is 202.

	Deadline	Projects beginning
Higher Education in the Humanities • Lyn Maxwell White 786-0380	April 1, 1992	October 1992
Institutes for College and University Faculty • Barbara A. Ashbrook 786-0380	April 1, 1992	October 1992
Core Curriculum Projects • Frank Frankfort 786-0380	April 1, 1992	October 1992
Two-Year Colleges • Judith Jeffrey Howard 786-0380	April 1, 1992	October 1992
Elementary and Secondary Education in the Humanities • F. Bruce Robinson 786-0377	March 15, 1992	December 1992
Teacher-Scholar Program • Annette Palmer 786-0377	May 1, 1992	September 1993
Special Opportunity in Foreign Language Education	March 15, 1992	October 1992
Higher Education • Elizabeth Welles 786-0380		
Elementary and Secondary Education • F. Bruce Robinson 786-0377		

DIVISION OF FELLOWSHIPS AND SEMINARS

Marjorie A. Berlincourt, Director • 786-0458

	Deadline	Projects beginning
Fellowships for University Teachers • Maben D. Herring 786-0466	June 1, 1992	January 1, 1993
Fellowships for College Teachers and Independent Scholars • Joseph B. Neville 786-0466	June 1, 1992	January 1, 1993
Summer Stipends • Thomas O'Brien 786-0466	October 1, 1992	May 1, 1993
Travel to Collections • Kathleen Mitchell 786-0463	July 15, 1992	December 1, 1992
Faculty Graduate Study Program for Historically Black Colleges and Universities	March 15, 1992	September 1, 1993
Maben D. Herring 786-0466		
Younger Scholars • Leon Bramson 786-0463	November 1, 1992	May 1, 1993
Study Grants for College and University Teachers • Clayton Lewis 786-0463	August 15, 1992	May 1, 1993
Summer Seminars for College Teachers • Joel Schwartz 786-0463		
Participants	March 1, 1992	Summer 1992
Directors	March 1, 1992	Summer 1993
Summer Seminars for School Teachers • Michael Hall 786-0463		
Participants	March 1, 1992	Summer 1992
Directors	April 1, 1992	Summer 1993

DIVISION OF PRESERVATION AND ACCESS

George F. Farr, Jr., Director • 786-0570

	Deadline	Projects beginning
National Heritage Preservation Program • Richard Rose 786-0570	November 2, 1992	July 1993
Library and Archival Preservation Projects • George F. Farr, Jr. 786-0570	June 1, 1992	January 1993
Library and Archival Preservation/Access Projects • Barbara Paulson 786-0570	June 1, 1992	January 1993
U. S. Newspaper Program • Jeffrey Field 786-0570	June 1, 1992	January 1993

To receive guidelines for any NEH program, contact the Office of Publications and Public Affairs at 202/786-0438. Guidelines are available at least two months in advance of application deadlines.

Telecommunications device for the deaf: 202/786-0282.

DEADLINES ♦ DEADLINES ♦ DEADLINES

DIVISION OF PUBLIC PROGRAMS

Donald Gibson, Director • 786-0267

Area code for all telephone numbers is 202.

	Deadline	Projects beginning
Humanities Projects in Media • James Dougherty 786-0278	March 15, 1992	October 1, 1992
Humanities Projects in Museums and Historical Organizations • Marsha Semmel 786-0284	June 5, 1992	January 1, 1993
Public Humanities Projects • Wilsonia Cherry 786-0271	March 13, 1992	October 1, 1992
Humanities Projects in Libraries • Thomas Phelps 786-0271		
Planning	February 7, 1992	July 1, 1992
Implementation	March 13, 1992	October 1, 1992

DIVISION OF RESEARCH PROGRAMS

Guinevere L. Griest, Director • 786-0200

	Deadline	Projects beginning
Texts • Margot Backas 786-0207		
Editions • Douglas Arnold 786-0207	June 1, 1992	April 1, 1993
Translations • Martha Chomiak 786-0207	June 1, 1992	April 1, 1993
Publication Subvention • Gordon McKinney 786-0207	April 1, 1992	October 1, 1992
Reference Materials • Jane Rosenberg 786-0358		
Tools • Helen Agüera 786-0358	September 1, 1992	July 1, 1993
Guides • Jane Rosenberg 786-0358	September 1, 1992	July 1, 1993
Interpretive Research • George Lucas 786-0210		
Collaborative Projects • David Wise 786-0210	October 15, 1992	July 1, 1993
Archaeology Projects • Rhys Townsend 786-0210	October 15, 1992	July 1, 1993
Humanities, Science and Technology • Daniel Jones 786-0210	October 15, 1992	July 1, 1993
Conferences • David Coder 786-0204	January 15, 1993	October 1, 1993
Challenge Grants, Centers, International Research		
Challenge Grants • Bonnie Gould 786-0361	May 1, 1992	December 1, 1991
Centers • Christine Kalke 786-0204	October 1, 1992	July 1, 1993
International Research • Christine Kalke 786-0204	April 1, 1992	January 1, 1993

DIVISION OF STATE PROGRAMS

Carole Watson, Director • 786-0254

Each state humanities council establishes its own grant guidelines and application deadlines. Addresses and telephone numbers of these state programs may be obtained from the division.

OFFICE OF CHALLENGE GRANTS

Harold Cannon, Director • 786-0361

	Deadline	Projects beginning
.....	May 1, 1992	December 1, 1992

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