

BOOKS

Double Jeopardy

BY ELLEN MAGENHEIM

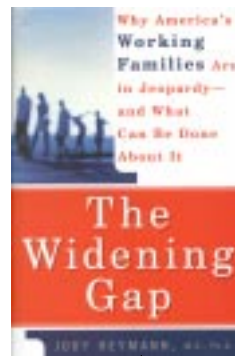
Over the last 50 years, many changes have occurred at the intersection of family and work life. Foremost among these interrelated changes are the increased participation of women—including mothers of very young children—in the labor force, the rise in the number of single parent families, and the increase in dual-worker families. These arrangements bring with them a range of changing needs.

In previous generations, mothers at home took care of children when they were very young or when they stayed home from school because of illness or school vacations. In previous generations, women at home also took care of frail or ill elderly relatives. Women were able to provide these caring services because they were not simultaneously meeting the demands of the formal labor market. Fathers, who might have helped children with homework, are now often unable to do so because of the rise in nontraditional work hours as well as constantly changing work schedules. Parents working long hours and odd shifts not only have limited time to interact with their children, they also

face the problem of finding reliable child care for young children.

In many households, these changes in family structure and work arrangements have created challenges for parents to simultaneously and successfully meet their obligations to families and employers because these new directions have not been matched by adjustments in the institutions—including schools, the workplace, and the government—which might provide support for the changing needs of working family members. This mismatch, and the myriad problems that arise as a result, are the focus of Jody Heymann's book *The Widening Gap: Why America's Working Families are in Jeopardy and What Can Be Done about It*, a disturbing examination of the problems faced by working families in America today.

At first glance, it may seem the problem is a matter of money; that is, if parents had more money, they could purchase quality child care or find a nurse to care for elderly parents. More money would help, but as



Heymann persuasively shows, it would not solve all the problems families face, which are as much a matter of time as money. For example, parents cannot get off from work to meet with a teacher, or they are at work rather than at home in the evening and can't help a child with homework.

In examining the shortages of time and money that families face, Heymann takes a broad view of how these needs change during a lifetime and how they vary across different types of families, such as those with special-needs children and those of different social and economic classes. Though some families experienced many of these problems in the past, what is new is the extent to which these stresses have become commonplace.

Heymann, who is a professor at Harvard University and director of policy for the Harvard University Center for Society and Health, builds her arguments on a vast and rich array of data, some of which were collected specifically for this study.

Statistical evidence on the

relationship between work obligations and family needs comes from the National Survey of Daily Experiences (Daily Diaries Study). The National Longitudinal Survey of Youth provides information on work schedules and benefits. Data on working conditions, work autonomy, and work-family interactions come from the Survey of Midlife in the United States. The author integrates the data from these surveys with ethnographic data collected from the Urban Working Families Study, in which more than 200 working families, child care providers, and employers were interviewed. Additional data came from the Baltimore Parenthood Study and the National Study of the Changing Workforce. The breadth and depth of these data give this book a vividness often lacking in social science analyses.

Heymann paints a portrait of parents who feel they are not able to devote themselves adequately either to work or to family. Statistical evidence revealing a lack of workplace flexibility is supplemented—and brought to life—with individual reports of the accommodations and compromises parents make to try to keep their jobs while raising their children, often in ways they find unsatisfactory on both counts.

Heymann shows how the

problems have been addressed in the past, which is mostly not at all. To a large degree families and businesses have been left to deal with these problems as best they can. Relying on individual initiative is a very American problem-solving approach; and the United States, unlike other industrialized countries, relies heavily on the private sector to meet the needs of working families. Heymann concludes that individual families are not doing a very good job of it.

Heymann suggests some solutions: lowering the age at which the government begins educating children, ensuring flexible work schedules that allow parents to participate in their children's education, and offering all-day and year-round schooling. Her discussion of potential solutions, however, reveals the book's only weakness: Heymann does not adequately consider what the tradeoffs are in pursuing her proposals and what barriers to implementation might be encountered.

On the face of it, her proposals indicate attractive new directions for policymakers and private sector leaders. And it seems reasonable to assert that, when parents have more flexibility, more workplace autonomy, better benefits, and therefore more resources, their children will benefit from their education.

But Heymann does not determine whether there is the private and public will to commit to these changes and above all to pay for them. She would have strengthened her argument by giving examples of initiatives by the private and public sectors, separately or jointly, that have helped workers simultaneously meet their needs at home and at work.

The Widening Gap integrates a range of social science approaches and analyses in a way that will be informative for readers already familiar with the literature on family and work. It should also be accessible and valuable to readers new to this topic. While her conclusions would be enriched by a clearer analysis of inherent tradeoffs, this work provides a thorough foundation upon which to conduct these political and economic arguments.■

Jody Heymann, *The Widening Gap: Why America's Working Families are in Jeopardy and What Can Be Done about It* (New York, NY: Basic Books, 2000); 254 pp; cloth, \$22.40; paper, \$15.00.

Ellen Magenheim

Professor

Department of Economics

Swarthmore College

Swarthmore, Pennsylvania

Culture Shock

BY JOHN CROSSMAN

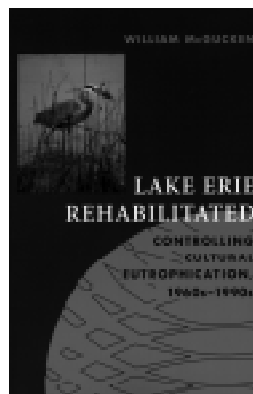
In *Lake Erie Rehabilitated*, historian William McGucken offers an insightful account of the rehabilitation of Lake Erie during the 30-year period from 1960 to 1990. This book is an outgrowth of two previous books—*Scientists, Society and State: The Social Relations of Science Movement in Great Britain, 1931-1947* and *Biodegradable: Detergents and the Environment*—that deal with the impact of technology on the environment. Building on these earlier works, McGucken offers a clarifying description of eutrophication—the process by which water becomes overloaded with nutrients, deficient in oxygen, and ultimately incapable of supporting a diverse sports fisheries. He also traces its devastating impact on the Lake Erie ecosystem and the steps taken to improve water quality in this once-pristine body of water. McGucken presents this information within a historical context of regional development and describes the key issues, persons, and events that successfully challenged the oft-held belief that pollution was an unavoidable consequence of economic development.

McGucken's choice of Lake Erie to illustrate the need to better control nutrient concentrations in our aquatic systems is timely. The U.S. Environmental Protection Agency's most recent

water quality report to Congress cites nutrients such as phosphorus and nitrogen from lawn and crop fertilizers, sewage, manure, and detergents as the leading cause of impaired water quality in lakes and estuaries, and the second leading cause of problems in rivers. Lake Erie is also important from a historic perspective. The severe pollution that led to the Cuyahoga River bursting into flames in the summer of 1969—and the declaration that Lake Erie was a 'dying sinkhole' as a result of sewage and chemicals—precipitated a public outcry that led to the passage of the 1972 Clean Water Act.

The health of Lake Erie also posed a challenge to the nation's commitment to conservation and environmental protection. U.S. Secretary of Interior Stewart L. Udall expressed this poignantly when he said, "If we can lick the water pollution problem in the next few years on Lake Erie, we can lick the problem nationwide." McGucken describes this interest in the environment in a concise overview of the environmental movement in the first chapter, which sets the stage for the ensuing chapters on human-caused, or cultural, eutrophication of Lake Erie.

The author deftly navigates the technical and political



complexities of eutrophication in an understandable manner. He does a good job of weaving the results of scientific investigations into the larger societal debate over nutrients and water quality, examining the critical participation of the detergent

manufacturing industry, and recounting the industry's ultimate decision to develop alternatives to phosphate builders used in detergents, a major contributor to nutrient loading that led to algal blooms, aquatic weed infestations, oxygen depletion, and fish kills in Lake Erie. The author also does a commendable job of capturing the dynamic interplay between government, industry, the scientific community, and an informed public in considering Lake Erie as a functioning ecosystem.

The narrative on the contribution of nonpoint sources of pollution to overall nutrient loadings is also informative. This understanding continues to influence local, state, and national programs that deal with issues such as confined animal feeding operations, storm water runoff, fertilizer application, and land use practices. McGucken also meticulously describes the precedent-setting negotiations between the International Joint Commission, the United States,

and Canada in developing the Great Lakes Water Quality Agreement of 1972. He cites key documents and summarizes the complex set of negotiations, denials, reversals, and the ultimate acceptance of the importance of reducing phosphorus loads and concentrations to reverse the eutrophic condition of Lake Erie. He also exposes the dynamics of the major antagonists in the debate and the role that an informed public played in keeping pressure on decision

makers to come up with a workable solution for the environmental problems in the Lake Erie ecosystem.

While *Lake Erie Rehabilitated* may not be of interest to the casual reader, I would highly recommend it to students in environmental studies, lake managers, environmental professionals, water quality specialists, policy analysts, and legal scholars. I would also recommend it as a valuable reference text for anyone interested in freshwater

ecosystems, watershed protection, water quality standards, and intergovernmental relations.■

William McGucken, *Lake Erie Rehabilitated: Controlling Cultural Eutrophication, 1960s - 1990s* (Akron, OH: University of Akron Press, 2000); 308 pp.; paper, \$29.95.

John Crossman
Hemet, California

The Toll of Sprawl

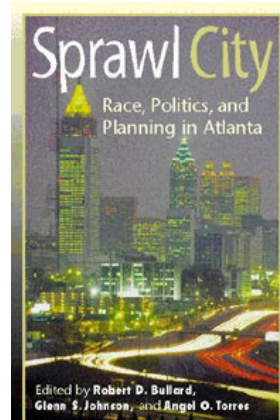
BY MARY R. ENGLISH

Sprawl affects everyone... but some more than others. Intuitively, that statement makes good sense. Sprawl adversely affects not only the look of the landscape, but the well-being of people—particularly those who do not have a fat wallet or white skin. For everyone, sprawl exacerbates a well-known litany of woes: long commutes, traffic congestion, air and water pollution, the loss of farmland and other open space, and, in many cases, an eroded sense of community.

But for low-income people and people of color, often trapped in the city by circumstances beyond their control, the effects of sprawl can be far worse. It can mean de facto housing segregation, inadequate schools, and a crumbling urban

infrastructure, as others flee the inner city and its tax revenues decline. It can mean living in the midst of ugly, sometimes dangerous, brownfields—lots that used to house commerce and industry but now sit idle, often contaminated with chemical residues, as businesses relocate to greenfields on the metropolitan area's periphery. It can mean daily commutes to jobs far outside the city, relying on public transit systems that make the trips impossibly long or simply impossible. It can mean seeing their neighborhoods bisected by new highways that they'll have little occasion to use if they cannot afford a car or gas.

In *Sprawl City*, the editors and contributors pull out all the



stops to document the adverse effects of sprawl on low-income people and people of color. This important book is marred, however, by overkill, including too many arguments and statistics, not all of

them germane.

In the first chapter, for example, co-editors Robert D. Bullard, Glenn S. Johnson, and Angel O. Torres extensively discuss the prevalence of toxic release facilities in areas inhabited mainly by people of color. While disturbing, this is a digression from the book's central thesis. Does sprawl determine the locations of these facilities, or do other factors?

Moreover, do toxic releases adversely affect the health of people in the immediate neighborhoods, or that of people downstream and downwind? Similarly, does air pollution from multiple sources, including vehicular exhaust fumes that increase with sprawl, affect mainly low-income people and people of color, or are the effects felt throughout a region?

The book would have been stronger if the editors had chosen to carefully document a few, clearly compelling reasons to think about sprawl as an equity issue that will have immediate ramifications for disadvantaged people and, in the years to come, adverse socioeconomic ramifications for society as a whole. Consider this statistic cited in the introduction: today, one out

of every four children under the age of six in the United States lives beneath the poverty level, and 58 percent of them are children of color. This is an alarming fact that bodes ill, as many of our nation's children grow up in decaying, depleted surroundings. The point would have been worth developing in a chapter devoted solely to impoverished children and the effects of sprawl on them.

The book would also have been stronger without the argument that African-Americans are the worst off of the worse off. While the roots of some current conditions lie in long-standing patterns of discrimination, belaboring the point that African-Americans are the worst off is contentious and divisive.

The co-editors note that

“environmental justice principles are not meant to shift risks among populations but rather to identify alternatives that may mitigate the impacts of potential disproportionately high and adverse effects.” To the extent that the book lives up to these principles, it is a success.■

Robert D. Bullard, Glenn S. Johnson, and Angel O. Torres, eds., *Sprawl City: Race, Politics, and Planning in Atlanta* (Washington, DC: Island Press, 2000); 236 pp; cloth, \$30.00; paper, \$13.00.

Mary R. English

*Energy, Environment and Resources Center
University of Tennessee
Knoxville, Tennessee*

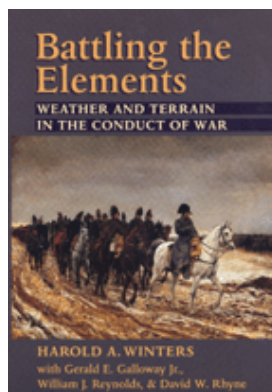
Stormy Weather

BY JONATHAN M. HOUSE

For historians, warfare often appears to be decided by generalship, morale, weapons, tactics, and logistics. Yet every soldier would admit that the best armies may be hampered and even defeated by adverse weather and terrain. Napoleon's disastrous retreat from Moscow in 1812 is perhaps the most famous example of how climate and distance can neutralize the most brilliant commander.

It is this complex of factors that fascinates Harold Winters,

professor emeritus of geography at Michigan State University, and his co-authors, retired army officers who have taught the subject at the United States Military Academy. In *Battling the Elements*, they explore different aspects of weather and environmental obstacles—such as typhoons, mud, forests, rivers, and pacific atolls—that have affected the outcome of a battle or a war. Each chapter describes



the scientific basis for one of these elements and then illustrates the results by two, often contrasting, military events. For example, Chapter Seven, “Troubled Waters: River Crossings at Arnhem and Remagen,” describes

the manner in which rivers erode soil from one region and deposit that soil farther downstream. The resulting terrain factors hampered the 1944 Allied

invasion of the low countries—known as Operation Market-Garden and made famous as “A Bridge Too Far”—while allowing U.S. forces to cross the Rhine River in March 1945.

Much of the science involved—the tectonic plates and glaciers that shaped the continents, the monsoon patterns that dominate Asian weather, and the vast expanses of Eastern Europe that neutralize the warming effects of the Gulf Stream—is familiar to the well-read lay person. Rarely, however, has a popular study succeeded in showing the general reader how these scientific theories and technical concepts help determine and explain specific events in history. With no apparent sacrifice in scientific precision, Winters and his colleagues make their subject clear and accessible

to almost anyone.

Apart from a few typographical errors on dates, perhaps the only drawback to this fascinating survey is the occasional failure to explain why commanders erred in assessing weather and terrain. In Chapter One, for example, the authors describe the genesis of the window of favorable weather that permitted the Allied invasion of Normandy on June 6, 1944. The account observes that the Germans lacked the meteorological information available to General Dwight Eisenhower, but fails to provide the explanation—with the prevailing winds moving from west to east, and without effective weather observation stations in the Atlantic, the German commanders were blind to the weather systems that were approaching the coast of occupied France.

Such omissions are minor

flaws in a generally superior work. Soldiers and historians will certainly profit from perusal of this study. Moreover, even general readers with little interest in military history can develop a broader and more analytical understanding of geography and the effects of terrain and weather on the conduct of war.■

Harold A. Winters, with Gerald E. Galloway Jr., William J. Reynolds, and David W. Rhyne, *Battling the Elements: Weather and Terrain in the Conduct of War* (Baltimore, MD, and London, UK: 2001); 336 pp.; paper, \$18.95.

Jonathan M. House
Gordon College
Barnesville, Georgia

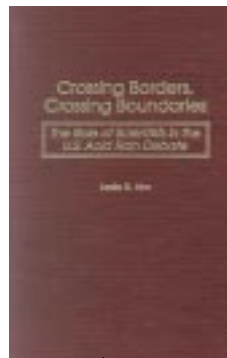
Acid Fallout

BY RALPH M. PERHAC

Throughout the decade of the 1980s, air quality, specifically acid rain, was perhaps the primary environmental issue facing the nation, a concern that held the rapt attention of scientists, legislators, and the public. Much has been written about the role science played in shaping acid rain policy, but as a participant in the acid rain debate, I know of no other work so comprehensive, stimulating,

or well researched as Leslie R. Alm's *Crossing Borders, Crossing Boundaries*.

The debate over acid rain raises a number of questions about the ties between science and public policy. Can scientists be objective when assessing the implications of scientific data? Should they advocate specific policy options, and do they act out of self-



interest in doing so? Do scientists lose credibility if they go beyond simply reporting data? Do international biases play a role in policy advocacy?

Alm seeks to discover when, where, and how scientists entered the policy process and what effect they had. Yet *Crossing Borders, Crossing Boundaries* is not a

primer on the science of acid rain or the ecological impacts of acidic deposition, nor is it an apologia for the strong advocacy or nonadvocacy position taken by many scientists. And it in no way criticizes or condemns legislators for not making use of the wealth of scientific information available on acid rain.

For Alm, the central issue is whether scientists should or should not advocate policy, a question that was argued with vigor during the 1980s. He based his research in part on a rich source of written material, ranging from peer-reviewed scientific papers to popular newspaper writings. In addition, through more than 100 personal interviews with the scientists involved in the debate, Alm clearly demonstrates the polarization of opinion among scientists. Many expressed a wish to remain pure by not taking any public stance on policy. Others felt an obligation to interpret data in terms of policy options. Furthermore, natural and social scientists held different views on the question. These revelations shed light on the problems decision makers face when confronted with a scientific community sharply divided between advocacy and nonadvocacy positions. I'm tempted to say that two chapters, "Science, Scientists, and Acid Rain," and "Scientists, Policy Makers, and Acid Rain," should be required reading for all policy people dealing with issues in which science plays a prominent role.

Alm also compares the different role scientists played in policy debates in the United

States and Canada. Although the positions taken by scientists in the two countries were generally compatible, the approach to policy was noticeably different. Perhaps for the first time, Canadians became involved with, and expressed opinions about, internal U.S. policy, a subject that has previously received little discussion.

Because of strong disagreement among scientists over their role in policy, arguments among them were frequent and heated. This, of course, compounded the difficulty policy people faced when trying to understand relevant science. Their task was not ameliorated when scientific findings were presented to them in too much technical detail. Alm suggests that scientists would do well to focus more attention on how data are presented. He also maintains that natural scientists should use social scientists as intermediaries, as they seem to be more adept at framing issues in ways useful to policy makers.

The problem of using science to inform the policy-making decision is not trivial—in part because scientists and policy makers are not always clear about what is and is not a strictly scientific question. Consider the question of whether atmospheric concentrations of 120 parts per billion of ozone are sufficiently low to protect human health. At first, this may seem a straightforward scientific question, but it is not, unless one first specifies an acceptable level of risk. Tell me the risk you will accept, and I will answer the question scientifically. Otherwise, I am giving little more than opinion.

Alm does not pretend to have easy answers to hard questions, nor does he take a stand on whether scientists should serve as advocates in policy debates. He does warn, however, that those who do advocate policy should recognize the danger that their credibility may be questioned.

Regardless of their proclivity, scientists should be aware of how their approach to environmental concerns differs from that taken by policy people. Scientists could perform a worthwhile service by identifying the extent of consensus that exists on an issue and transmitting that information to policy people in a meaningful and comprehensible manner.

As a nation, we face no shortage of environmental issues, many of which lend themselves to scientific inquiry. As a result, science will continue to play a role in policy for the foreseeable future. *Crossing Borders, Crossing Boundaries* provides an excellent description of the process and its importance in the legislative process. I highly recommend it to policy makers, to concerned citizens, and especially to scientists who work with environmental issues.■

Leslie R. Alm, *Crossing Borders, Crossing Boundaries* (Westport, CT: Praeger Publishers, Greenwood Publishing Group, Incorporated, 2000); 160 pp; cloth, \$55.00.

Ralph M. Perhac

*Director, Environmental Research
Electric Power Research Institute,
Retired
Raleigh, North Carolina*