# THE KEY REPORTER

# **1993** ΦBK BOOK PRIZES AWARDED TO SUNDQUIST, HARDIN, AND SKOCPOL

Eric J. Sundquist, Garrett Hardin, and Theda Skocpol received the three Phi Beta Kappa awards to authors for outstanding contributions to humanistic learning in 1993. The \$2,500 prizes were presented at the annual  $\Phi$ BK Senate banquet on December 3, 1993, at the Embassy Row Hotel in Washington, D.C.

Sundquist, who is professor of English at the University of California, Los Angeles, won the Christian Gauss Award for To Wake the Nations: Race in the Making of American Literature (Belknap/Harvard, 1993). Joseph Kestner, McFarlin Professor of English at the University of Tulsa, chaired the Gauss committee. In presenting the prize he quoted one of the judges as describing Sundquist's work as offering "what must be one of the most significant revisions of American literary history to appear in some time, with its attention to the impact of race on the writings of both African Americans and European Americans."

Hardin, Professor Emeritus of Human Ecology at the University of Cal-

**OLUM** 

ifornia, Santa Barbara, received the Science Award for Living Within Limits: Ecology, Economics, and Population Taboos (Oxford, 1993). Felix Browder, professor of mathematics at Rutgers University, who chaired the science award committee, described Hardin's book as a "trenchant, learned, passionate analysis of the most difficult problem that confronts mankind since the threat of nuclear annihilation has dwindled—the threat of an apparently inevitable human overpopulation of the earth. His analysis...brings forward all the issues involved, economic, social, religious, technological. . . .'

Skocpol, professor of sociology at Harvard University, won the Ralph Waldo Emerson Award for Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States (Belknap/Harvard, 1992). In presenting this award, Robert Fogelin, professor of philosophy at Dartmouth College and chairman of the Emerson committee, said, "Rarely have sociol-CONTINUED ON PAGE 2



The winners of the 1993  $\Phi BK$  book prizes—(from the left) Garrett Hardin, Theda Skocpol, and Eric Sundquist—posed together just before the awards banquet last December.



With the assistance of the newly created Robert R. and Kathryn D. Aurner Memorial Fund, Phi Beta Kappa made three \$500 awards for distinguished undergraduate research in the sciences to students participating in the National Science Foundation's 1993 National Conference on Diversity in the Scientific Workplace. The Society's president, Joan M. Ferrante, is pictured presenting the award to two of the winners: Peter Cabauy (left) of Florida International University and Lennard Perez Jr. of St. Mary's University. Jonathan Hill of Iowa State University (not pictured) received the third award

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#### **BOOK AWARDS**

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ogy and history been so ably combined. . . . Skocpol shows that various women's organizations were powerful influences for reform throughout this period of supposed inactivity. What she brings home, and what others have failed to see, are the significance and scope of these movements."

The 1994 Phi Beta Kappa book awards are open to qualified books published in the United States between May 1, 1993, and April 30, 1994. Entries must be submitted, preferably by the publishers, by April 30, 1994. Inquiries and entries should be addressed to the appropriate award committee at 1811 Q Street NW, Washington, DC 20009.

# **ABOUT THAT SURVEY**

We are grateful to all our readers who have responded thus far to the survey of the entire membership, now in progress, inviting comments and suggestions about the newsletter. If you have not yet received your survey card, rest assured it will be in the mail over the next few months (the mailings have been staggered to facilitate processing). The results are being tabulated, your comments are being considered, and a report will appear in

"This survey is most interesting. I have been receiving *The Key Reporter* for 28 years and have never even opened it until this past issue. Something about it made it 'look' worth reading. I read the whole issue from cover to cover and then kicked myself for never reading *The Key Reporter* before. I hope you are planning to continue *The Key Reporter* in its new format, since that's what convinced me to read it."

#### Survey respondent

the newsletter when the survey is completed.

In the meantime, we are making an effort to send all issues of *The Key Reporter* to all members of the Society; at the same time we are eager to economize on postal expenses whenever we can reasonably do so.

• If you know a member who is not now receiving the newsletter regularly and would like to receive it, please let us know.

• If you receive duplicate mailings, or if you and another member of your household now receive two copies

#### To Wake the Nations

*Excerpt from the Introduction*, To Wake the Nations: Race in the Making of American Literature, *pp.* 7–8, by Eric J. Sundquist, published by Belknap/Harvard University Press, 1993.

... It remains difficult for many readers to overcome their fundamental conception of "American" literature as solely Anglo-European in inspiration and authorship, to which may then be added an appropriate number of valuable "ethnic" or "minority" texts, those that closely correspond to familiar critical and semantic paradigms. Instead, a redefinition of the premises and inherent significance of the central literary documents of American culture is in order. My intention is certainly not to depose canonical figures but to see their less often celebrated works—Herman Melville's *Benito Cereno*, Frederick Douglass's *My Bondage and My Freedom*, and Mark Twain's *Pudd'nhead Wilson*—from the new point of view provided by the introduction of comparatively ancillary but nonetheless important works such as Nat Turner's "Confessions" and Martin Delany's *Blake; or the Huts of America*, and the more extended serious treatment of major authors such as Chesnutt and Du Bois, who are the equals of most any writers in the history of American literature.

Although the weight of To Wake the Nations falls on African American texts, my argument moves back and forth-alternates, so to speak-between black and white texts in order to suggest that neither perspective is by itself adequate to account for the ongoing crisis over race in American cultural and political life, just as neither black nor white authorship guarantees any sort of univocal vision or moral advantage. Certain themes and tropes recur throughout the book, but there is not a single running argument. Rather, I have been interested in a group of issues-revolutionary ideology, folklore and vernacular culture, the debate over African retentions (and what is now sometimes called Afrocentrism), the role of music in black culture, the superimposition of antebellum and post-Reconstruction historical time frames, prophetic leadership, and others-that seem to accompany one another harmonically through the defining period of American race literature. The book is a study of traditions but not necessarily of literal origins, of epochal movements but not of linear progression. Thus, very different phenomena such as African cultural retentions and racist minstrelsy occupy more or less equal analytic positions in this book; and although I concentrate on a limited number of authors and texts, the larger historical moments I isolate are assumed to be interwoven with the cross-currents of two traditions that are always dynamically defining each other.

#### Living Within Limits

Excerpts from Chapter 1, "The Challenge of Limits," p. 5, and Chapter 27, "Recapitulation and a Look Ahead," pp. 308–10, Living Within Limits: Ecology, Economics, and Population Taboos, by Garrett Hardin, published by Oxford University Press, 1993.

A great source of shared sorrow comes to us these days from an environment that has been badly mistreated for many centuries. Describing and looking for remedies to this sorrow is the obligation of ecology. Though the science of ecology was named more than a century ago, the public scarcely became aware of it until Rachel Carson's *Silent Spring* was published in 1962. Since then an

but need only one, we would appreciate being so informed.

• If any member now receiving the newsletter does not wish to receive it, please let us know.

The membership survey has revealed that many members with overseas addresses have not been receiving the newsletters we have been mailing. As a result, our mailing house has contracted with a new distributor who promises better service by airlifting the newsletter to various distribution points overseas.

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avalanche of discouraging reports on the environment has engulfed the public.

Broadly stated, most ecological problems reduce to the single problem of balancing supply and demand. That may sound simple enough, but the two words *supply* and *demand* stand for utterly disparate things. Supply is strictly limited, though we often cannot state the limits with any precision. Demand, however, is essentially unlimited, because the word implies *demands made by human beings*. There is no intrinsic limit to the demands that can be made by people. The natural tendency to produce an imbalance between supply and demand is the source of Buddhistic "sorrow." ["I teach only two things: the cause of human sorrow and the way to become free of it."] Preventing, or at least minimizing, this sorrow requires solving the population problem. Such was Malthus's view; and such must ours be....

## Focusing on the Furnishings of the Mind

Birth control is not population control. Improvements in the technology of birth control will make population control easier, but perfect methods of birth control are not enough. How much these methods are used is determined by the furnishings of the mind.

The ideas that are necessary for population control are easily accessible to the ordinary mind. They are widely known, but people are not as acutely aware of them as they must be if population control is ever to be achieved. If talented teachers can find striking ways of fitting the following generalizations into primary and secondary education, the advance of population control will be greatly furthered.

*Exponential growth:* This is just a fancy term for growth by compound interest, which people understand from their banking experience. Most economic literature fails however to emphasize the following important point: no positive rate of exponential growth of a population can safely be regarded as "small."...

Diseconomies of scale are the rule: Whatever may be the relative frequencies of economies and diseconomies of scale, human beings naturally recognize and exploit the economies first. Increasingly, society is left with diseconomies. As a result, in ever more instances, more (of almost anything) is worse. This expectation contradicts the "bigger is better" philosophy of the recent past.

Carrying capacity is measured in terms of (number of people) multiplied by (the physical quality of life): The maximum number of people can be supported only if the per capita share of physical wealth (energy, space, food, luxuries) is kept to the minimum. (Of course some aspects of the "quality of life" call for little or no substantive expenditures: friendliness, for example.)

#### Protecting Soldiers and Mothers

Excerpt from Conclusion, "America's First Modern Social Policies and Their Legacies," pp. 525–26, Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States, by Theda Skocpol, published by Belknap/Harvard University Press, 1992.

The story of modern social provision in the United States does not, as many people suppose, begin with the Social Security Act of 1935. Nor was America merely a laggard on a universally traveled road toward "the modern welfare state." From the late nineteenth century onward, the United States took a journey with marked twists and turns, exploring several different paths as its national and state governments devised public regulations and social spending to buffer many citizens against material want, market dislocations, and family crises. Between the 1870s and the 1920s, the paths explored in U.S. social policy were especially distinctive. In an era when many industrializing Western nations were launching fledgling paternalist welfare states for workers—that is, sets of regulations and benefits devised by male bureaucrats and politicians for the good of male wage earners and their dependents—the United States sought to help not workers but soldiers and mothers.

From the 1870s through the turn of the century, the U.S. federal government and many states expanded costly pensions and custodial institutions to aid veteran soldiers of the Union army and their dependents. This was the first phase of modern social provision in the United States, when many disabled, elderly, and dependent Americans were helped more generously than in the fledgling foreign welfare states of the day. During the early 1900s, proposals for general old-age pensions, health and unemployment insurance, and labor regulations covering adult male workers were rebuffed by U.S. legislatures and courts, ensuring that the United States would *not* smoothly transform Civil War benefits into a welfare state for the "army of labor." During the same period, however, the federal government and forty-some states did enact social spending, labor regulations, and health education programs to help American mothers and children along with women workers who might become mothers.

Indeed, as the Civil War system of social provision faded away with the passing of the part of the generation it sought to honor, the United States briefly looked as if it would fashion an internationally distinctive maternalist welfare state. Largely administered by female professionals, this system of social provision tried to ensure public protection for mothers and children regardless of their ties to wage earners. A fully developed maternalist welfare state might have gradually expanded help to all American families, primarily by bolstering the security of children and mothers. Many social policies pointing in this direction were instituted by the U.S. states and federal government during the 1910s and early 1920s. But some of these measures, such as mothers' pensions and protective labor laws for women workers, were flawed, and also failed to be implemented as their sponsors had hoped. Others, such as minimum wage laws and the federal Sheppard-Towner program, were clipped off by the Supreme Court and Congress during the 1920s.

Thus the United States stopped short and turned back from its route toward a possible maternalist welfare state. With the coming of the Great Depression and the New Deal of the 1930s, the nation would take new paths.

Population size is demostatically controlled: It takes negative feedback to keep the potential of exponential growth from destroying a population. A community has a choice of negative feedbacks; but if it refuses to choose, nature will step in with the painful negative feedbacks of famine, disease and social chaos.

Zero population growth is the NORM for every population: Ignoring minor fluctuations, more than 99 percent of the existence of every species is passed in an essentially ZPG condition. The rapid growth of the human population during the past two centuries is very exceptional. It must soon come to an end. The experience will probably never be repeated....

Without the control of immigration, no country can succeed in controlling its population size: The Marxist philosophy, "From each according to his ability, to each according to his needs," defines an unmanaged commons, which ends in ruin....

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## WHAT COMPUTERS STILL CAN'T DO

BY HUBERT L. DREYFUS

During my travels as Phi Beta Kappa Visiting Scholar last year, I found that the subject most students and faculty wanted to discuss was whether computers could be intelligent. I had already been thinking about that question for more than 25 years and had published my views; nonetheless, that semester of intense discussions helped me sharpen my understanding and condense my conclusions. Here, with thanks to the Phi Beta Kappa chapters that made these discussions possible, are my latest thoughts on the subject.

T HAS BEEN ALMOST a half-century since the computer burst upon the world with promises that it would soon be programmed to be intelligent, and the related promise or threat that we would soon learn to understand ourselves as computers. Now with 2001 (as evoked in the movie with HAL) rapidly approaching, and educators telling us we should get our children to think procedurally like computers, it is time for a retrospective evaluation of the attempt to program computers and ourselves to be intelligent. It is time, in other words, to assess the possibility and desirability of calculative rationality.

Artificial intelligence (AI) began auspiciously, with Allen Newell and Herbert Simon's work at the Rand Corporation. Newell and Simon proved that computers could do more than calculate. They demonstrated that computers were physical symbol systems whose symbols could be made to stand for anything, including features of the real world, and whose programs could be used as rules for relating these features. In this way computers could be used to simulate certain important aspects of intelli-Thus the informationgence. processing model of the mind was born. But looking back over these 50 years, I find that theoretical AI, with its promise of a robot like HAL in 2001, appears to be a perfect example of what Imre Lakatos has called a "degenerating research program."1

A degenerating research program is one that starts out with a successful approach to a new domain, but then runs into unexpected problems it cannot solve and is finally abandoned by its practitioners. Newell and Simon's early work on problem solving was indeed impressive, and by 1965 artificial intelligence had turned into a flourishing research program, thanks

to a series of micro-world successes such as Terry Winograd's SHRDLU, a program that could respond to English-like commands by moving simulated, idealized blocks. The field had its own Ph.D. programs, professional societies, and gurus. It looked as if all one had to do was extend, combine, and render more realistic the micro-worlds-domains isolated from everyday common-



sense intuitionand one would have genuine artificial intelligence. Marvin Minsky, head of the MIT AI Laboratory, predicted in 1967 that within a generation the problem of creating 'artificial intelligence' will be Hubert Dreyfus substantially solved."2

Then, rather suddenly, the field ran into unexpected difficulties. The trouble started, as far as I can tell, with the failure of attempts to program children's story understanding. The programs lacked the intuitive common sense of a four-year-old, and no one knew what to do about it. An old philosophical dream was at the heart of the problem. AI is based on an idea that has been around in philosophy since Descartes-that all understanding consists in forming and using appropriate symbolic representations. For Descartes these were complex descriptions built up from primitive ideas or elements. Kant added the important idea that all concepts were rules. Frege showed that rules could be formalized so that they could be manipulated without intuition or interpretation.

Given the nature of computers, AI took up the search for such formal rules and representations. Common-

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sense intuition had to be understood as some vast collection of formalizable beliefs, rules, and procedures. And it simply turned out to be much harder than expected to formulate, let alone formalize, the required theory of common sense. It was not, as Minsky had hoped, just a question of cataloguing a few hundred thousand facts. The commonsense knowledge problem became the center of concern. Minsky's attitude changed completely in the course of 15 years. In 1982 he told a reporter: "The AI problem is one of the hardest science has ever undertaken."3

Given this impasse, it made sense to return to micro-worlds and at least try to develop theories of such isolated domains. This is what actually happened-with the added realization

*With 2001 rapidly approaching* ... it is time for a retrospective evaluation of the attempt to program computers and ourselves to be intelligent.

that such isolated domains need not be games like chess or micro-worlds like Winograd's blocks world, but could be skill domains like disease diagnosis or spectrograph analysis.

Thus, from the frustrating field of AI has recently emerged a new field called knowledge engineering, which, by limiting its goals, has applied AI research in ways that work in the real world. The result is the so-called expert system, which was the subject of cover stories in Business Week and Newsweek and is enthusiastically promoted in The Fifth Generation: Artificial Intelligence and Japan's Computer Challenge to the World, by Edward Feigenbaum and Pamela McCorduch.<sup>4</sup> They spell out the goal:

The machines will have reasoning power: they will automatically engineer vast amounts of knowledge to serve whatever purpose humans propose, from medical diagnosis to product design, from management decisions to education.5

What the knowledge engineers claim to have discovered is that in ar-

Lakatos, Philosophical Papers, ed. by John Worrall (Cambridge, Eng.: Cambridge University Press, 1978).

<sup>&</sup>lt;sup>2</sup>Minsky, Computation: Finite and Infinite Machines (Englewood, N.J.: Prentice Hall, 1967),

<sup>&</sup>lt;sup>3</sup>Quoted in Gina Kolata, "How Can Com-puters Get Common Sense?" Science 217 (September 24, 1982), 1237

<sup>&</sup>lt;sup>4</sup>Reading, Mass.: Addison-Wesley, 1983. 5Ibid., 56

eas that are cut off from everyday common sense and social intercourse, all a machine needs in order to behave like an expert is specialized knowledge of two types:

The first type is the *facts* of the domain—the widely shared knowledge . . . that is written in textbooks and journals of the field. . . . Equally important to the practice of the field is the second type of knowledge called *beuristic knowledge*, which is knowledge of good practice and good judgment in a field.<sup>6</sup>

Using both kinds of knowledge, Feigenbaum developed a program called DENDRAL, which takes the data generated by a mass spectrograph and deduces from these data the molecular structure of the compound being analyzed. Another program, MYCIN, takes the results of blood tests, such as the numbers of red and white cells and the amount of sugar in the blood. and comes up with a diagnosis of which blood disease is responsible for this condition. It even gives an estimate of the reliability of its own diagnosis. In their narrow areas, such programs give impressive performances. They seem to confirm the observation of Leibniz, the grandfather of expert systems:

The most important observations and turns of skill in all sorts of trades and professions are as yet unwritten. This fact is proved by experience when, passing from theory to practice, we desire to accomplish something. Of course, we can also write up this practice, since it is at bottom just another theory more complex and particular....<sup>7</sup>

And, indeed, isn't the success of expert systems just what would be expected? If we agree with Feigenbaum that "almost all the thinking that professionals do is done by reasoning,"<sup>8</sup> we can see that once computers are used for reasoning and not just for computation, they should be as good as or better than we are at following rules for deducing conclusions from a host of facts. So we would expect that if the rules that an expert has acquired



Thaddeus Tate, director of the Institute for Early American History at the College of William and Mary, is shown at the ceremony in which he unveiled portraits of two early members of the Society's first chapter—William Short Jr. (left) and John Marshall—on the ground floor of the Society's headquarters in Washington, D.C., on December 3. Between the two portraits is a drawing of the Wren Building, made in 1976 for Phi Beta Kappa by Thomas E. Thorne, chairman emeritus of the art department at the college, on the occasion of the Society's bicentennial.

from years of experience could be extracted and programmed, the resulting program would exhibit expertise. Again, Feigenbaum and McCorduch put the point clearly:

The matters that set experts apart from beginners are symbolic, inferential, and rooted in experiential knowledge.... Experts build up a repertory of working rules of thumb, or "heuristics," that, combined with book knowledge, make them expert practitioners.<sup>9</sup>

Because each expert already has a repertory of rules in his or her mind, all the expert system builder need do is get the rules out and program them into a computer.

#### The Greek Connection

This view is not new. In fact, it goes back to the beginning of Western culture, when the first philosopher, Socrates, stalked around Athens looking for experts in order to draw out and test their rules. In one of his earliest dialogues, *The Euthyphro*, Plato tells us of such an encounter between

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Socrates and Euthyphro, a religious prophet and thus an expert on pious behavior. Socrates asks Euthyphro to tell him how to recognize piety: "I want to know what is characteristic of piety... to use as a standard whereby to judge your actions and those of other men." But instead of revealing his piety-recognizing heuristic, Euthyphro does just what every expert does when cornered by Socrates. He gives him *examples* from his field of expertise, in this case, mythical situations in the past in which men and gods have done things that all agree are pious.

Socrates then gets annoyed and demands that Euthyphro tell him his rules for recognizing these cases as examples of piety, but although Euthyphro claims he knows how to tell pious acts from impious ones, he cannot state the rules that generate his judgments. Socrates ran into the same problem with craftsmen, poets, and even statesmen. They also could not articulate the principles underlying their expertise. Socrates therefore concluded that none of these experts knew anything and that he didn't CONTINUED ON PAGE 6

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<sup>6</sup>Ibid., 76-77.

<sup>&</sup>lt;sup>7</sup>Leibniz, *Selections*, ed. by Philip Wiener (New York: Scribner, 1951), 48. My italics. <sup>8</sup>Feigenbaum and McCorduch, op. cit., 18.

<sup>9</sup>Ibid., 64.

#### WHAT COMPUTERS CAN'T DO

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know anything either—not a promising start for Western philosophy.

Plato admired Socrates and saw his problem. So he developed an account of what caused the difficulty. Experts, at least in areas involving nonempirical knowledge such as morality and mathematics, had, in another life, Plato said, learned the principles involved but had forgotten them. The role of the philosopher was to help such moral and mathematical experts recollect the principles on which they act. Knowledge engineers would now sav that the rules used bv experts-even experts in empirical domains-have been put into a part of their mental computers, where they work automatically.

When we learned how to tie our shoes, we had to think very hard about the steps involved.... Now that we've tied many shoes over our lifetime, that knowledge is "compiled," to use the computing term for it; it no longer needs our conscious attention.<sup>10</sup>

On this Platonic view, the rules are there functioning in the expert's mind whether the expert is conscious of them or not. How else could one account for the fact that the expert can perform the task? After all, we *can* still tie our shoes, even though we cannot say how we do it. So nothing has changed. Only now, 2,400 years later, thanks to Feigenbaum and his colleagues, we have a new name for what Socrates and Plato were doing: *knowledge acquisition research*.<sup>11</sup>

#### The Problem with Rules

Although philosophers and even ordinary citizens have become convinced that expertise is based on applying sophisticated heuristics to masses of facts, there are few available rules. As Feigenbaum and McCorduch explain: "An expert's knowledge is often ill-specified or incomplete because the expert himself doesn't always know exactly what it is he knows about his domain."12 Indeed, when they suggest to an expert the rules the expert seems to be using, they get a Euthyphro-like response: "That's true, but if you see enough patients/ rocks/chips/designs/instruments readings, you see that it isn't true after all." And they comment with Socratic annoyance, "At this point, knowledge threatens to become ten thousand special cases."<sup>13</sup>

There are other hints of trouble, too. Ever since the inception of artificial intelligence, researchers have been trying to produce artificial experts by programming the computer to follow the rules used by masters in various domains. Yet, although computers are faster and more accurate than people in applying rules,

## We must take a fresh look at what a skill is and what experts acquire when they achieve expertise.

master-level performance has remained out of reach. In each area where there are experts with years of experience, the computer can do better than the beginner and can even exhibit useful competence, but it cannot rival the very experts whose facts and supposed heuristics it is processing with incredible speed and unerring accuracy.

#### A Fresh Look at Skills Acquisition

In the face of this impasse, in spite of the authority and influence of Plato and 2,400 years of philosophy, we must take a fresh look at what a skill is and what the experts acquire when they achieve expertise. We must be prepared to abandon the traditional view that beginners start with specific cases and, as they become more proficient, abstract and "interiorize" more and more sophisticated rules. It might turn out that skill acquisition moves in just the opposite direction: from abstract rules to particular cases. Because we are all experts in many areas, we have the necessary data, so let's look at how adults learn new skills.

#### Stage 1: Novice

Normally, the instruction process begins with the instructor breaking the task into features that beginners can recognize without experience in the task domain. The beginners are then given rules for determining actions on the basis of these features, like a computer following a program.

For purposes of illustration, let us consider two variations: a bodily or motor skill and an intellectual skill.

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Student automobile drivers learn to recognize such interpretation-free features as speed, indicated by the speedometer, and rules such as "Shift to second gear when the speedometer needle points to 10 miles an hour."

Novice chess players learn a numerical value for each type of piece, regardless of its position, and the rule: "Always exchange if the total value of pieces captured exceeds the value of pieces lost." They also learn that when no advantageous exchanges can be found, control of the center should be sought, and players are given a rule defining center squares and a rule for calculating extent of control. Most beginners are notoriously slow players, as they attempt to remember all these rules and their priorities.

#### Stage 2: Advanced Beginner

As novices gain experience actually coping with real situations, they begin to note, or an instructor points out, perspicuous examples of meaningful additional aspects of the situation. After seeing enough examples, the students learn to recognize these *situational aspects*. Instructional maxims now can refer to these new situational aspects, recognized on the basis of experience, as well as to the objectively defined *nonsituational features* recognizable by novices.

Advanced beginning drivers use (situational) engine sounds as well as (nonsituational) speed in their gear-shifting rules. They shift when the motor sounds as though it is straining. The drivers learn to observe the demeanor as well as position and velocity of pedestrians or other drivers. They can, for example, distinguish the behavior of the distracted or drunken driver from that of the impatient but alert one. No number of words can take the place of a few choice examples in learning these distinctions. Engine sounds cannot be adequately captured by words, and no list of objective facts enables drivers to predict the behavior of a pedestrian in a crosswalk as well as can observation of many pedestrians crossing streets under a variety of conditions.

With experience, chess beginners learn to recognize overextended positions and ways to avoid them. Similarly, they begin to recognize such situational aspects of positions as a weakened king's side or a strong pawn structure, despite the lack of precise rules.

<sup>&</sup>lt;sup>10</sup>Ibid., 55.

<sup>&</sup>lt;sup>11</sup>Ibid., 79.

<sup>&</sup>lt;sup>12</sup>Ibid., 85.

<sup>13</sup>Ibid., 82.

#### Stage 3: Competent Performer

With more experience, the number of potentially relevant elements of a real-world situation that the learners are able to recognize becomes overwhelming. At this point, because a sense of what is important in any particular situation is missing, performance becomes nerve-wracking and exhausting, and the students might wonder how anybody ever masters the skill.

To cope with this problem and to achieve competence, people learn, through instruction or experience, to adopt a hierarchical perspective. First, they must devise a plan, or choose a perspective, that then determines which elements of the situation are to be treated as important and which ones can be ignored. Thus, restricting themselves to only a few of the vast number of possibly relevant features and aspects, people find that making decisions becomes easier.

Competent performers thus seek new rules and reasoning procedures to decide upon a plan or perspective. But these rules are not so easy to come by as the rules given beginners in texts and lectures. The problem is that there are a vast number of different situations that learners may encounter, many differing from each other in subtle, nuanced ways. There are, in fact, more situations than can be named or precisely defined, so that no one can prepare a list of what learners should do in every possible situation.

A competent driver leaving the freeway on a curved off-ramp, after taking into account speed, surface condition, criticality of time, and the like, may decide that he is going too fast. The driver then has to decide whether to let up on the accelerator, remove his foot altogether, or step on the brake. He is relieved when he gets through the curve without mishap, and shaken if he begins to go into a skid.

A class A chess player, here classed as competent, may decide, after studying a position, that his opponent has weakened his king's defenses so that an attack against the king is a viable goal. If the attack is chosen, features involving weaknesses in his own position created by the attack are ignored, as are losses of pieces not essential to the attack. Removal of pieces defending the enemy king becomes salient. Successful plans induce euphoria, while mistakes are felt in the pit of the stomach.

As competent performers become more and more emotionally involved in their tasks, it becomes increasingly difficult to draw back and to adopt the *detached* rule-following stance of the beginner. While it might seem that this involvement-caused interference with detached rule testing and improving would inhibit further skill develop-

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## <sup>®</sup>American Scholar

In keeping with its tradition of presenting fine reading on a variety of subjects, *The American Scholar* offers a colorful palette for springtime. Featured articles scheduled to appear in the Spring 1994 issue include "The Bourgeois Virtue," by Donald McCloskey; "Did the Russian Revolution Have to Happen?" by Richard Pipes; and "Leopold Labedz: A Memoir," by Edward Shils. Also appearing will be journalist John McDonough's fascinating account of D-Day as it was reported by the media and received by the American people in their homes.

Rounding out the issue will be an appreciation of Hoagy Carmichael and Johnny Mercer; an essay about famous murder cases and books written about them in the late nineteenth and early twentieth centuries; and "Boy 'N the Hood," *Scholar* editor Joseph Epstein's views on growing up and living in neighborhoods.

We think you will enjoy reading this issue and many more to come. If you agree, send your subscription order now and receive the Spring 1994 issue in early March. Just complete and return the coupon below.

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ment, in fact, just the opposite seems to be the case. As we shall soon see, if the detached rule-following stance of the novice and advanced beginner is replaced by involvement, the person is set for further advancement, whereas resistance to the frightening acceptance of risk and responsibility can lead to stagnation and ultimately to boredom and regression.

#### Stage 4: Proficient Performer

Suppose that as the result of both positive and negative experiences, the learner's responses are either strengthened or inhibited. Should this happen, the performer's theory of the skill, as represented by rules and principles, will gradually be replaced by situational discriminations and associated responses. Proficiency seems to develop if, and only if, experience is assimilated in this atheoretical way and intuitive behavior replaces reasoned responses.

As the performer's brain acquires the ability to discriminate among a variety of situations entered into with concern and involvement, plans are intuitively evoked and certain aspects stand out as important, without the learner's standing back and choosing those plans or deciding to adopt that perspective. Action becomes easier and less stressful as the learner simply sees what needs to be achieved rather than deciding, by a calculative procedure, which of several possible alternatives should be selected. There is less doubt that what one is trying to accomplish is appropriate when the goal is simply the obvious choice rather than the winner of a complex competition. In fact, at the moment of involved intuitive response there can be no doubt, because doubt comes only with detached evaluation of performance.

Remember that involved, experienced performers see what the goals and salient facts are, but not what to do to achieve these goals. This situation is inevitable because there are far fewer ways of seeing what is going on than there are ways of responding. Proficient performers simply have not yet had enough experience with the wide variety of possible responses to each of the situations they can now discriminate to have rendered the best response automatic. For this reason, proficient performers, seeing the goal and the important features of the situation, must still decide what to do. To CONTINUED ON PAGE 8

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decide, they fall back on detached, rule-based determination of actions.

A proficient driver, approaching a curve on a rainy day, may realize intuitively that he or she is going dangerously fast. The driver then consciously decides whether to apply the brakes or merely to reduce pressure by some selected amount on the accelerator. Valuable moments may be lost while an alternative is consciously chosen, or time pressure may lead to a less-than-optimal choice. But this driver is certainly more likely to negotiate the curve safely than the competent driver who spends additional time deciding, based on speed, angle of curvature, and felt gravitational forces, that the car's speed is excessive.

A proficient chess player, who is classed a master, can recognize a large repertory of types of positions. Recognizing almost immediately and without conscious effort the sense of a position, the player sets about calculating the move that best achieves the goal. The player may, for example, know that he or she should attack, but must deliberate about how best to do so.

#### Stage 5: Expert

A more subtle and refined ability to discriminate distinguishes the expert from the proficient performer. Further discrimination among situations all seen as similar with respect to a plan or perspective enables the expert to distinguish those situations requiring one action from those demanding another. With enough experience in a variety of situations, all seen from the same perspective but requiring different tactical decisions, the proficient performer gradually decomposes this class of situations into subclasses. each of which shares the same decision, single action, or tactic. The resulting repertory of situations allows the immediate intuitive response to each situation, which is characteristic of expertise.

The expert chess player, classed as an international master or grandmaster, in most situations experiences a compelling sense of the issue and the best move. Excellent chess players can play at the rate of 5 to 10 seconds a move and even faster with no serious degradation in performance. At this speed they must depend almost entirely on intuition and hardly at all on analysis and comparison of alternatives. For such expert performance, the number of classes of discriminable situations, built up on the basis of experience, must be immense. It has been estimated that a master chess player can distinguish roughly 50,000 types of positions.

Automobile driving probably involves the ability to discriminate a similar number of typical situations. Expert drivers, generally without any awareness, not only know by feel and familiarity when slowing down on an off-ramp is required, but also know how to perform the appropriate action without calculating and comparing alternatives. What must be done simply is done.

#### How Expertise Really Works

It seems that a beginner calculates using rules and facts just like a heuristically programmed computer, but that with talent and a great deal of involved experience, the beginner develops into an expert who intuitively sees what to do without applying rules. Normally, however, experts do not *calculate*. They do not *solve problems*. They do what normally works and, of course, it normally works.

Society . . . must encourage its children to cultivate their intuitive capacities in order that they may achieve expertise, not encourage them to reason calculatively and thereby become human logic machines.

The phenomenology of skills acquisition I have presented enables us to understand why the knowledge engineers from Socrates to Feigenbaum have had such trouble getting experts to articulate the rules they are using. The experts are simply not following any rules! They are doing just what Feigenbaum feared they might be doing-discriminating thousands of special cases. This in turn explains why expert systems are never as good as experts. If one asks experts for rules, one will, in effect, force the experts to regress to the level of a beginner and state the rules they still remember but no longer use. If one programs these rules into a computer, one can use the speed and accuracy of the computer and its ability to store and access millions of facts to outdo a human beginner using the same rules.

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But no amount of rules and facts can capture the knowledge of experts who have stored their experience of the actual outcomes of tens of thousands of situations.

# The Dangers of Overreliance on Calculative Rationality

If this were merely an academic discussion, we could conclude here; if it were merely a matter of business, we could sell our stock in expert systems companies. Indeed, as it turns out, that would have been a good idea, because almost all of them have gone out of business. But we cannot be so casual. The Socratic picture of reason underlies a general movement toward calculative rationality in our culture, and that movement brings with it great dangers.

The increasingly bureaucratic nature of society is heightening the danger that, in the future, skill and expertise will be lost through overreliance on calculative rationality. Today, as always, individual decision makers understand and respond to their situations intuitively, as described in the highest levels of the skill acquisition model I have presented. But when more than one person is involved in a decision, the success of science and the availability of computers tend to favor the detached mode of problem description characteristic of calculative rationality. Everyone wants a decision that affects the public to be explicit and logical, so that rational discussion can be directed toward the relevance and validity of isolated elements used in the analysis. But, as we have seen, with experience comes a decreasing concern for accurate assessment of isolated elements. In evaluating elements, experts have no expertise.

For example, judges and ordinary citizens serving on our juries are beginning to distrust anything but "scientific" evidence. A ballistics expert who testified only that he had seen thousands of bullets and the barrels of the guns that had fired them, and that there was absolutely no doubt in his mind that the bullet in question had come from the gun offered in evidence, would be ridiculed by the opposing attorney and disregarded by the jury. Instead, the expert has to talk about the individual marks on the bullet and the gun and connect them by rules and principles showing that only the gun in question could so mark the bullet. But in this he is no expert. If he

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is experienced in legal proceedings, he will know how to construct arguments that convince the jury, but he does not tell the court what he intuitively knows, for he will be evaluated by the jury on the basis of his "scientific" rationality, not in terms of his past record and good judgment. As a result, some wise but honest experts are ignored, while nonexpert authorities who are experienced at producing convincing legal testimony are much sought after. The same thing happens in psychiatric hearings, medical proceedings, and other situations where technical experts testify. Form becomes more important than content.

It is ironic that judges hearing a case will expect expert witnesses to rationalize their testimony, for when rendering a decision involving conflicting conceptions of what is the central issue in a case and therefore what is the appropriate guiding precedent, judges will rarely if ever attempt to explain their choice of precedents. They presumably realize that they know more than they can explain and that ultimately unrationalized intuition must guide their decision making, yet lawyers and juries seldom accord witnesses the same prerogative.

In each of these areas and many more, calculative rationality, which is sought for good reasons, means a loss of expertise. But in facing the complex issues before us, we need all the wisdom we can find. Therefore, society must clearly distinguish its members who have intuitive expertise from those who have only calculative rationality. It must encourage its children to cultivate their intuitive capacities in order that they may achieve expertise, not encourage them to reason calculatively and thereby become human logic machines. In general, to preserve expertise we must foster intuition at all levels of decision making: otherwise, wisdom will become an endangered species of knowledge.

Hubert L. Dreyfus, professor of philosophy at the University of California, Berkeley, visited eight campuses during his year as a **ΦBK** Visiting Scholar. His two books on the subject of this article are What Computers Still Can't Do (MIT Press, 1992) and, with Stuart E. Dreyfus, Mind Over Machine: The Power of Human Intuition and Expertise in the Era of the Computer (Free Press, 1986).

## LETTERS TO THE EDITOR

In the Summer 1993 issue of *The Key Reporter*, Dr. Carl Greiner observed, "We do not have a single, simple societal answer about how to ration [scarce human organs for transplantation]." I believe there is such an answer, which would not only be fair, but would also solve the problem of scarcity and enable many more lives to be saved.

It would be to give priority to those who do most to make enough organs available for transplantation. For example, top priority could be given to a next-of-kin who consents to making a deceased loved one's organs available. Such a person could be permitted to choose the person, such as another loved one or a friend, to receive an organ like the one made available.

Priority could also be given to those who have registered their consent for use of organs after their demise. Perhaps, the promise of such priority would result in efforts by churches, civic clubs, fraternities, sororities, and other organizations to persuade their members to qualify for priority by registering their consent.

J. William Norman, Tallahassee, Fla.

#### Dr. Greiner responds:

It could be ethically permissible to give priority to those friends or families who made organs available or who registered consent for such use. Public notification that this was occurring would be essential. A major ethical concern would remain that those who are "unloved and unwanted" or subject to discrimination could be further disadvantaged by such a system. Not only are they held in lesser emotional and social regard, but they could be less successful in obtaining life-saving therapy.

There also are practical concerns. The next-of-kin sequence has legal merit but may not adequately address the preferences of the deceased. It may be useful to use prior family/friend donation as a "tie breaker" if two patients were otherwise equally in need of transplantation. However, the introduction of such a preference system opens the door to other considerations such as age or formal contributions to society (community service, household, or social position) as relevant deciding

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factors. Social debate on this type of proposal is warranted.

Editor's note: The responses to President Ferrante's column in the Autumn 1993 issue have poured in. (She quoted a letter from a member who decried "a quiet drift to a conservative stance" in the Society, saying, among much else, "I do not want Phi Beta Kappa to become a dinosaur clinging to the edge of the slime pit while other more tenable forms of life survive around it. We are a community of scholars, and I hope as such we welcome those unsettling questions that make us reexamine all that we were taught.") Here are some responses:

Thanks for your invitation to the members of the Phi Beta Kappa society to respond to the letter you arranged to have reprinted in the autumn issue of *The Key Reporter*....

The letter is . . . the sort of letter that one would have expected to have been written by a concerned member of an intellectual society at least ten years ago. The concerns of scholars and intellectuals have moved well beyond class, gender, race, and even "postcolonial analysis." Thus the letter represents a rather tired *cri de coeur* intellectually.

... The letter nevertheless makes a valid point, one that should be taken seriously at next year's triennial Council. I, too, am under the impression that the Society's awards and much of the material in The Key Reporter do not reflect a wide-ranging enough interest in the most challenging intellectual investigations and discussions of our time. These include some excellent probings, those that go beyond cant and rant, into the issues of class, gender, race, and imperialism. But equally important, if not more so, have been recent examinations of the role of such things as ethnicity, geography, religion, psychology, and economics in determining the quality of life. I know that the scientists among us could add several other important areas of discussion.

Incidentally, I am not completely unhappy with what our Society's guiding interests have been, for Phi Beta Kappa must keep a foot on solid ground while it considers more excit-

#### LETTERS TO THE EDITOR

#### CONTINUED FROM PAGE 9

ing, but more conjectural scholarship. The Society must, however, risk placing the foot wrong more often than it does now . . . .

Donald R. McCoy, Lawrence, Kans.

...Your correspondent hopes "to hear in the Society's rhetoric some stimulating dialogue about the real and provocative confrontation that is taking place between Western privilege and prejudice and the rest of the world's experience." It is no surprise to see the leftist cliches of the '60s, even the '30s, being recirculated. (Marxism is dead, but only America's universities haven't heard.)

If there is any confrontation in the

'90s, however, it is the confrontation of a whole planet trying to emulate and obtain what American culture (let's drop the euphemism: it isn't "Western'' privilege your correspondent is complaining about but American culture) has to offer. This means for many would-be immigrants repeated attempts to enter the United States or those industrialized European nations that are most "Americanized." . . . And if the entry points are sometimes closed, . . . the rest of the world does its damnedest to borrow, imitate, appropriate, share, or steal the values and goods which we spread out before

goods which we spread out befor them in the marketplace.

...One wonders if the writer has ever traveled, has ever heard of the vast disparities in wealth and privilege in the Third World countries. While one cannot deny the deeply rooted social prejudices in the West, I for one would not wish to trade our variety for the apparently unassailable caste systems which prevail in India, Latin America, and Japan, or the internecine tribal systems which seem to be the best that the human mind has been able to contrive throughout much of Africa and the Middle East. ...

My suggestion for your correspondent is to look at the symbol on the Phi Beta Kappa key that he/she presumably wears with pride and intellectual integrity. The hand is pointing upward, not laterally, and certainly not downward. As for *The Key Reporter*, it should continue what it has been doing, namely, seeking out the best in books and writers, irrespective of immediate social or political interest. And keep up your guard. Your summer letter is only the first shot in what will probably turn out to be an ongoing effort to politicize our organization.

Lawrence J. Clipper, New Carlisle, Ind.

... The letter is thoughtful, but I am disturbed by its tone.... Something is not right about a letter that asks Phi Beta Kappa to reconsider its assumptions, while failing so thoroughly to question its own.



Three of the Society's staff members are pictured at the December banquet. From the left are Linda Surles, whose responsibilities include dealing with the Phi Beta Kappa associations, the book awards, the Romanell professorship, and the Sibley fellowship; Barbara Howes, secretary to the executive secretary; and Mary Mladinov, the Society's administrative secretary.

> Scholarship that shakes its own foundations is not necessarily good or responsible scholarship.... In my observation, the Society is one of the few academic organizations that has refused to celebrate deconstructing and discarding the past as if the "hermeneutics of suspicion" were a self-evident good. I am all for engaging the current debates, but I would be saddened if the Society felt pressured to conform to the particular agenda that your correspondent appears to embrace.

> Thank you for inviting thoughtful reflection on these issues.

> Jobn P. Burgess, Louisville, Ky. Amen to the anonymous letter writer you quote.... I had suggested

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reviews to *The Key Reporter* and *The American Scholar* of books by Professors Bell Hooks and Edward Said, Noam Chomsky and John Berger, and Cornel West. Nothing to date. Yes it is time (overdue) to shake the foundation.

#### Evelyn Alloy, Philadelphia, Pa.

... A couple of years ago I did not renew my subscription to *The American Scholar*, in part because I thought it too "conservative" for my taste. I have recently, however, decided to renew the subscription for several reasons: the poems are first-rate, the book reviews are informative, and I now think the quarterly is not so much "conservative" as it is a voice of scholarship and cultural tradition. That voice I think is

> needed at a time when some of the prevailing cultural notions are clearly not working toward the aim of a good society.

The letter-writing member wants us to "welcome those unsettling questions that make us reexamine all that we were taught." The recent works of the philosopher Alasdair MacIntyre (After Virtue, 2nd ed., Notre Dame, 1988; Whose Justice? Which Rationality?, Notre Dame, 1988) have caused me to do just that. I have had to reexamine the liberal or radical individualism to which I acceded as a college student in the late 1960s. I am

still in a process of reexamination, and I find the publications of the Phi Beta Kappa Society most welcome and helpful as I "reexamine all that [I was] taught" or otherwise came to believe.

As one member whose profession is the practice of law, I expect from publications of the Society a reflection of solid and diverse scholarship. I want to be challenged to think, and think again. I want to be reminded of the best in our cultural tradition, and to be shown how critics are addressing that tradition. I happen to think the Society's publications are striking a pretty decent balance.

> N. Houston Parks, Columbia, Tenn.

The letter you printed . . . furthers the purposes of Phi Beta Kappa not at all.

Its writer admits to not having reviewed the relevant literature but then goes right on to accuse the Society of conservative bias and concomitant neglect of that new sacred trinity, Gender-Race-Class. Its litany against "Western Civilization privilege and prejudice" is itself a specimen of tedious ideological tub-thumping.

I submit that patient inquiry after the facts should precede allegation; that the hankering after the new yield to the quest for the true; that the Society continue to conduct its affairs in accordance with the first word of its motto, which, after all, means love of wisdom, not of fashion.

P.M. Aliazzi, Hunting Valley, Obio

I am writing to disagree with the author of the letter which criticizes the "conservative stance" of Phi Beta Kappa. Young people know how to learn, but this does not mean that they know what to learn. We do them a profound disservice in this regard if we base our recommendations solely upon the latest political fashion.

The author forgets that Plato, Jesus, and Engels had ideas which sounded, and still sound, radical. How can they

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be viewed as the defenders of "Western civilization privilege"? Many of the "new" ideas that cause us to "reexamine all that we were taught" spring from earlier authors.

Also, all new works and ideas are not necessarily better. . . . Surely we can examine and incorporate new ideas without discarding the venerable aspects of our civilization. . . .

Thomas G. Taylor, Longview, Tex.

The letter writer ... is one of a small group of people determined to take over every tiny bit of the academic world. He or she makes all the usual demands for "gender, race, class, and postcolonial inquiry" as the basic concerns of scholarly organizations and publications.

After an unsuccessful attempt (as chair of the English department) to protect the quality of our curriculum and the freedom of our teachers to govern their classrooms, I packed up my outstanding teacher awards and took early retirement from San Francisco State University. Distinguished poets, teachers, and scholars were having their courses challenged and even altered by feminists and other politically correct advocates who have no academic qualifications to

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Priscilla S. Taylor, Editor, The Key Reporter

boast of (the highest degree was ABD— All But Dissertation).

The silent agenda and the narrow ideological base of your writer are clear from such phrases as "Western civilization privilege and prejudice." Far from detecting a "drift to a conservative stance" in Phi Beta Kappa over the years. I have been alarmed at the number of radicals we have been sheltering. You should have been at an initiation a few years ago when some boat people who had made it to the United States and into Phi Beta Kappa had to sit through a speech by the head of our International Relations department who told them that the North Vietnamese and the Chinese communists were really lovely people who only appeared aggressive because they were afraid of being wiped out by our nuclear bombs. (The consternation among the initiates was dramatic. Some asked later if they had misunderstood the speaker's English). . . .

If we are dinosaurs, it is because we are still in thrall to Derrida, Foucault, and others who were tested and discarded years ago by other countries and other cultures....

Kay S. House, Payson, Ill.

... All persons see institutions from their own individual perspectives, opinions, and biases. The writer's agenda for Phi Beta Kappa's future directions speaks loudly to his/her own wishes to change the Society from supporting scholarship to embracing political change. That view is wrong for an organization such as Phi Beta Kappa, which has made its course so clear since its beginnings.

Too bad that the writer has not made a long enough or broad enough study of the literature of the Society to write knowledgeably about its objectives. Had the writer taken the time to do so, s/he would know that Phi Beta Kappa has been promoting the best in arts and sciences efforts for many, many years.

The letter reveals a person who is less interested in advancing the principles of friendship, morality, and learning that the Society stands for than in prejudicing public affairs through private institutions....

James M. Jenks, Garden City, N.Y.

If what your correspondent has in mind for Phi Beta Kappa comes to pass, I'll take the slime pit.

Alan D. White, Berkeley Heights, N.J.

# RECOMMENDED READING

B O O K C O M M I T T E E **Humanities:** Svetlana Alpers, Frederick J. Crosson, Simon W. McVeigb, Robert P. Sonkowsky, Jean Sudrann, Lawrence Willson **Social Sciences:** Earl W. Count, Leonard W. Doob, Louis F. Harlan, Thomas McNaugher, Catherine E. Rudder, Anna J. Schwartz

Natural Sciences: Ronald Geballe, Russell B. Stevens

#### **Russell B. Stevens**

**Explaining Epidemics and Other Studies in the History of Medicine.** Charles E. Rosenberg. Cambridge Univ., 1992. \$14.95.

This collection of 16 thoughtful essays, initially prepared for this or that specific treatise or symposium, ranges broadly over the institutions, practices, and personages of the U.S. medical enterprise. The reader gains an informed and more sympathetic understanding of the forces of change that molded this sector of our society over the past two centuries.

The Golem: What Everyone Should Know about Science. Harry Collins and Trevor Pinch. Cambridge Univ., 1993. \$19.95.

An odd but intriguing book—both provoking and thought provoking. The authors have selected a half-dozen or so very different examples of scientific inquiries and shown how the personalities and reputations of the persons involved have affected the debate over the significance of the data. The authors assert that science is "fallible and untidy." To any readers who may have been brought up to think otherwise, this slender volume should prove helpful.

Curators and Culture: The Museum Movement in America, 1740–1870. Joel J. Orosz. Univ. of Alabama, 1990. \$34.95.

Granted that museums, from the outset, have hardly been the sole prerogative of the natural sciences, exhibits of biological and geological items have always been prominent. In this volume, Orosz traces the development over more than a century of what we see in the great museums of the present. More particularly, he shows how the disparate emphases on public amusement, public education, and professional research ebbed and flowed, largely as a reflection of cultural shifts, during that time.

The Biological Century: Friday Evening Talks at the Marine Biological Laboratory. Ed. by Robert B. Barlow Jr., John E. Dowling, and Gerald Weissman. Harvard, 1993. \$45.

To those who know the Woods Hole MBL firsthand, this compilation of 11 lectures—each of which is dedicated to one or two pioneers and brings that particular field up to date—is arguably a must. To professional biologists of any sort it will be a rewarding source of information on the background and status of several diverse lines of investigation. To nonscientists the book may frankly prove overly technical, albeit generally very well written.

## Living Within Limits: Ecology, Economics, and Population Taboos. Garrett Hardin. Oxford, 1993. \$25.

I find this volume absolutely superb, in both content and style, addressing issues of the utmost importance. Quite possibly some people will take the author to task, as indeed he was taken to task two decades ago for his articles on "The Tragedy of the Commons" and "Living on a Lifeboat." Yet the issues raised and the cogency of the logic expressed here are well nigh inarguable.

#### **The Last Panda.** George B. Schaller. Univ. of Chicago, 1993. \$24.95.

Granted, pandas have a special popular appeal, but a book not unlike this one might well have been written about any of a substantial number of so-called endangered species. Schaller shows how essential is the intense dedication of a wildlife biologist to the successful prosecution of a given study and how the interwoven, often conflicting, pressures of political, economic, linguistic, even nationalistic

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factors gravely complicate conservation efforts.

The Mountains Next Door. Janice Emily Bowers. Univ. of Arizona, 1991. \$14.95.

The author does three things in this slender volume: shows how, to a trained eye, an apparently undistinguished area can be seen as a complex and fascinating entity; interweaves her descriptive account of field biology with felicitously phrased commentary on a wide range of topics; and provides a highly readable reminder that not all of biology is genetic engineering and DNA.

The Book of Life: An Illustrated History of the Evolution of Life on Earth. Ed. by Stephen Jay Gould. W. W. Norton, 1993. \$40.

An attractive combination, this. On the one hand, profuse illustrations, many in color, plus abundant explanatory charts characteristic of coffee-table books. On the other, a detailed and scholarly text. Here, then, is a reasonably priced volume worthy of extended and careful study.

#### Frederick J. Crosson

Metaphysics as a Guide to Morals. Iris Murdoch. Allen Lane/Penguin, 1993. \$35.

An unusual book, as current modes of philosophizing go: although addressed to all of us, its style is not unlike that of a person reflecting on the human situation in the light of a long life and an extensive and thoughtful knowledge of philosophers from Plato to Wittgenstein. As the author of a score of novels, Murdoch writes clearly and incisively, and takes philosophy to have crucial relevance to finding our way. Her theme is the centrality of moral questions (how to live) to human nature, to the good and the beautiful that we seek. Not written to be raced through (anyway, it's 500 pp.), but it opens up horizons.

#### Encounters and Dialogues with Martin Heidegger. Heinrich Petzet. Univ. of Chicago, 1993. \$34.95.

The author is an art historian who was a friend of Heidegger's for four decades, met him with some regularity, visited him at home, exchanged letters, and kept a kind of journal of their conversations, as well as of Heidegger's meetings with a Buddhist

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monk, with Jean Beaufret, and so on. No Boswell or even Eckermann, his account is modest in scope and aspiration, but it does provide an interesting sketch of one whose writings seldom disclose the human side of everydayness.

## **Culture and Imperialism.** Edward W. Said. Knopf, 1993. \$25.

One of the themes of this book is persuasive-that (not only) Western cultural forms like the modern novel. while aspiring to simply aesthetic goals, could not help absorbing and expressing the political and imperialist outlooks of their national homes. The other dimension of the book is a vigorous indictment of contemporary American imperialism, which seems quite separable from the former. The first theme is explored by analyzing novelists like Conrad, Austen, and Camus (and the composer Verdi), to exhibit the subtle ways in which the narrative form draws sustenance from empire. In its stronger form, the thesis is that the political and cultural spheres are not only connected but the same. Some of the textual argument is subtle and telling, and deserves more elaboration.

#### Tragedy and Biblical Narrative. J.

Cheryl Exum. Cambridge Univ., 1992. \$54.95.

The stories of Saul and Jephthah and David are not tragedies in the sense of the Greek dramas, but they do exhibit a tragic dimension and deal with similar themes of guilt, suffering, and evil: a "tragic vision" in Exum's language. The idea has been approached before, notably by Milton's preface to Samson Agonistes and by George Steiner, with both of whom Exum disagrees, arguing that the biblical context does not interdict the crushing tragic vision of incommensurate suffering. "Can Job ever again feel secure?" she asks rhetorically at the end of considering his story. I don't think that requires a negative answer, but the analysis of the stories is close and stimulating.

## Nietzsche and Modern Times.

Laurence Lampert. Yale, 1993. \$35. The author of a fine study on Zarathustra here essays first a Nietzschean reading of the history of early modern philosophy, specifically of Francis Bacon and Rene Descartes, and then a long and sinuous analysis of Nietzsche's vision of the end of philosophy and its sequel. In both parts, a few brief texts are subjected to extremely close interpretation, relying on the hermeneutical premise that the authors could not say openly what they thought, primarily because of the social power of religious authority and belief. The readings are interesting and suggestive, but the interpretation is so colored by fealty to Nietzsche's position that difficulties receive scant attention. Nonetheless, the exegetical labor is helpful for anyone who wants to read philosophers with care.

#### **The Metaphysics of Death.** Ed. by John M. Fischer. Stanford, 1993. \$45; paper, \$16.

A balanced collection of 17 contemporary essays on something everyone needs to think about. The topic, as the title perhaps ponderously suggests, is not ethical questions about euthanasia and such, but about just how death should or can be rightly described and thought about and assessed. The authors range from Woody Allen to Bernard Williams and Thomas Nagel. A number of benchmark articles are included, and any reader is bound to learn to think somewhat more clearly about what lies ahead.

#### **The Human Person.** David Braine. Notre Dame, 1992. \$32.95.

This long investigation of the psycho-physical unity of animal organisms, including humans, argues against both dualist and materialist interpretations of perception and behavior (agency), basing itself on a largely Aristotelian-Wittgensteinian conceptual framework but very much elaborated in the categories of contemporary debate. In the course of such elaborations, Braine succeeds in reframing some hylomorphic conceptions in ways that disclose fresh and relevant aspects in ways of thinking about sentient things and their modes of being. Probably not for the general reader.

#### Jean Sudrann

Lafcadio Hearn and the Vision of Japan. Carl Dawson. Johns Hopkins, 1992. \$24.95.

How to understand Japan and the Japanese? The question is as compelling now as it was in 1890 when Hearn arrived in Japan, where he lived for the last 14 years of his life, teaching

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### Key Reporter Book Committee Retirements, Appointments

Both American historian Richard N. Current and European historian Madeline R. Robinton have recently retired from *The Key Reporter*'s Book Committee, after long and distinguished service. Three new members have been appointed: Svetlana Alpers, professor of art history at the University of California at Berkeley; Louis F. Harlan, professor of history at the University of Maryland; and Simon W. McVeigh, senior lecturer in musicology at Goldsmiths' College, University of London.

Alpers is the author of *The Art of Describing* (1983) and *Rembrandt's Enterprise* (1988), among other works. Harlan won the Pulitzer prize and the Beveridge and Bancroft awards in 1984 for volume 2 of his *Booker T. Washington*. McVeigh, a composer, conductor, and violinist, is the author of *Concert Life in London from Mozart to Haydn* (1993).

Japanese students, becoming a Japanese citizen, and taking a Japanese wife. Hearn kept reformulating that "vision of Japan" which, Dawson acknowledges, simply reflects the limited capacity of a late-19th-century Westerner to experience and communicate fully his own developing responses. True enough. But Hearn has to be acknowledged among the best of those who tried, especially because he had no racial or political agenda.

Concentrating on the form of Hearn's writings, Dawson explores his attempts for both a "continuous self" and a stable relationship with the foreign culture. Hearn's account of his ascent of Mount Fuji not only leaves a lively impression of high adventure but also becomes a moving metaphor of human trial that culminates in the "immense poetry" of the view from the summit, embracing both space and time.

So powerful an autobiographical account along with equally powerful retellings of ancient Japanese folklore and recorded reveries (e.g., "Ulalation," in which the howling of a dog becomes for Hearn a metaphysical contemplation of ancient memories and Buddhist ways, accompanied by CONTINUED ON PAGE 14



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the dog's litany of fear and unease) amply illustrate the effectiveness of Hearn's prose. Dawson also finds an inner coherence in Hearn's work, linking the otherwise loosely connected fragments of a single essay or a single volume.

Although Hearn's reputation was high, both abroad and later in Japan, his growing disillusion was marked by his continuous withdrawal from the Japanese society he so revered and his despair over the increasing fragility of the values of old Japan and the structure they supported.

#### Jane Austen among Women. Deborah Kaplan. Johns Hopkins, 1992. \$29.95.

Kaplan's book on Jane Austen is a welcome addition to studies by those feminist historians and literary critics who find the works of Jane Austen often resistant to their search for "the female voice." Kaplan also knows the extent to which the female voice supports Austen's immediate community, the patriarchally organized, economically privileged gentry who pray together and vote together, and for whose women marriage is the safest, almost the only, way to escape genteel poverty. However, Kaplan also suggests that Austen's acceptance of the patriarchal concept of the female domestic role in the larger community was coupled with support from the women's culture existing within the larger community. This female support network helped to define the significance of women's domestic work and permitted women to evaluate the cost of their subordination, lack of freedom, and shortage of cash.

Although this support, made available through diaries, letters, and visits, soothed anger and disappointment, complaints were never voiced where the gentlemen of the community could hear or overhear. For these gentlewomen, dependent on fathers, brothers, and other male relatives, maintenance of their status as gentry was, perhaps, even more important than their deprivations.

In her treatment of Austen's rejection of a most desirable marriage proposal, Kaplan demonstrates the importance of this "cultural density" by arguing for Austen's sense of the positive aspects of spinsterhood, evidence for which is clear in the available letters.

The final section of the study focuses on Austen's early work, published and unpublished, climaxing with a discussion of *Pride and Prejudice*, first as it has been read by 20th-century feminist critics, then as Kaplan reads it in the context of Jane Austen's world, where gentlewomen prized the culture of the hierarchical society, recognizing that women's society may be "against" patriarchal rule but also "belongs to" that larger community.

#### Terrible Sociability: The Text of Manners in Laclos, Goethe, and James. Susan Winnett. Stanford, 1993. \$35.

Through her selection of novels spanning three centuries of European civilization, Winnett considers each author's creation of a text dramatizing the use of mannerly forms of the world to effect unmannerly ends. Thus the dual function of manners in each of the novels (Les Liaisons Dangereuses, Die Wablverwandtschaften, The Golden Bowl) becomes that of conserving the proprieties of the good society even though it is precisely those manners that enable the plots of desire.

In Les Liaisons Dangereuses these plots effect the doom of the two major female figures, one playing the worldly game in a desperate effort to outwit it, the other conforming to the gentility of conservative manners in an equally desperate effort to avoid being forced into the game. Clearly, Winnett argues, Laclos expresses through this no-win situation his knowledge of inevitable success for the libertine male. Goethe, in his novel, introduces morality into the struggle with manners, leaving his protagonists in a landscape of sociability while the plot hovers on the edge of the gothic, creating a narrative of renunciation, sterility, and death. This, for Goethe, is the inevitable result of "the dark passionate necessity" of human emotion, uncontrollable by mannerly society. Then, in The Golden Bowl, James reverses the relationship between social landscape and plot as Maggie Verver successfully manipulates the world of manners to achieve the moral triumph of igniting her husband's passion, even as James delineates the fundamental weakness of the mannerly world.

From the power of the libertine

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male to the triumph of the moral female, Winnett skillfully explores complexities and accounts for persistent influences and reversals of attitude in her chosen works. Sometimes the complexity of her material seems intractable—as in her discussion of Goethe; sometimes one wishes she would forgo citing the opinions of all her scholarly predecessors. Nevertheless, what remains is the sense of an independent mind engaged in a fruitful struggle with difficult and, above all, extremely interesting material.

#### **Robert P. Sonkowsky**

The State, Law and Religion: Pagan Rome. Alan Watson. Univ. of Georgia, 1992. \$30.

Watson's uncluttered prose helps advance our understanding of important but elusive aspects of Roman legal history, such as the omission from the Twelve Tables of provisions concerning state religion and the relationship between the language of religious vows or prayers and legal contracts. A lean book (90 pp. plus 26 pp. of appendix, notes, and index of texts) for both scholars and amateurs of legal, religious, and social history.

Culture and National Identity in Republican Rome. Erich S. Gruen. Cornell, 1992. \$37.50.

Readers who may have heard Gruen as a Phi Beta Kappa Visiting Scholar a few years ago, as well as any others interested in the reception by Rome of Greek culture in the third and second centuries B.C., will welcome this book, which repudiates the simplistic analysis of this topic found in books such as manuals of literary history. Gruen's thesis is that the nobility associated themselves with the absorption into Roman culture of Hellenic traditions, art, and literature in such a way as to emphasize distinctively Roman values. Those who appear in a new and clearer light include Cato the Elder; Terence, especially in the prologue to his play The Mother in Law; and Lucilius the satirist, who saw and attacked the excesses of those nobles who adhered ineptly to the Hellenic heritage.

#### Community and Society in Roman Italy. Stephen L. Dyson. Johns Hopkins, 1992. \$39.95.

Just as Greek historical studies were in the past deficient because historians focused exclusively on Athens, so our understanding of the ancient Romans has suffered from neglect of the hundreds of small towns in ancient Italy. Inasmuch as this neglect started with the ancient Roman authors themselves, who concentrated on life in the capital city of Rome, Dyson goes beyond the literary evidence, using inscriptions, archaeological studies, and anthropological methods. The result of his careful analysis and reasoned articulation is a marvelous account of municipal and rural lifestyles in Italy in their evolving relationships to Rome from the end of the Punic Wars to the beginning of the Gothic-Byzantine wars in the sixth century A.D. Dyson interprets the evidence and synthesizes important studies to acquaint the reader with persons at all social levels; their professions; the cemeteries, shops, and other buildings of the towns; and complex social and political implications, leading toward the Empire and early medieval developments.

Life of the Ancient Egyptians. Eugen Stroubal. Tr. by Deryck Viney. Photographs by Werner Forman. Univ. of Oklaboma/Opus Publishing Ltd., 1992. \$42.50.

Lovely photographs (289, most of them in color) illustrate this account of the daily life not of the pharaohs but of ordinary ancient Egyptian people. The English translation of the commentary flows along in clear, interesting prose, providing comprehensive coverage from copulation and conception to death and passage into the netherworld. Archaeological and textual sources are mentioned and illustrated but not dissected or argued in detail for specialists. Rich in details about childhood, education, courtship, the position of women, housing, dress, cosmetics, medicine, farming and other occupations. Not merely for the coffee table.

#### **Bisexuality in the Ancient World.** Eva Cantarella. Tr. by Cormac Ó Cuilleanáin. Yale, 1992. \$27.50.

Terms like *bisexuality* and *bomosexuality* can evoke false connotations if used outside cultural contexts. Cantarella discusses primarily male homosexuality (but sexuality that is not necessarily exclusively "homo-") in pagan Greece and Rome and secondarily, as well as more speculatively (because there is less evidence), female homosexuality. She also demonstrates the influence of the Greek and the Judeo-Christian traditions about homosexuality upon the Romans. She argues compellingly, and only rarely tendentiously, about social, psychological, and political implications, citing literature, vase paintings, graffiti, dipinti, inscriptions, legal texts. The most important and interesting of her goals are to provide insight into the effects of changing trends and rules governing homosexuality on relationships among men and women and to show the degree of coercion exerted and suffered. To say the least, this is at a far remove from mere antiquarianism; indeed, it has decided relevance today.

#### Lawrence Willson

A Scholar's Conscience: Selected Writings of J. Saunders Redding, 1942–1977. Ed. with an Introduction by Faith Berry. Univ. of Kentucky, 1992. \$37; paper, \$15.

In a degenerate age, when most scholars have their eye on the main chance, it is refreshing to come across one who had a conscience that resisted the lure of pelf and fashionable trends in criticism and racial politics. Redding was a Negro (the term he preferred to the originally pejorative "black" or the later fashionable "Afro-American"), a teacher and writer in a time of racial turmoil, who did not grow an Afro hairdo or raise his fist in support of Black Power or beamingly proclaim that "black is ' Although he became beautiful.' known as "the dean of Afro-American scholars," he declared that "the concept 'Black Studies' . . . is of questionable validity as a scholarly discipline," and he rejected the idea of segregating so-called black literature and labeling it as such. His aim as teacher and critic (who published more than a thousand reviews of books written by writers of all colors) was to emancipate the Negro artist from any category, especially the racial one. "The development of his thought and aesthetic was pluralistic and assimilationist, a pattern that was neither Eurocentric nor Afrocentric, but Americentric." Redding's work I heartily recommend to his fellow Phi Beta Kappas, whose company on terms of equality he was denied for 15 years after his election to the Society, says his editor, because he was black.

Intellectual Memoirs, New York 1936–1938. Mary McCarthy. Foreword by Elizabeth Hardwick.

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#### Harcourt Brace Jovanovich, 1992. \$15.95.

McCarthy's final volume of autobiography is a slim one and superficially deceptive, starting with its title, for her memoirs are by no means "intellectual" unless one is eager to explore the difference between "Stalinist" and "Trotskyite," which she mentions a few times but drops with a thud. Her most intellectual activity was her study, deeply pursued, of "the sexual equipment of the various men I made love with" and their "amazing differences, in both length and massiveness." Contemporaries of McCarthy (she was born in 1912, into the generation of the reviewer) who were, however peripherally, aware of the literary establishment of the 1930s and the aura of glamour that was reflected by, for example, such knights and ladies of the Algonquin Table Round as Dorothy Parker and Robert Benchley, will find much here to discredit the vaunted "sophistication" of the time (characterized by constant drunkenness, "colossal" hangovers, and "free" love, which exacted at last a heavy price). Those who at the time were envious can now thank their stars that their engagement was no more than peripheral, for the book might well be subtitled "Memoirs of Love and Squalor," with the squalor predominant. (McCarthy was first bedded by Edmund Wilson, subsequently her husband-although "I never loved him," "he was too old and too fat"-when she was drunk; and she agreed to marry him because he could help to advance her career and at the same time give her the child she wanted, neither of which was possible for the man she loved and lived with, who was, almost incidentally, already married.) The life described was cheap, but the book is not. Hardwick calls it "a jewel of startlingly cleareyed autobiography," and so it is.

#### The Mind of the South: Fifty Years Later. Ed. by Charles W. Eagles. Univ. Press of Mississippi, 1992. \$16.95.

The principal virtue of this collection of papers presented at a symposium at the University of Mississippi in 1991 is its attestation to the fact that *The Mind of the South* is an enduring classic that can inspire a heated altercation between any two (or a dozen) southerners who happen to discuss it. In the first place, they will not be able

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to categorize it: Is it history, sociology, literature, or an amalgam of all three filtered through the oddly unique personality of its author, Wilbur J. Cash? Whatever it is, some will dismiss it as the product of "a poor boy from the hills," "a Southern white man of the lower middle class," whose vision was limited to the Carolina piedmont from which he sprang. Almost every critic will agree that the failings of the book are "legion" for "He ignored the black mind. He exaggerated continuity. He caricatured the church. He read the present into the past." He was manifestly wrong in portraying the Civil War as "a unifying, healing experience" and in accepting without question "the myth of Southern feminine purity" and "the crippling ideas of honor" that beset the society. "Current historians have no taste for such irrationality," says another critic. "To be seen as an ally of Cash is an embarrassment." The discussion of these and other facets of Cash's classic (and only) book is always lively and absorbing, and the critics do at last come to agree that "for all [its] shortcomings, Cash wrote a book of enormous and enduring emotional power," emerging from a passionate identification with the region.

**Frost: A Literary Life Reconsidered.** William H. Pritchard. 2d edn. Univ. of Massachusetts, 1993. \$14.95.

The Robert Frost depicted by Lawrance Thompson in his controversial biography of Frost will not be replaced by the comparatively benign figure of Pritchard's friendly imagination (as I must call it) until those of us who knew Thompson's Frost have been long laid away and the poet has receded as a person into history, where his arrogance, rudeness, and insensitivity will no doubt be forgiven as a quaint New England crustiness, the acting out of an expected role. Pritchard to some extent disarms the critic by emphasizing that this is a literary biography, implying that the "facts" of the poet's physical life are of secondary significance, as of course they are-or will be, after a while.

Perhaps it is enough to say, with Bernard DeVoto, that Frost was "a good poet but a bad man." He lived too long and he talked too much—but if I continue on that line I shall ruin my enthusiasm, mild as it is, for Pritchard's book, which surely points the way for future biographers to travel, for future generations of readers will give Frost his due ranking as one of the nation's most distinguished writers. Thompson's biography was no doubt too censorious of the man; Pritchard's maybe a little too generous and "understanding."



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