Sustainable Communities Review

Merging Traditional Concerns
for the Environment
with the Social and Cultural Aspects
of Community Life

Sustainable Communities Review

Contents

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The quality and quantity of water continue to fuel debate in Texas and Mexico. The Dallas/Forth Worth metropolitan region is exploring various avenues to secure water from Oklahoma and Fannin County, two hours north and northeast of Dallas. Residents from both areas are fighting to save their water and preserve their "way of life." The proposed $1.7 billion Marvin Nichols Reservoir project for Fannin County would cover up some 276,000 acres of forest land. One argument is that conservation could make the expensive project unnecessary. Again, in the Rio Grande Valley, the water dispute between Mexico and USA may come down to introducing conservation south and north of the border.

In the Lerma-Chapala Watershed east of Guadalajara, some steps forward are occurring. The US/Mexico Chamber of Commerce received funds to clean up the tannery industry on the Lerma Watershed. Todos por Chapala has created an initial network of "sustainable community promoters" in eight villages around Lake Chapala. UNT students assisted local residents to address reforestation and other community issues in May of 2002 (see previous issue regarding Guadalajara area). Farther south, UNT cooperated with the University of Colima and City of Manzanillo to hold a workshop on "Eco-tourism and Sustainable Communities"(May 29–31), and one issue involves the pollution of the Pacific Ocean around Manzanillo.

In March, our colleague Isidor Wallimann from Basel, Switzerland, came by to discuss the weaknesses of globalization, especially for the 4.5 billion people who seem to be becoming poorer by most accounts, while 1.5 billion become richer. Recalling Dr. Wallimann's previous articles in *SCR* on "social economy," we learned that the "Social Economy Network" of Basel is expanding to meet the needs of the unemployed in Basel. Dr. Clower from UNT has been working with colleagues in Northern Ireland, who have funding from the European Union to develop a "social economy network" for the unemployed. Social economy is an alternative approach to economic and social well-being may have some merit for meeting the challenges created by globalization.

In this issue we offer philosophic discourse, information on the problem in Africa and the USA, and, finally, some ideas on how to strengthen local initiatives. Two competing ways of thinking about how we can improve or preserve our environment as well as the socio-economic condition of the 4.5 billion low-income individuals on our planet are presented by our colleague Professor John Cairns. He focuses upon the constraints that resource depletion put upon the traditional market driven economy. We are learning every day that more global trade is not a simple solution to ecological preservation and reduction of poverty. The rise of "localization of community development" has emerged as a necessary correction to the laissez faire globalization and international capitalism.

Per Professor Cairns' argument, Professors Kaman, Kramer, and Johnson attempt to show the limits of globalization as a means of reducing poverty among African children. With financial corruption in various nations in Africa and in industrial societies undercutting progress, global institutions like the World Bank and the International Monetary Fund seem to have tied the hands of various nation-states of Africa with the loans they have arranged for their "well-being." The questionable justice of the "loan process," where the funds were lost to corruption and secret bank accounts does not support the case for paying back third-world loans. Therefore, debt relief is necessary and morally the correct decision in most cases.

With 4.5 billion not profiting from the globalization, people are on the move. Twenty years ago I was impressed by socio-cultural integration programs for immigrants in Canada. Now most medium and large cities in the USA have thirty or more immigrant groups. In this issue, Syida Sarah Jesmin addresses the challenges facing women from Bangledesh in the Dallas/Fort Worth area when they seek prenatal health care. With multi-cultural immigrants in the USA, Canada, and European Union nations increasing each year, programs to assist immigrants in adjusting to our local neighborhoods and cities become even more necessary. One unintended consequence is that industrial societies will have citizens better equipped to address the challenges facing poorer nations.

One of the best experiments in "sustainable communities" was the creation of the kibbutz in Israel. However, they have not managed their regional sustainability very well, given today's news. Shapira and his colleagues examine one small component of quality community life—namely the health and life satisfaction for elderly citizens. The principles of the kibbutz involve a "social and economic unit based on equality among members, common property and work . . . collaborative consumption, meeting all needs equally, and democracy in decision-making in a rural environment." Employment is in occupations with a high degree of physical activity. Comprehensive medical care, intensive social support, no mandatory retirement from work, and economic security are additional traits of the kibbutz. On our journey toward more "sustainable communities," the history of the kibbutz has some lessons to guide us.

To create community requires a certain worldview or ideology to unite a people. Susan Danielson, in "Reconnecting the Disconnect," shows us how English classes can integrate service projects to make learning come alive and, in turn, reconnect students to collective values. The service-learning movement, Campus Compact, and the outreach university movement are all part of the attempt to enlist the academy into building sustainable cities and regions in the USA and beyond. As Professor Morales in our last issue of *SCR* argued, we must rethink our approach to knowledge production if we are to reduce the "bio-cultural decline," that is, the decline of the biological diversity as well as human diversity on this planet.

Brady, Hudak, and Ji's article demonstrates how a university (UNT) and a city (Denton) form a partnership to solve the solid waste challenge. In this last year UNT faculty and students have been involved in water quality, after-school expansion and enrichment, adult and child literacy, reforestation, watershed protection, and even "green building" of low-income housing in Denton. We have also learned about the University of Colima, which in its explicit mission to make the State of Colima, Mexico, a more sustainable environment has introduced "Problem Based Learning" as developed by colleagues in Canada.

Book Review Editor Hiram Freidsam has collected some important book reviews. As Cairns noted earlier, many still feel that ecological decline does not limit our individual or communal sustainability. Professor Freidsam and I noted recently how many volumes in this section and books arriving in our office now deal with strengthening local communities and local solutions. However, the limits of localization are well illustrated by the Nordhaus and Boyer volume *Warming the World* and the Meyer volume on climate change. Global governance or global institutions seem to be in our future.

After spending two weeks in Mexico with nine students from UNT, I was both hopeful and disturbed about Mexico's future. We worked with BIOECO and Sociedad del Amigos del Lago de Chapala in the Lake Chapala region. The Lake is down to a maximum depth of 4 meters and the Lerma-Chapala-Santiago Watershed with 16 million people was described as a dying eco-system. As deforestation spreads, agave (a cactuslike plant that produces tequilla) is springing up everywhere, to produce "wealth" in seven years. Aquifers drop as they use more and more water, as they flood fields and spray crops with water. My students saw little political will and few resources addressing this sea of complex issues. This leads some students to see no hope for the eco-system near Guadalajara.

On the positive side, we met officials in Atotonilco working to protect a major spring and their local river. We visited Dr. Joe de Leon, originally from Port Arthur, Texas, who had introduced drip irrigation systems and hydrophonics to grow organic vegetables at a non-profit agricultural cooperative and orphanage near Lake Chapala. Aurora Michel, President of Sociedad del Amigos del Chapala is leading litter clean up efforts, reforestation and nursery expansion. Further south in the

mountains, some 7,000 ft. up, we visited Dos Agua, with its 50 families, and spoke to some dozen women growing lilies (2,000–4,000 per week) with a drip irrigation systems.

In the State of Colima we explored the potential impact of Eco-tourism for local economic well-being and for the environment. This region of Mexico is relatively intact, especially compared to the region around Guadalajara and Lake Chapala.. However, the Port of Manzanillo is experiencing ecological and urban decline. On the positive side in Colima, we met enthusiastic state and university colleagues and students concerned with ecological preservation. The University of Colima has an emerging ethos to "adopt" the state and various communities as its responsibility. Planners are now considering directing their curriculum toward the sustainable development of Colima and Mexico. At the local level we met a young restaurant owners and an ice cream shop owner who had created "eco-tourist enterprise" to educate local and foreign tourists on the floral and fauna of the region. An unanticipated side effect was their sense of building eco-efficient businesses. The brain-power in the local citizens, students, and governmental officials to think through sustainable community projects seems to be strong. I was left with the feeling that the State of Colima could play a leadership role in Mexico for ecological and economic justice.

I move back to Jalisco to close my notes on Mexico. While trying not to be an alarmist, I wonder whether the Lerma-Chapala-Santiago watershed will die in the next twenty years. Mexico's elite, compared to other elite in various other nations, seems to be the least benevolent and unaware of the limit of its ecological heritage. The strong interest in family survival does not lead them to focus on general community well-being.

Back in Denton, Texas, I returned to find the City Council considering staff reports on sustainable neighborhoods, and I was invited to their study session. Materials on sustainable Austin, San Antonio, and Fort Worth were included in the background documentation. In the spring semester, we did three sessions on green building as part of a series on Sustainable Communities, broadcast on Channel 26 television. After many years of operating under the sustainable communities banner, it was hopeful to see the City of Denton move one more step toward sustainability as a focus.

—Stan Ingman

Commentary

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Espousing Sustainable Use of the Planet in an Age of Instant Gratification*

John Cairns, Jr.

Sustainable use of the planet requires societal and individual behaviors compatible with a multigenerational preservation of natural capital. However, citizens of the United States and many other developed countries "want it all right now." The instant gratification of perceived "needs" without regard for future consequences is totally incompatible with sustainable use of the planet, which espouses preservation of ecosystem health and integrity. Instant gratification views ecosystems as commodities to be used or even replaced with anthropogenic artifacts (e.g., shopping malls, etc.). Societal behavior suggests a strong bias toward the latter paradigm. The United States, Europe, and parts of Asia have enjoyed an era of great economic prosperity, which has endured for an incredible period of time. With low unemployment and, by contemporary standards, low rates of inflation, personal debt is extremely high, as are the numbers of declared individual bankruptcies, although the latter does fluctuate. Television and radio advertisements proclaim methods of generating credit for additional gratification of "needs."

However, billions of people, arguably somewhat over 3 billion, have US$3/day per capita or less for all their needs. Their goal is to survive, and thoughts of sustainable use of the planet are not likely to enter their minds.

Important Considerations

The instant gratification paradigm and the current economic state influence a number of important considerations in discussing sustainable use of the planet.

Disparity in Distribution of Resources

A nation, the United States, of over 270 million people (Bureau of the Census, 1998, 373) is using approximately 25% of Earth's resources, although the global population is slightly in excess of six billion. Furthermore, disparity in distribution of resources is growing (Lardner, 2000), but the Durants (1968) conclude that the concentration of wealth is natural and inevitable and is periodically alleviated by violent or peaceable partial redistribution. In an increasingly violent world, the hope for a peaceful, non-violent redistribution of wealth, so that there is more equity and fairness, seems rather remote—and this scenario is not likely to facilitate the transition to sustainable use of the planet. Cairns (2000) notes that peace does not assure sustainable use of the planet, but it is an important pre-condition.

Clearly, many societal practices are unsustainable for even a modest long term, such as 50 years, and many are barely sustainable in the short term (e.g., depletion of ground water aquifers).

Ecological Footprints

If countries with present low per capita resource use were to increase it to averages of the United States, this demand could not be sustained. Even on a short-term basis, these increased demands would result in even more extensive, possibly irreversible, environmental degradation. Brown et al. (2000) and Smil & Yushi (1998) provide some persuasive evidence on other countries regarding the consequences of achieving per capita parity with the United States in certain categories. For example, China's per capita consumption of beef of a mere 4 kg per year is less than one-tenth of the 45 kg per year per capita in the United States. (In Uruguay—a tiny country of barely 3 million people— beef consumption is 62 kg per year per capita, the highest in the world, and cattle are exclusively grass-fed and feedlots are not significant. (This information was furnished by the INAC—in an e-mail in 1999 from Instituto Nacional de Carnes—the National Beef Institute of Uruguay.) If the additional beef for China were produced primarily in feedlots, this endeavor would require an amount of grain equivalent to the entire harvest in the United States, only one-third of which was recently exported. If China matched oil consumption per capita in the United States, this change would require more than the present global production of oil. Even modest increases would have a dramatic impact. If the per capita consumption of chickens in China were to increase to only one additional chicken per year and those chickens were fed primarily on grain, this increase would require as much grain as all the grain exports of Canada, which is the world's second largest exporter. Paul Siegel (personal communication) supplied some information on pounds of grain required per pounds of chicken produced; even if other countries were to match present achievements in the United States, which they now do not, this feat would still require enormous quantities of grain (for more detailed information, see Anon [2000a] and Aho [1999]). If China were to consume seafood at Japan's per capita rate, it would require 100 million tons more than the present total catch. These and other startling data were first called to my attention by Myers' (2000) fascinating discussion of this problem, and he makes a persuasive case for an ecology and an economy of hope in the United States.

Although per capita living standards have risen dramatically in the People's Republic of China in recent years, they are still far below those of many individuals in affluent countries, such as the United States, Canada, and much of Europe. As a caveat, it is well to note that, even in affluent countries such as the United States, many individuals, including children, are not adequately nourished. In addition, a number of countries have citizens who are not as well off as the average citizen in China. However, China has over one-quarter of the planet's human population and is a rapidly growing economic and military power. It would be ethically, morally, and politically unacceptable to tell the Chinese that they cannot approach the standard of living in the United States. However, if the Chinese do so in the fashion that the United States, Canada, and many other developed countries have done with large per capita ecological footprints (e.g., Wackernagel & Rees, 1996) the ecological damage to the planet will be enormous.

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Reducing the size of one's per capita ecological footprint does not necessarily mean a comparable reduction in quality of life as measured by such indices as literacy, longevity, and overall health care. A recent United Nations report provides persuasive evidence that the United States spends more per capita on health care than any other country, but is 18th in the actual quality of care. Therefore, consideration must be given to ways in which the per capita ecological footprint size can be reduced without reducing the quality of life and ways that ecosystem health is maintained, otherwise what future generations receive will be shoddy indeed.

Another facet exists to the ethical, moral, and political dilemma just mentioned. The United Nations Population Division (2000) discusses the need for developed countries, whose demographics may result in larger numbers of elderly than people of working age, to import working age individuals. Clearly, the imported workers cannot be expected to live in poverty while surrounded by affluence, and they should reasonably expect the same retirement benefits and medical care that the aging population, whom they are aiding, is receiving. In the United States, at least, there are serious doubts about the ability of the Social Security System to provide adequate retirement benefits for those persons expecting to retire in 2025 and beyond. The health care system in the United States is debated regularly in the United States Congress, on television and radio talk shows, and in the press. The basic question becomes how to develop sustainable practices that will enable future generations, wherever they may be, to have a quality of life comparable to current standards.

A New Social Contract

Economies and technologies have transformed society but should not be the guide in choosing values. Human society is acting as if economic growth and new technologies will provide values. The unique intelligence of humans is being used to avoid facing long-term problems that become more intractable every day. There is a tyranny to the aggregate of seemingly small, individual decisions that collectively may control life in ways that are unanticipated (e.g., Kahn, 1966; Odum, 1982). The quest for sustainable use of the planet is about determining what social contract will best allocate resources to an unlimited number of generations with an equitable and fair distribution of resources to those presently alive.

Achieving a Sensitive Relationship with the Environment

The disparity in allocation of resources among humans is minuscule compared to the disparity in allocation of resources among the 30 plus million species that inhabit the planet. One species, *Homo sapiens,* is clearly using a disproportionate share of space and, arguably, an even more disproportionate share of the resources. An even greater disparity exists in compatibility with natural biological cycles. The wastes of every species on the planet are of considerable use to a variety of other species, which transform them and reincorporate them into the bio/geo/chemical biospheric cycles. Humans, on the other end, produce a variety of wastes, mostly through their industrial technologies, that are not readily reincorporated into natural cycles and that often threaten ecological integrity. The irony is a blatant disregard for ecosystem health and the well-being of other species since, in the aggregate, they constitute the ecological life support system upon which human society depends for its survival and the natural capital that is the basis of economic well-being. Hawken et al. (1999) discuss how sensitivity to ecosystem health can increase natural capital and simultaneously be economically profitable.

Some formidable obstacles resist preserving the biospheric life support system and the millions of species that represent its components. The system is complex and dynamic and requires a high level of ecological literacy for even a modest understanding of its structure and function. Furthermore, the newly developing field of ecotoxicology, which focuses on response to toxicant stress at the ecosystem level, is still attempting to determine what concentrations of toxicants, either singly or in mixtures, exceed critical response thresholds or breakpoints. One of the complications is that, while surrogate systems such as micro- and mesocosms are suitable for controlled laboratory experiments and have some of the attributes of ecosystems, they are not miniature ecosystems and therefore are of limited use. In short, no precise evidence exists on when harm will occur at the ecosystem level. As a consequence, extraordinary rates of economic growth are occurring in ecologically sensitive areas or are affecting these areas by extracting resources from them.

The precautionary principle (e.g., Raffensperger and Tickner, 1999) suggests that, when an activity raises threats of harm to human health or the environment,

> *"Economic growth, technology, and science will not solve the problems. Long-term thinking, compassion, and the concern for future generations must be incorporated into a new social contract, which must then be implemented."*

precautionary measures should be taken, even if some cause-and-effect relationships are not fully established scientifically. Stated another way, the precautionary principle requires that society forgo some short-term economic gains if the consequences of acquiring them may be severe, even if significant uncertainty about the outcome exists. This principle is the essence of long-term planning and thinking, which in turn is the keystone to sustainable use of the planet. Economic development generally overrides environmental considerations, even at the individual level where the person involved professes a respect for natural systems.

One example is the current problem in the Commonwealth of Virginia, where I reside, of the proliferation of chip mills. These mills grind large quantities of trees for paper and chipboard since trees of many different ages and species all furnish suitable raw material for the chip mill process. Despite the fact that, since 1985, more than 120 chip mills have been constructed in the South, a landowner, Kathy Liston, was surprised and indignant when industry loggers "disregarded her rights as a landowner when they damaged several streams and historic sites on her land" (Anon., 2000b). Inevitably, a Virginia's Chip Mill Study Committee was appointed in 1999 by the Virginia Legislature to study the problem, despite the fact that case histories abound in other states. By the time the committee's report is ready, much additional environmental damage will doubtless have occurred. Even when information is abundant on a particular subject, such as chip mills, and its deleterious environmental effects, the information may not be used by either individuals or governments to take precautionary action. In the case history just cited, the property owner asked: "Isn't the state supposed to

look out for citizens and not big timber companies?" The Virginia Department of Forestry (VDOF) environmental guidelines for best management practices are voluntary, not mandatory, and VDOF takes action only if evidence indicates sediment directly entering the streams as a result of logging operations. Responsibility for sustainable use of the planet rests on both individual citizens and their governments. If neither is willing to take precautionary action, even when case histories abound, the prospects for sustainable use of the planet are dismal. Even when the evidence for environmental damage is abundant and apparent immediately, economic development usually, but not inevitably, triumphs.

Natural systems are even more indifferent to the fate of *Homo sapiens* than the latter is to the fate of the millions of species that they contain. Although natural systems are greatly affected by human activities, they are not dependent upon humans, as evidenced by the fact that they existed for billions of years before the human species appeared on the planet. As Hinckley (2000), Myers (2000), and others have noted, human society must focus optimistically on what can be done even though it cannot ignore what has been done. Negativism and pessimism can be averted, however, if the problems of human society are examined with an intent to provide a solution to them. Irrational optimism is faith in the future in the absence of sufficient literacy to envision viable solutions to present problems. Not only are solutions to virtually all environmental problems available, but sufficient case histories can confirm or validate their efficacy. The major issue in sustainable use of the planet is developing a focus on long-term ecosystem and human health in an age where instant gratification is arguably the norm.

Case histories (Hawken et al., 1999; Anderson, 1998; Wackernagel & Rees,

1996; Natrass & Altomare, 1999; Common, 1995; Roodman, 1998; National Research Council, 1996) abound on successful ways to develop a more sensitive relationship with the environment, while simultaneously improving the quality of human life. Economic growth, technology, and science will not solve the problems. Long-term thinking, compassion, and the concern for future generations must be incorporated into a new social contract, which must then be implemented. These choices come from ethics, ethos, spiritual values, and a sense of equity and fairness for future generations, those presently living, and the species with which humans share the planet and the ecological life support system upon which human society depends. Information abounds (as in the case of the chip mills), but information is not knowledge and knowledge is not wisdom. Reason guided by intelligence is the essence of long-term planning, as is the ability to exercise these qualities in the face of uncertainty by utilizing the precautionary principle. Human society is capable of shifting to a new paradigm and will undoubtedly develop a sense of community in doing so. This community will include not only humans but other forms of life as well.

Sustainability in some form will be achieved. The big questions become: (1) how much human suffering and ecological damage must occur before human society ceases to deny that present instant gratification practices are unsustainable? and (2) if humans inadvertently cross crucial ecological thresholds and restore the damage to natural capital, will societal memory act on this information or must it be repeated endlessly in each region of the world?

Conclusions

Caldwell (2000) has been discussing the question "can American society make sound environmental decisions?" for three decades and he (Caldwell, 1970) has written:

> Can we really elect to have a high-quality environment? Does the structure of American society—pluralistic, democratic, historically based in favor of "Everyman's laissez-faire"—permit the shaping of its environment in any way other than by combat and compromise? The question is not whether conflicts of interest in the environment can be eliminated. There is no prospect, in a diverse world, that they will be. A second practical question is how to raise the levels of information and social concern at which the process of bargaining and accommodation occurs. To improve the human environment, both men and politics must be improved. Men make politics; political institutions influence human behavior; and behavior is heavily influenced by attitudes, beliefs, and values. Purposeful shaping of the environment involves the purposeful shaping of outlooks on life. The quality of the future environment depends, therefore, upon the shaping of attitudes, beliefs, and values through present education.

Caldwell's 1970 statement of the problem cannot be substantially improved. However, societal coherence, not only in the United States but more markedly so in other countries, is greatly diminished. At the same time, the range of attitudes and beliefs appears to be much greater, and the prospects of achieving sufficient consensus for effective societal decision making is, arguably, greatly diminished. Economic globalization has, if anything, made the power of special interest groups much greater and has definitely increased the disparity in the distribution of per capita wealth. Most humans are still living in the short-term present, and instant gratification is definitely more socially acceptable than it was three to five decades ago. Even the belief that environmental decisions should be based on "sound science" has fewer advocates, but the probabilistic component of science, which is its essence, is not well tolerated.

Although the information base is enormously larger at the beginning of the 21st century than it was just a few decades ago, it does not seem to have resulted in comparable increases in knowledge and wisdom. An uncharitable person might conclude that knowledge and wisdom have been diminished because the frenetic pace of life does not permit a careful systematic examination of available information and the reflection upon the information that sets one on the path to knowledge and wisdom.

Intelligence, creativity, and ingenuity are gifts disproportionately endowed on one species, *Homo sapiens*, and could lead to sustainable use of the planet and a high quality of life for many generations to come. However, if the traits are used merely for instant gratification of material "needs" without regard to members of one's own and other species, sustainable use of the planet will become a distant, unattainable goal. A persuasive case could easily be made that those working toward achieving sustainable use of the planet are irrational optimists; however, giving up is unthinkable!

How Poverty and the Global Economic System Seriously Threaten Africa's Children and the Sustainability of African Communities

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A frica's future rests with her children, but these children and the future sustainability of African communities are seriously threatened by conditions of extreme poverty and the gross inequities of the global economic system. The importance of health care and education as critical investments in human capital to ensure the future sustainability of African and World communities has been emphasized by the Director of UNICEF:

> Human capital is a more important factor for achieving economic growth than physical capital . . . investment in human capital in the forms of nutrition, basic education and health cannot be postponed: it either takes place at an appropriate age when the need is present—or it does not. For the young children, there is no second chance. The under-emphasized tragedy of dis-investment in human capital in the 1980s is that the result will be carried forward in stunted bodies and deficient education well into the twenty-first century. (UNICEF, 1990: 11)

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In recent decades, age-adjusted morbidity and mortality rates have risen throughout most of Sub-Saharan Africa with devastating effects on children. There are many inter-related factors contributing to the deteriorating health and

well-being of children in Africa, including rapid population growth, and corruption within the political and economic sectors. Some African nations are also plagued by despotic ruling elites who have become personally wealthy while neglecting the people's needs for public health and education. But the extreme poverty generated by Africa's disadvantaged position within the world economic system provides the underlying context that is preventing African nations and communities from overcoming the deplorable conditions that now exist. This paper examines the poverty conditions prevalent within African communities, the devastating effects of HIV/AIDS, and the destructive consequences of the Structural Adjustment programs imposed on African nations by the World Bank and the International Monetary Fund (IMF).

Post Colonial Changes in African Economies

Once Independence from colonial rule was officially achieved, the fledgling Sub-Saharan African Governments committed themselves to the eradication of the three crucial enemies of development, namely illiteracy, disease, and poverty. To achieve these goals, African governments took aggressive action not only by offering heavy food subsidies, but also by developing, monitoring, and controlling the healthcare and education delivery systems. Consequently, the period between the 1960s and 1980s was characterized by an exponential expansion of the education and healthcare systems. Some of the new African governments nearly succeeded in achieving universal primary education. In Tanzania, for example, over 90% of age-eligible children were enrolled in primary school by 1980. In Kenya, only 60% of primary school-aged children were enrolled in 1963 when independence was attained, whereas by 1983 nearly 93% were attending school (Government of Kenya, 1974 and 1978). Similarly, improvements in public health and healthcare services resulted in decreased infant and child mortality rates. Also, there was a marked reduction in deaths resulting from curable diseases such as typhoid, diarrhea, cholera, dysentery, tuberculosis, and kwashiorkor. However, the gains made in the health and education sectors could not be sustained, because most African economies have been incorporated into the global capitalistic economic system in a very unequal manner.

The African economies took a disastrous downturn in the 1980s when the prices of many African primary commodities such as tea, coffee, cocoa, cotton, rubber, and sisal fell to their lowest point since the 1930s. At about the same time, interest rates skyrocketed on the debts that African nations had been encouraged to incur by international lending agencies such as the World Bank, so as to promote economic development. The decline in export returns combined with the drastic increases in interest rates meant that African countries could not service their international debts in a timely manner. Compounding this was a spirit of confidence and militancy in some Third World countries that were determined to be economically and politically independent from northern hegemony. According to Bello (1994), their defiance led the World Bank and the IMF to institute Structural Adjustment programs so as to punish and control the rebellious and indebted Third World countries. The adoption of the Structural Adjustment austerity policies was prerequisite to receiving international aid and additional loans to service the already existing ones. Among other things, the debtor countries have been required to privatize state enterprises, devaluate their currencies, and grow more cash crops in order to earn foreign currencies to service their loans. They have also been required to reduce government deficits by cutting consumer subsidies, to charge user fees for social services such as education, transportation and health care, and to encourage free trade by dropping protectionist measures and creating incentives to attract foreign capital.

These Structural Adjustment programs have been represented by the IMF as being necessary to stimulate economic efficiency and growth. In practice, however, the overall effect has been a reversal of the gains that had been made during the 1960s and 70s. African countries have experienced stagnation or sharp reversals in growth, escalating poverty and increasing inequality between emerging socio-economic classes. According to UNICEF (1990), in thirty-seven of the poorest African countries, health and education expenditures declined by 50% and 25%, respectively, in the 1980s. At the same time, the countries have been forced to spend more each year on repaying their debts.

Studies by Bello et al. (1997), the Ecumenical Coalition for Economic Justice (1990), UNICEF (1998), Brandford and Kuscinski (1988), and Olis (1992) all indicate that northern rich countries extract huge transfers of wealth from Africa—much more than they provide in aid or loans. For example, within a short span of six years, between 1984 and 1990, a large sum of 178 billion US dollars was transferred from the Third World to commercial banks controlled by the urban-industrial nations in debt repayment (World Bank, 1999: 122). Indeed, during the 1980s and 1990s, the draining of capital from the Third World was so massive that a former Director of the World Bank exclaimed, "Not since the Conquistadors plundered Latin

America has the world experienced a flow in the direction we see today" (Miller, 1991:64). As the result, many African countries have been too close to bankruptcy to plan for development, having exhausted their wealth to meet the conditions imposed by their creditors.

It is not an apology for those African governments that are despotic, corrupt, or simply incompetent, but rather an explanation to observe that the fledgling democracies that emerged in the wake of autocratic colonial rule were extremely frail and vulnerable. World history is rampant with examples of post-colonial nations that floundered politically and economically. Democratic institutions were able to take hold in only a few post-colonial nations, such as India and Costa Rica, where a relatively large educated professional class and moneyed elite existed at the time of independence. Because non-Africans had been imported into Africa to fill middle management positions, there were few indigenous Africans who were educationally equipped to provide enlightened leadership; and some of those who aspired to promote progressive social change were assassinated by neo-colonial forces who benefited from the abject poverty in which most African people live. Given that in many African nations, the average per capita income is

> *"Because non-Africans had been imported into Africa to fill middle management positions, there were few indigenous Africans who were educationally equipped to provide enlightened leadership . . . "*

less than one dollar (U.S.) per day, it is not surprising that the governments and the people they rule react in desperate ways. Africa's high fertility rates must also be understood in the context of poverty. World history demonstrates that the poor must have reason to foresee a secure economic future, which is not dependent upon the projected wages of their offspring, before families are willing to reduce their fertility to replacement levels. (cf. Kramer, 1980, for documentation of the *increase* in fertility which occurred in Kenya in response to loss of land security.).

A component of Structural Adjustment has been that African currencies have been devalued; hence, African exports have become cheaper, and laborers' wages are lower in terms of their purchasing power. The economic crisis resulting from IMF devaluation policies has been compounded by drops in the market value of exported commodities and decreases in international aid following

> *" . . . the World Bank and the IMF have become Africa's shadow governments, and most African people have become poorer with little or no money to feed, clothe or pay school fees for their children."*

the end of the Cold War. Because they are diverting most of their revenue to servicing their debt, African governments have been forced to cut spending on social services drastically, and taxes have been imposed on almost everything. The implications are that the World Bank and the IMF have become Africa's shadow governments, and most African people have become poorer with little or no money to feed, clothe or pay school fees for their children. This forcible extraction of wealth has stripped African children of their basic rights to health and education. Even the World Bank is beginning to have reservations about the wisdom of Structural Adjustment mandates; one of the World Bank chief economists has admitted that "we did not think that the human costs of these programs would be so great, and the economic gains so slow in coming" (cited in Bello et al., 1997: 55).

Erosion of African Educational Systems

In Kenya, for example, under Structural Adjustment the percentage of children attending school has declined remarkably. An analysis of this phenomenon reveals that the principal cause of dropping out is that families are unable to pay school fees (Republic of Kenya, 1998). The dropout rate is so high that of all the pupils enrolled in Standard One in 1992, less than half had completed the primary grades by 1999, and even more drastically, only 20% of those who completed their primary schooling continued on to attend secondary school (Njogu, 2000). Enrollments in primary schools have declined and schools have become overcrowded, with about 60 pupils per class and not enough textbooks or desks to serve these numbers. Due to poverty, most children are pulled out of school either to help their parents on their family farms or to be

engaged in wage labor jobs so as to increase the family income. Studies by Ndeti et al. (1999) and Katz & Monk (1993) report that as families become poorer, girls are more likely to be withdrawn from school than boys. This is because girls are expected to help the mother with subsistence activities or to take care of the home and siblings while the mother undertakes various economic tasks in order to feed her family.

Increasing poverty as a result of servicing foreign debt has drawn primary school teachers in Kenya into a sharp conflict with the government over poor salaries and the retrenchment that has been recommended by the World Bank and the IMF, ostensibly to increase efficiency and reduce the size of the "bloated" civil service. Teachers' salaries are among the lowest for any of Kenya's civil servants. According to the United Nations (1994), teacher's salaries have declined by 30% in West Africa and 20% in East Africa. To make ends meet, teachers are forced to run a small business and/or to grow food, and at times, together with their pupils, they peddle commodities in city streets and small villages (UN, 1994; Bello et al.,1997; Human Rights Watch, 1999, and Njogu, 2000).

Reduced Health Care and Food Consumption

UNICEF's (1996) report on the state of world's children vividly illustrates how the debt repayment negatively impacts the health of African people. For example, Zambia spends four dollars on debt servicing for every dollar that it spends on health, while infant mortality rates are rising. In Ethiopia, debt payments are four times more than public spending on health, while 100,000 children die every year from easily preventable and treatable diseases such as diarrhea. In 1996, Uganda spent only $3 US per person on health care, while spending $17 US per person on repaying its debt. One in every five Ugandan children dies from preventable diseases before reaching the age of five. After servicing their debts, the national governments of Africa are left with little or no money even to maintain the physical infrastructure in the healthcare system. Furthermore, due to the citizenry's declining income combined with government withdrawal of subsidies on health care, it is becoming increasingly difficult for African people and especially for African children to obtain medical care. O'Heaney (1994), Human Rights Watch (1999), Ndeti et al. (1999), for example, report that the majority of Kenyans do not visit government health facilities because they are too costly or simply because there are no drugs available. They further observe that there is a remarkable increase of in-home births, underweight infants, and stunted growth in children, as well as high infant morbidity and mortality rates. Medicine and emergency vehicles are virtually unavailable in the public sector, and medical equipment is in disrepair. Doctors are underpaid and they work under very poor conditions. Many of them are voting with their feet by migrating to a place where the medicine and technology are available for them to earn a living utilizing the skills they acquired in medical school. Diseases such as typhoid, cholera, whooping cough, tuberculosis, and kwashiorkor have returned with a vengeance. The deterioration of public health and medical services is compounded by the onslaught of the AIDS epidemic (Biljmakers & Sanders, 1996; UN, 1998).

Without adequate food, children are especially vulnerable to diseases that would not be so life-threatening were the children adequately nourished. Hunger is endemic in Africa, and African children are endangered by undernourishment. The African diet has deteriorated as the majority of farmers concentrate on growing cash crops at the expense of food production. Shiva (2000) observes that the ideology of "free trade" is used by the World Bank and IMF as rationale for this development strategy. Third World leaders and producers are told that food security does not depend on food self sufficiency (food grown locally for consumption) but on food self-reliance (buying food from international markets). This "wisdom" has not paid dividends to African producers. They continue to be underfed and malnourished in the midst of huge coffee, cotton, and horticultural plantations.

By strictly adhering to agricultural policies dictated by the World Bank and the IMF, most of the African countries have recorded a sharp decline in food production and consumption (Shiva, 2000; Ndeti et al., 1999; Biljmakers & Sanders, 1996; Bello et al., 1997; Muntemba 1993; Jerspersen, 1992; Olis, 1992). Most households in Kenya, Zimbabwe, and Sudan, for example, cannot afford a calorie adequate diet, and more than three-quarters of the households can no longer afford meat, rice, bread, corn meal, cooking oil, or other basic foodstuffs. The majority have reduced their meals from two to one a day.

The AIDS Epidemic and African Children

The economic and health crisis in Africa is compounded by the AIDS pandemic. The continent lies practically defenseless against the pandemic, which now threatens to decimate the most productive stratum of the population—those between 20 and 45 years of age. The statistics are chilling. Heuvel (2000) reports that 15 million people in Sub-Saharan Africa have died from AIDS, and 24.5 million are HIV positive. One in five adults in South Africa, Namibia, and Zambia is infected, one in four in

Lesotho, Swaziland, and Zimbabwe, and more than one in three, in Botswana. It is estimated that about half of all 15-year-olds in these countries will eventually die of AIDS, even if infection rates drop substantially (Heuvel, 2000). In Kenya alone, over 1.9 million people between 15 and 49 years of age were living with HIV/AIDS by the end of 1998. More than 300,000 additional people had already died. Fifty percent of the hospital beds are occupied by AIDS patients. Five hundred people are dying of AIDS daily, and there are about 1 million orphans (UNDP, 1998; Mulindi, 2000; UNAIDS, 1998). Yet, resources needed to combat AIDS are going elsewhere, with a significant portion earmarked for debt servicing. Twenty-four percent of foreign earnings in Zimbabwe, 13% in Zambia, and 71% in Uganda are diverted to western countries for debt repayment (Bello et al., 1997).

As the authors of this paper have argued elsewhere (Kramer, Johnson, and Kamau, 2000), increased poverty accelerates the spread of AIDS, and international resources are essential to stem the tide of new infections and to prolong the lives and reduce the suffering of those already infected with HIV. At the present time, drugs for treating the infected and for protecting HIV positive mothers' fetal and newborn offspring are far too expensive for most African families.

In addition to basic healthcare, sexual health education needs to be offered. Studies reveal that most African youth are woefully lacking in understanding what causes HIV infection, the fact that seemingly healthy people may carry the virus, and what they need to do to protect themselves. Girls and boys need to know that they must be knowledgeable and assertive so as to avoid any exchange of blood or semen. This means, for example, making certain that any penetration of the body such as ear piercing, circumcision, injections (even if provided by a professional healthcare provider) must be done with a sterilized instrument. Instruction about safe sex, ranging from abstinence to proper uses of condoms, is essential. Even when young people are aware, they typically have no extra money to buy condoms. The few who can afford to buy condoms commonly conserve them by washing them after use and then reusing them later.

The AIDS pandemic negatively impacts children's lives in multiple ways. For example, increased fear that mature women may be HIV positive has resulted in men sexually abusing young girls, particularly those in rural areas because they are believed to be "AIDS free."

Forced sexual encounters between older men and girls not only places the child at extreme risk of AIDS, but this violation also breaks the intergenerational trust, which has formerly been a cornerstone of African communities.

Many children are born to mothers who are HIV positive, and 20–25% of these children also become infected during gestation or from their mother's breast milk after birth. Whether HIV positive or not, the prognosis of these children is poor. Most are exposed to a poor environment, malnutrition, and the lack of medical attention. Parental despair further compromises the quality of these children's lives (Ayeiko, 1997).

AIDS orphans have high death rates, particularly in the rural areas. Because of the debilitating illness and eventual death of one or both parents, many children of HIV positive parents are denied the opportunity to attain an education. This is because they are withdrawn from school to either take care of their HIV/AIDS infected parents, to "parent" their younger siblings, and/or to assume the role of bread-earner. In some cases, the children are themselves too sick, or too overworked to provide care for others. Economic hardships force children caring for dying parents and orphaned children to engage in high-risk activities themselves, such as sex work. What is startling is that children are taking care of other children on the African continent, where cultural expectations promoting extended mutual kin support and communal responsibility have traditionally been treasured. One must ponder what has gone wrong with the extended kinship support system.

Breakdown of Communal Responsibility

There is an old African proverb which states that "it takes a whole village to raise a child." From an African perspective, community refers to a thoroughly fused collective "we," in which an organic relation is assumed between the individuals who compose the community. Only in relation to other people does the individual become conscious of her/his sense of self, duties, privileges, and responsibilities toward others as well as oneself. This social reality is captured in the dictum "I am because we are and since we are, therefore I am" (Mbiti, 1989). Individuals are expected to provide material and emotional support. This mutual support system provides the context in which children are traditionally born and thrive, and it has traditionally cushioned African peoples against absolute poverty.

However, during the current socio-economic crisis, individuals and community members are becoming unable to meet their societal obligations. Through several interna-

tional telephone interviews, we have learned that poverty has caused many close knit families to disintegrate, whereas the African communities used to rally together in times of need. Nowadays, community help is no longer forthcoming, and individual families are forced to sell their homes and farms to pay hospital bills. Paying bills for AIDS patients has impoverished even some formerly wealthy families.

Some African communities have become so fragmented that even funerals, which were once a whole community's responsibility, are becoming a household burden. The interviewees also indicated that the current urban lifestyle, out-migration, and the tendency to emulate the western nuclear family are all contributing to the breakdown of African communities. As families witness their real earnings sharply decline and the cost of living escalate, as they attempt to cope with draught, famine, and civil unrest, they are forced to become individualistic. But by doing so, they contribute to the weakening of the mutual support systems which provided stability and coherence in traditional African communities. Frequent deaths, considerable loss, irreconcilable grief, extreme poverty, and overextended social expectations have had a deadly impact on the extended family mutual support networks.

In Sub-Saharan Africa, it is estimated that 10.7 million HIV-negative children "lost their mother or both parents before the age of 15 years" by the end of 1999 (WHO, 1999). Even more alarming are projections to the year 2010 when, assuming current trends, "40 percent of all African children will be orphaned" (Fennell & McNabb, 2000). AIDS orphans are the double losers as African social bonds and ethics of care threaten to disintegrate. Many impoverished relatives are refusing to take on the extra responsibility of fostering orphans. The majority of these relatives are overextended financially and are devoting all their waking hours to generate food and other basic necessities for their own children. Many of the orphans are left to fend for themselves without moral, educational or economic guidance from any adult in their communities. Some face homelessness as well as hunger. Those who withdraw from school and become heads of the household have few skills nor resources to perform these parental duties (Ayieko, 1997).

Fear of contagion coupled with social isolation, avoidance, secrecies, moral judgments, and the stigmatization of AIDS victims and their immediate families threatens to further erode African communities. Most AIDS victims are blamed for moral failures, and their families are castigated for not being positive role models. AIDS victims,

instead of being supported, are excluded from social gatherings and even from using public transportation.

Many orphans are visited only by those relatives who live within walking distance. To keep family bonds intact, there is a need for constant social interaction, but those members of the extended family who have moved to an urban center must travel to their rural homelands, and vice-versa. Under the present economic crisis, traveling has become very expensive, and many Africans travel only when it is absolutely necessary.

As mentioned previously, the individuals most infected by HIV are between ages fifteen and forty-five. These are the most productive and skilled labor force workers, and many are mothers. What this means is that when these HIV positive individuals develop AIDS and eventually die, a vacuum in both the labor force participation and parenting is created. In years to come, Africa will not only suffer from an inadequate labor force, but it will be faced with a population composed principally of the elderly and a lost generation of orphaned children.

Conclusion

Millions of African children are being victimized by the failed policies of creditor institutions such as the World Bank and the IMF, as well as the policies of their own governments. Children are paying for their country's debts through imposed poverty, ill health, poor nutrition, and denied educational opportunities. The imposition of austere economic and neo-colonial measures by the World Bank and IMF, compounded by low commodity prices, unequal and exploitative international trade policies, and corrupt governments, as well as the devastating effects of the AIDS epidemic, have forced Sub-Saharan Africa to spend much more on debt repayment than on the health care, education, and other human services that are urgently needed by its citizens. If the World Bank and the IMF do not provide debt relief, large numbers of African children will continue to be uneducated, malnourished, and unhealthy, or they will simply die. The children are the future, but no society can sustain the genocidal encroachments that current international monetary policies impose. It is high time for the urban-industrial nations that support and fund the World Bank and IMF to be the prime movers in stopping this genocide by providing debt relief and removing Structural Adjustment mandates that hinder the development of human service systems.

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Utilization of Prenatal Health Care Services by Bengladeshi Women

Syeda Sarah Jesmin

"I took vitamins only for few days while I was pregnant, I have seen back home my elder sister never had them. I heard from my friends and relatives that vitamins might make the baby big inside your womb. But I was afraid . . . should not I listen to the doctor? I was so confused. . . . I talked with my mother over phone, she was confused too. You know, I am in a different country now. I do not know much about the health care system here. If anything goes wrong who is going to help us?"

The statement above was made by a Bangladeshi woman who immigrated to the United States two years ago.

Extensive research has been done on health care utilization by minority populations; however, research on prenatal care utilization by the small ethnic sub-groups of immigrants in the U.S. is rare. The number of one group, immigrants from Bangladesh, is growing at a significant rate, but there has been no systematic study of this community in America. In the 1990 census, some 12,000 persons reported that they were of Bangladeshi origin. Between 1990 and 1997, an additional 50,000 immigrants came from Bangladesh (Kitano & Daniels, 2001). Though the Bangladeshi people are broadly identified in the U.S. as Asians, they have their unique set of health beliefs and practices based on their country of origin, cultural heritage, ethnic background, religious affiliation, and immigration experience, which may be significantly different from other Asian immigrant groups.

Studies of immigrant women show that preventive services and other health services for immigrant people are often impeded by linguistic, cultural, and health-services barriers (CDC, 1998; Stephenson, 1995; Jenkins, 1996; Davis-Floyd, 1993; Gany, 1996; Rice, 1999;). Lack of access to prenatal care can significantly worsen the birth outcomes for immigrant women (Brown, 2000; Gany, 1996; WHO, 1992). Furthermore, socio-economic factors may be more important to health status and health care for immigrants than for non-immigrants (Dunn & Dyck, 2000). In addition to financial barriers, problems of transportation, long waiting hours, women's substance use, housework, and child care are additional impediments for seeking medical help during pregnancy (Mikhail, 1999).

Ethnicity is a significant determinant of attitudes toward prenatal care and women's self-care practices during pregnancy (Markens et al., 1997; Mikhail, 1999). Certain racial and ethnic groups are more likely to

live in areas with negative social and economic characteristics that affect their health behavior. But even when modern health care facilities are accessible, women sometimes show reluctance to accept biomedical advice because they believe they will lose their unique cultural traditions if they do not observe their traditional practices and rituals. In the United States, the availability of high tech medical facilities, and the high rate of physician-assisted childbirth places the focus on "medical condition," while in other cultures the focus is on the "naturalness of birth" (Howell-White, 1999).

Given the rapid influx of Bangladeshi immigrants into the United States, and their contributions to the U.S. labor market, it is short-sighted to ignore the health care needs of women in this group. This exploratory, qualitative study was undertaken to understand the health service utilization patterns of Bangladeshi immigrant women during pregnancy. In particular, the research focused on: (1) The beliefs and rituals that surround the lives of Bangladeshi immigrant women during their preg-nancies; (2) The types of childbirth experiences the women have in U.S.; and (3) How they respond to biomedi-cine during their pregnancies.

Data and Methods

This study was ethnographic. A snowball sample was used to collect data from 12 Bangladeshi women who were pregnant or who had been pregnant within the past 12 months. Data were collected mainly through face-to-face and in-depth interviews. During the summer of 2000 inter-views were arranged for a location the respondents chose (usually at

home), at times that were convenient to them, and conducted in their native language (Bengali). Data were collected in most cases through women's recall of their experiences, such as checkups, number of visits to physicians, and what changes they made in their diet and behaviors. Since these self-reports depended upon memory, accuracy could vary from one respondent to another.

The respondents were aged between 26 years to 40 years of age. Most came from the wealthy and educated families and from the capital city or from other large cities of Bangladesh. Almost all had come with their husbands, who emigrated for work or education. Most had baccalaureate degrees from Bangladeshi institutions. Six were

> *"Studies of immigrant women show that preventive services and other health services for immigrant people are often impeded by linguistic, cultural, and health-services barriers."*

working in department stores or fast food restaurants, four on a part-time and two on a full-time basis. The duration of their stay in the U.S. was two to five years. Except for one who was Hindu, all the respondents were Muslims, and all were living in the Dallas-Fort Worth area.

Findings

Most of the Bangladeshi women's first significant contact with the health care system in the U.S. occurred during pregnancy. Having been socialized into a traditional and technologically less advanced society, did these women adapt to the high-tech medical services of the U.S. or find conflict with their cultural tradi-tions? The interviews revealed a number of factors that affected their prenatal care.

Compliance and Non-Compliance

Freidson (1972) identified social cohesion or inter-connectedness of the network and the nature of the beliefs which are held by its members as the major dimensions of social networks that influence illness behavior. Both of these dimensions work in shaping the Bangladeshi immigrant women's compliance and conformity with their doctors' advice. The Bangladeshi women live and socialize in a Bangladeshi neighbor-hood, which helps them perpetuate their traditional beliefs. Thus, these women do not comply with their American care provider's instructions if they find them in conflict with their cultural and religious beliefs. This is true not only of Bangladeshi immi-grant women; one of the major problems of biomedicine is non-compliance. American women do not always follow biomedical instructions during their pregnancies if they find the instructions in conflict with their daily life routines (Davis-Floyd, 1997). For the Bangladeshi women, compli-ance and non-compliance are af-fected by a number of different factors. Although educational level did not show a relationship with the

degree of compliance, the religious and cultural beliefs that women have internalized through their socialization in Bangladesh has a very strong influence on their attitudes and behaviors. These beliefs make them doubtful about the competency of the doctor and often help to create a negative attitude toward the therapy he delivers, which is completely devoid of spiritual matters.

A woman who observes religious rituals during pregnancy said that

> the doctors do not know everything. Even if science refutes something, it does not mean that it is wrong. We all are made and governed by a supernatural power. If Allah wishes, anything can be changed anytime.

All the women said that their doctors prescribed iron and calcium for them, but not all followed the doctors' instructions. They have learned that in Bangladesh many women do not take vitamin tablets because they believe that they make the fetus big and delivery difficult. Thus, they have a negative attitude toward vitamin tablets. Moreover, their relatives from Bangladesh have also suggested that they not try vitamins.

One woman said that although she is taking vitamins, she wished she did not have to take them. She is afraid that the fetus might be growing too big, but she follows the doctor's advice because she now lives in a different country. Without relatives and the familiar medical system around her, she feels helpless. She thinks that she has no choice but to follow the doctor's orders and does

not dare to challenge or disobey the doctor's instructions. If she does not follow the doctor's instructions and anything goes wrong, she feels she will have no resource to help her recover.

The women also believe that the doctor will not understand their arguments or their perspectives and feelings. They do not admit failing to

> *"Bangladeshi culture demands that women be submissive and compliant to social rules and regulations, which might make a woman refrain from arguing or making complaints about her treatments. Her feelings of powerlessness due to living in a different country and not having familiar medical practices may be relevant."*

follow instructions to their doctors, nor do they like to discuss with them the religious or cultural practices they perform during pregnancy. They think that the doctors will not accept the efficacy of such practices, and they fear that if the doctor learns about these practices , he/she will require refraining from them.

When they believe that a test or instructions may not be necessary, they do not argue with the physicians, and often they do not ask about the purpose of procedures and tests. In addition to their limited English-

speaking abilities, discussed below. two other factors for not negotiating or arguing with the doctor may be important. Bangladeshi culture demands that women be submissive and compliant to social rules and regulations, which might make a woman refrain from arguing or making complaints about her treatments. Her feelings of powerlessness due to living in a different country and not having familiar medical practices may be relevant.

Language: Impediment to Seeking Care

Language is undoubtedly a strong impediment in women's interaction with health care providers. Few of them can communicate effectively in English; others depend on their husbands for that communication. But the husbands who accompany their wives as interpreters may also find difficulty in communicating with doctors. Several of the women reported that their husbands have much difficulty in translating Bengali medical terms into English or English terms into Bengali.

As an example, inability to communicate easily in English impedes attendance in prenatal classes. Since the women cannot communicate effectively in English, they feel shy and uncomfortable among English speaking people, especially if their husbands are not with them. If a husband cannot make time for the class, the woman has to miss it.

Miscommunication is another reason for non-compliance. The women do not wish to be looked upon as "bad patients." Thus, when they do not understand instructions, they usually do not ask for clarification. They will seek clarifications by

talking with other Bangladeshi women, or even with relatives still in Bangladesh.

Miscommunication also influences their level of satisfaction with the care they receive.

Most of the complaints about the medical care they received came from respondents who also reported that they face difficulty in communicating with the physicians. Several women described instances in which inadequate information led to poor and unsatisfactory outcomes.

The language barrier not only impedes the women's communication with their doctors, it also creates an obstacle for getting information from other sources such as magazines and brochures. Although some reported that they got useful information from such sources, in reality few read well enough to do so. Furthermore, their lack of knowledge of English prevents their recognizing the need to learn about pregnancy from print sources.

Beliefs and Health Care

The Bangladeshi women seek western medical care because this is the only option available to them in the U.S., but their faith in its efficacy is not total. Thus, their behaviors neither conform to the behaviors of American women, nor do they match those of Bangladeshi women living in their home country. These women are a special case of what Davis-Floyd calls "women-in-between," by which he means women who are whole-hearted in their adherence to neither holistic nor to technocratic models of birth (1992). These women still observe many taboos and restrictions of their native culture, which influence their health status and care-seeking behavior during pregnancy.

Many reported that they classify foods and herbs by their "hotness" or "coldness" and try to balance diets between hot and cold foods. This quality is not merely or always a function of temperature. "Hotness" is often acquired by exposure to the sun and "coldness" to water, or they are discerned by the sensations that the food produces. Some women believe that fish, vegetables, fruits, rice, etc., are "cold" whereas meat, eggs, milk, etc., are "hot" foods. A meal that is too hot or too cold is dangerous, especially during the pregnancy. To illustrate the importance of this belief one woman said:

> The baby floats in water inside our womb. If one does not maintain the balance between "hot" and "cold" foods, her stomach may get upset and this will cause dehydration. If one loses water too much from the body, the baby will die.

Several respondents said that they try not eat too much during pregnancy; otherwise the fetus would grow too big and make normal delivery difficult, possibly requiring surgery. In Bangladesh, Caesarean sections are very expensive, and women consider them unsafe because incidents of infection and other complications are widespread.

Pregnant women also observe a number of restrictions on movement during their pregnancies. Most of the restrictions are intended to ensure the safety of the baby. Some women said that they try not to go outside during the evening or afternoon. If one has to go outside at night, she tries to have someone accompany her to avoid becoming the victim of evil

spirit or evil wind. Some women also said that they try to stay home on Saturday and Tuesday because these are "bad" days, but none of them actually knew why they are treated as bad days. Such restrictions are incompatible with their lifestyles in the U.S., where shopping and jobs require quite different behavior.

Though all the respondents consulted Western medical practitioners during their pregnancies, many also sought care from the traditional healers in Bangladesh. They consulted religious healers for their morning sickness, safety of the fetus, or for safe delivery. The rituals prescribed by the healers were executed in Bangladesh on behalf of the pregnant women by their relatives.

The Bangladeshi immigrant women's beliefs and behaviors are reinforced by their religious ideas. According to their religion, Islam, God is the source of all healing. During sickness or danger people should pray to him for recovery. For example, one woman said, "Delivery can be stopped if a specific verse from the holy Quran is recited from the opposite direction. But if one recites the same correctly, delivery becomes very safe and quick."

When Bangladeshi women get sick in a foreign country they miss the social support that they could get in Bangladesh. As a result, they feel helpless and often become more religious during pregnancy. Most of them try to observe all of the religious rituals during that time, including praying to Allah, reciting the Holy Quran, using verses of the Holy Quran to prevent danger, and requesting the religious leader to pray. In

addition, most of the women or their relatives on their behalf make vows for the safe delivery and safety of the baby.

Gender of the Provider

Almost all Bangladeshi women prefer delivery with the help of female doctors or midwives. According to Islam, women must be confined to "purdah" (Religious restrictions on free social interactions between men and women) and they are restricted from showing their bodies and faces to outsider males. Though conforming 100 percent to these religious restrictions today is rare, the women socialized in this ideology still try to maintain some degree of "purdah," consequently most of the respondents want a female doctor for checkups and delivery. Some even said that if they were assigned a male doctor for their scheduled appointment they would try to reschedule it for another date in hopes of being reassigned to a female doctor. Many women feel uncomfortable when a male doctor does a vaginal examination, and some respondents said that it is not allowed according to religious rules and regulations. Some said that although they prefer female providers, they feel confused as to whether they should express this kind of concern. They think that it would be impolite and offend male providers if they reveal their preference.

Insurance Coverage and Utilization

Almost none of the women who work outside of the home have insurance coverage from their own jobs. Except for one woman who had an American degree, the others worked in department stores or fast food restaurants. Since many of them came to the U.S. as spouses and did not have work visas, they work illegally and therefore do not receive maternity leave or benefits from their employers. Most had to quit their jobs during the advanced stage of their pregnancies.

Although none had their own insurance, they were covered through their husbands' insurance, but neither the Bangladeshi women nor their husbands were sufficiently aware about the benefits their insurance offered. They possess limited knowledge about their rights and responsibilities as patients.

The husbands find it difficult to choose an insurance plan if their employers offer them choices. Many do not understand which one should be taken because they have not had prior orientation about insurance mechanisms. The concept of health insurance is new to them; in Bangladesh they had paid out-of-pocket for medical care. This lack of knowledge leads to underutilization of the health benefits to which they are entitled.

In addition, most of them are not informed about the public health benefits they can receive in case of emergencies and are equally uninformed about special programs such as Medicaid.

Social Support and Networking

Research on stress and social support show that the birth of the first child is an important life event and one of the major forms of stress (Thoits, 1995). Members of disadvantaged social groups are especially vulnerable or emotionally reactive to stress, and women exhibit higher psychological distress or depression scores than their higher-status counterparts (Kessler and Essex, 1982). Most of the Bangladeshi women reported that they sometimes feel helpless, lonely, and depressed. They miss their family and friends in Bangladesh, where they lived among relatives and neighbors. Migration to the U.S. has led to a very different lifestyle. Some are working and remain very busy, while others just stay home. The women who do not work outside the home and do not have other Bangladeshi women living close to them were most likely to report that they feel isolated and lonely.

These women have found American culture and values to be different from their own. During the first few years of emigration they usually faced financial challenges, and their limited knowledge of U.S. immigration rules and regulations, particularly those related to their rights and responsibilities to work, were significant stressors on them. They are also confused about the expected norms of behavior with the care providers in the U.S. For support, the immigrant pregnant women mainly depend on their husbands. During their leisure times, they visit other Bangladeshi families and chat in a group of exclusively Bangladeshi women. The women who have had prior birth experience are particularly important, and are treated as advisors by first-time expectant mothers. Most of the knowledge related to appropriate prenatal care is channeled through these women. As a result, some pregnant women think that they do not need to attend prenatal classes. They look upon childbearing as a natural process. As such, they believe that there is nothing to learn from formal lectures or that visiting health centers for check up and following

the doctor's instructions for safety of the fetus and safe delivery are unnecessary.

Social support is one of the most important resources that help one to handle the stressors. Usually family members, friends, and coworkers are the significant others in the pregnant woman's life who can provide instrumental, and/or emotional support (Thoits, 1995).

Summing Up

The findings of this study case give direction for providing culturally competent care to Bangladeshi immigrant women in the U.S. and are relevant to developing a sustainable health care system for similarly situated immigrant populations

Immigrants come from diverse cultures and health care systems. Each immigrant group has its distinct set of beliefs and health behavior based on its country of origin, ethnic background, and religious affiliation. Thus, systematic studies of immigrant groups are needed to understand how these factors shape their health care utilization behavior in the U.S. The findings of the studies need to be systematically disseminated to practitioners and policy makers. To ensure effective health delivery to the immigrant groups, outreach programs are needed that address the issues that impede effective health delivery to the immigrant population. If possible, health workers need to be employed from the same immigrant group who would be able to help the women with information about the sources of care and their patient rights, as well as providing interpreter services. Only through such measures can full access of immigrant women to health care be assured.

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Place of Residence and Subjective Quality of Life: Kibbutz Residents Compared to the General Israeli Old-Old Population

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The kibbutz is a social and economic unit based on equality among members, common property and work, collaborative consumption, meeting all needs equally, and democracy in decision making, in a rural environment with employment in occupations with a high degree of physical activity, and with comprehensive medical care, intensive social support, no mandatory retirement from work, and economic security. Recently, aging on the kibbutz has been cited as an example of successful aging. This study reports on in-person interviews with 572 kibbutz members, 429 parents of kibbutz members, and 499 European-American born Israelis aged 75-94 who were interviewed in the course of a study conducted in 1990. The kibbutz members, parents of kibbutz members, and a comparable group of Israelis are compared in terms of background, health, function, and well-being, in order to illuminate the consequences of short- and long-term kibbutz residence. We found that although there were few statistically significant differences in the objective measures of health and functioning among those three populations, kibbutz members had significantly better subjective health and significantly fewer reported depressive symptoms compared to the other two groups. There were no significant differences in levels of ADL difficulties among the three study groups, but kibbutz members had significantly fewer difficulties with IADL and with activities requiring physical robustness. The kibbutz members reported higher perceived instrumental support but lower level of emotional support than did the two other groups. Most important, the kibbutz members and parents of kibbutz were one-third to 40% (respectively) less likely to report poor self-perceived quality of life as compared to members of the national sample. This relationship remains significant after adjusting for potential demographic, functional, health, and social confounders, and is independent of health and functional status. This finding points to a role for the kibbutz in improving subjective health and quality of life, and in reducing reported depressive symptoms even for recent residents who are already very old and frail. The hypothesis that the kibbutz way of life can provide a framework for successful aging is supported by the data presented here.

Introduction

The kibbutz is a social and economic unit based on equality among members, common property, and work, collaborative consumption, meeting all needs equally, and democracy in decision making (Blasi, 1980; Rosner, 1982). Kibbutz members live in a rural environment, are employed in occupations with a high degree of physical activity, and have comprehensive medical care, intensive social support, no mandatory retirement from work, and economic security. It has captured the imagination of social and medical scientists for many reasons, not the least of which is that it has been viewed as a sustainable community and an example of a setting conducive to successful aging. The "fact" of increased life expectancy and successful aging has led to studies that attempted to determine the causal factors of these proposed differences from the general Israeli population (Carmel, Lapidot, & Mutran, 1995).

There are about 250 kibbutzim in Israel, and the kibbutz population constitutes only about 2.5% of the Jewish population of Israel (Central Bureau of Statistics, 1998). However, the population of the kibbutz is undergoing rapid aging. While in 1961 only 2.5% of the kibbutz population was over age 65, today about 11.5% of kibbutz members are over 65, a proportion that is slightly higher than in the general Jewish population; in the older kibbutzim, the proportion aged 65+ can reach 20–23% (Davies, 1999). The reasons for this rapid aging are beyond the scope of the present paper.

The elderly population of the kibbutz consists of two separate and quite distinct groups, which are about equal in number. In addition to those who have been long-term members of the kibbutz, who have aged in place, the frail parents of kibbutz members who aged in other places in Israel but who, in old age, can no longer maintain their independent functioning, are allowed to move to the kibbutz in order to be near their children and receive the standard kibbutz basket of comprehensive social and health services.

Most elderly kibbutz residents work at least part time; both the nature of work and number of hours worked are adjusted according to the individual's capabilities, and although most kibbutz residents continue to work until virtual incapacity (Snarey & Lydens, 1990; Sagy & Antonovsky, 1994; Habib & Matras, 1987), the jobs can sometimes be routine or simple (Nusberg, 1989; Weiner, 1981). Health care is funded by individual membership in one of the national "sick funds" (managed care organizations), but delivered through the clinic, an essential part of each kibbutz. Long-term care is provided by the kibbutz, either on the kibbutz campus or in a regional kibbutz or public nursing home, and home care is available through a national home care entitlement program (Zipkin & Morgenstin, 1998).

Objectives of the Study

In this study, we compare the kibbutz members and parents of kibbutz members in terms of background, health, function, and well-being, in order to illuminate the consequences of short- and long-term kibbutz residence. Since the kibbutz members have lived on the kibbutz most or all of their lives, the kibbutz way of life will be of crucial importance in understanding their aging process. The aged parents, however, have aged in the general Israeli urban environment and came to the kibbutz only in old age when they were already frail and needed the support available in the kibbutz. These two kibbutz-residing groups will be compared to the European-American born members of the national stratified random sample (since the kibbutz population is composed almost exclusively of Israelis of European or American (Western) heritage), to control for the effect of place of birth.

We will also examine the subjective assessment of quality of life and determine to what extent residence on a kibbutz, as compared to residence anywhere else in Israel, affects subjective quality of life.

Methods

STUDY POPULATION

The CALAS (Cross-sectional And Longitudinal Aging Study) was designed to provide a cross-sectional description of health, mental, and social status of the old-old segment of the multi-cultural elderly population in Israel. A study of the old-old in Israel was conducted among two population groups, a national random sample and kibbutz residents, using identical questionnaires; an additional set of questions was asked of kibbutz members specifically relating to their feelings about the changes in the kibbutz over the past several decades.

National Random Stratified Sample— The kibbutz sample was part of a larger study. In 1989, a random stratified sample of subjects aged 75–94 was selected from the National Population Register (NPR), a listing of the Israeli population maintained by the Ministry of the Interior. The NPR is updated with reported births, deaths, and in and out migration, and corrected by linkage with census data. The study sample consisted of 1820 Jews aged 75 and over, alive and living in Israel as of January 1, 1989, selected randomly from the NPR, stratified by age (5-year age groups: 75–79, 80–84, 85–89, 90–94), sex, and continent of birth (Israel, Asia-Africa, Europe-America). The

sampling is described more fully in other publications (e.g., (Walter-Ginzburg, Blumstein, Chetrit, Gindin, & Modan, 1999).

Kibbutz Sample— According to a census of the elderly conducted in 1985 there were approximately 800 kibbutz residents in the country aged 85+ (Central Bureau of Statistics, 1986), and we attempted to contact 100% of this population. In addition, we took a matched sample of about 800 kibbutz residents aged 75–84, stratified by sex and coming from the same kibbutzim as the 85+ population, to control for availability of services in different kibbutzim. Both populations were selected from the National Population Register, as described above.

A total of 1505 kibbutz residents aged 75–94 were selected for interviewing, of whom we interviewed 1303 (84.1%). The refusal rate was 6.2%; 9.3% could not be located. Of those interviewed, 661 were long-term members of the kibbutz who had been born in Europe or America, and 642 were parents of members, who had been permitted to move to the kibbutz in their old age. Proxy interviews for those still alive but incapable of responding to the questionnaire were conducted among 8.5% of the members, and an additional 6.5% of members had died between the sample selection date and contact by the interviewer, and the information was obtained by proxy. We used the data only from those who answered the questionnaire for themselves (not proxy respondents) since many of the questions having to do with subjective assessments and the effect of stressful events on the subject could only be answered in person.

This study reports on in-person interviews with 572 kibbutz members, 429 parents of kibbutz members, and 499 European-American born interviewees from the national random stratified sample. Since the kibbutz population is composed almost exclusively of Israelis of European or American (Western) heritage, we selected only the European-American born Israelis who participated in the larger study, to control for the effect of place of birth.

Data Collection

The interview took approximately two hours to administer and collected extensive information concerning the socio-demographic, physical, health, functioning, life event, psychological, mental status, and social network characteristics.

Measures gathered from all respondents

The demographic variables included in this analysis are age, gender, education, and marital status. Health charac-

teristics analyzed included the number of self-reported medical conditions, number of medications currently prescribed, subjective health assessment, depressive symptoms assessed by the CES-D depression scale (Radloff, 1977), and cognitive status as measured by the Katzman mini-mental state exam (Katzman, Brown, Fuld, et al., 1983). The variables that measured functional status were number of difficulties with activities of daily living (ADL)(Katz, Downs, Cash, & Grotz, 1970), with instrumental activities of daily living (IADL)(Lawton, 1971; Fillenbaum, 1985), and with activities requiring physical robustness (Harris, Kovar, Suzman, Kleinman, & Feldman, 1989; Nagi, 1976; Rosow & Breslau, 1966). We asked a series of questions about frequency of engaging in regular physical sport activity. Sportive physical activity included swimming, gardening, and walking up to 3 kilometers (or more if applicable).

The subjective assessment of perceived quality of life was based on the question, "how would you describe your life today: good, fair, difficult, or very difficult."

Social network variables examined included number of living children, frequency of contact with children, care giving (whether the respondent cared for another elderly person), and degree of social isolation. The latter measure was constructed of living arrangement; contacts with children, grandchildren, and neighbors; and marital status.

A scale to measure social support was developed through factor analysis and was based on questions from the baseline survey instrument administered to the total Israel old-old population sample. Two types of social supports (Kahn, 1979; Shuval, Fleishman, & Shmueli, 1985) were examined: **expressive** support, defined as discussing personal issues with family, friends, or neighbors, as expressed in conversation and assistance in decision making processes and two questions regarding visits with neighbors, and celebrating holidays with family and friends; and **instrumental** support, defined as support by family, friends, or relatives during illness, in daily life activities, personal care, relations with neighbors, and aid in times of emergencies, or during short- or long-term illness episodes (Lawton, 1971; Norbeck, Lindsey, & Carrieri, 1981). For further information on the development of this scale, please consult Shapira (Shapira, 1996).

Statistical methods:

All variables analyzed were categorical, either in the original questionnaire or after recoding. The comparison of distributions of demographic variables in the three study groups was performed using Pearson chi-square statistics. This test revealed significant differences among the groups

in gender, age, and education. Therefore, we performed direct standardization of the distributions of all other variables in the groups of kibbutz members and parents according to distribution of gender, age, and education in the national sample. The standardized distributions were compared by Pearson chi-square (Tables 2, 3, 4).

The major outcome variable was reporting quality of life as "good or fair" vs. difficult or very difficult. Those whose answers were missing were excluded from this analysis. The predictive model was built using stepwise multiple logistic regression to evaluate the effect of kibbutz membership or residence after adjusting for demographic, functional, social network, and health characteristics.

Results

Kibbutz members were somewhat younger than both the parents group and the national sample. About 64% of the members were in the 75–84 age group while 51% of the parents and 59 % of the national sample were in the younger age category (p<0.001). (Table 1 presents the distribution of selected demographic characteristics by the three study groups.).

The gender distribution differed among the three groups. The national sample consisted of a larger proportion of males than females, while in the kibbutz sample the proportion of females was higher, especially among parents, where over 70% were women. Kibbutz members were more educated than both individuals in the national sample and parents. Only 4% of the members had had less than 5 years of education as compared to 12.7% and 18.4% of the parents and the national sample (respectively). The proportion married was similar for the kibbutz members and the national sample (40%) while only 25% of the parents were married.

In terms of health, the number of self-reported medical conditions was higher for both kibbutz members and parents than the national sample, although these differences were not statistically significant. Parents reported slightly more medications than did the two other study groups, but again the difference was not statistically significant (Table 2). Fewer kibbutz members reported poor subjective health than did either parents living in the kibbutz or individuals in the national sample (17.4%, 20.5% and 30.6% for kibbutz members, parents, and national sample subjects respectively, p<0.001).

Table 1: Distribution of Demographic Characteristics by Study Group							
	Kibbutz Members (n=572)		Parents (n=429)		Sample National (n=499)		P Value
Age:							
75–84	(365)	63.8	(219)	51.0	(293)	58.7	<0.001
85–94	(207)	36.2	(210)	49.0	(206)	41.3	
Sex:							
Males	(259)	45.3	(122)	28.4	(275)	55.1	<0.001
Females	(313)	54.7	(307)	71.6	(224)	44.9	
Education:							
0–4	(21)	3.9	(58)	12.7	(92)	18.4	
5–12	(416)	70.4	(275)	61.1	(292)	56.6	<0.001
+13	(133)	24.2	(81)	23.2	(100)	20.0	
Unknown	(2)	0.3	(15)	3.1	(15)	3.0	
Marital Status:							
Married	(226)	39.5	(106)	24.7	(199)	40.0	0.05
Unmarried	(343)	60.0	(323)	75.3	(297)	59.5	
Unknown	(3)		(3)	0.6			

A significantly lower proportion of kibbutz members (30.1%) than parents (36.9%) or members of the national sample (40.3%) reported experiencing depressive symptoms. The highest proportion of cognitively impaired individuals was observed among parents in the kibbutz, and the lowest was among kibbutz members, but the difference was not statistically significant (Table 2).

No significant differences were found among the three study groups in disability as measured by number of difficulties with activities of daily living (ADL) (Table 3). However, kibbutz members had significantly fewer difficul-

ties with instrumental activities of daily living (IADL) and activities requiring physical robustness than were parents and individuals in the national sample. In addition, kibbutz members were significantly more likely to engage in physical activities: 32% of kibbutz members were involved in activities with a high level of physical activity, as compared to 22% of the parents and the national sample (p<0.001).

Selected aspects of the social network are presented in Table 4. The parents (both men and women) of kibbutz members reported the highest rate of daily contact with their children (about 84% for both sexes, compared to

Table 2: Health Characteristics by Study Group, Standardized* Percentages

	Kibbutz Members (n=570)		Parents (n=414)		National Sample (n=484)		P Value
Number of Medical Conditions:							
0	(23)	4.2	(13)	3.8	(23)	4.8	0.30
1–3	(180)	33.5	(133)	34.0	(189)	39.1	
4–5	(144)	25.7	(100)	24.7	(128)	26.5	
6+	(223)	36.6	(168)	37.5	(144)	29.9	
Number of Medications:							
0	(64)	12.4	(25)	6.7	(53)	11.0	0.08
1–4	(352)	56.0	(256)	64.7	(294)	60.8	
5+	(183)	31.4	(133)	28.6	(137)	28.3	
Unknown	(1)	0.2	-		-		
Subjective Health:							
Excellent/ Good	(156)	27.2	(121)	32.7	(102)	21.1	0.001
Fair	(311)	54.6	(195)	46.5	(226)	46.8	
Poor	(99)	17.4	(96)	20.5	(148)	30.6	
Unknown	(4)	0.8	(2)	0.3	(8)	1.6	
Depressive Symptoms:							
No	(385)	67.0	(226)	60.1	(262)	54.1	0.001
Yes	(171)	30.1	(170)	36.9	(195)	40.3	
Unknown	(14)	2.8	(18)	3.0	(27)	5.6	
Cognitive status:							
Normal	(439)	71.2	(265)	68.4	(331)	68.4	0.24
Impaired	(110)	23.6	(120)	26.0	(119)	24.6	
Unknown	(21)	5.2	(29)	4.8	(34)	7.0	

* Direct standardization for the joint distribution of age, gender, and education in national sample

Table 3: Functional Status Characteristics by Study Group, Standardized* Percentages

	Kibbutz Members (n=570)		Parents (n=414)		National Sample (n=484)		P Value
ADL: (No. of difficulties)							
0	(444)	76.5	(278)	70.6	(360)	74.5	0.19
1–2	(71)	13.8	(66)	17.1	(63)	13.0	
3+	(54)	9.7	(70)	12.4	(60)	12.4	
Unknown	(1)	0.2		-	(1)	0.2	
IADL (no. of difficulties):							
0	(240)	39.9	(112)	35.0	(182)	37.6	0.005
1–2	(187)	34.8	(130)	31.2	(131)	27.1	
3+	(110)	19.4	(137)	26.5	(134)	27.7	
Institution	(27)	(5.2)	(33)	7.4	(31)	6.4	
Unknown	(6)	(1.0)	(2)	0.3	(6) 1.2		
Physical Robustness - difficulties:							
0	(141)	23.8	(63)	21.3	(97)	20.0	0.001
1–2	(184)	33.7	(103)	27.8	(119)	24.5	
3+	(245)	42.5	(248)	50.8	(266)	54.9	
Unknown	-	-	(2)	0.4			
Physical Activity:							
Low	(286)	49.7	(265)	57.6	(328)	67.8	0.001
Moderate	(111)	18.2	(73)	20.0	(49)	10.1	
High	(173)	32.1	(76)	22.4	(107)	22.1	

* Direct standardization for the joint distribution of age, gender, and education in national sample

about 50% for kibbutz members and 32% of the national sample, p<0.001). Kibbutz members and parents reported higher levels of high and moderate instrumental support but lower level of emotional support than did the other group. More of those in the national sample (38%) reported being the caregiver for someone else than did either parents (36%) or kibbutz members (32%) although the difference was not significant. The national sample group reported very high levels of social isolation compared to the two kibbutz groups.

Turning to the major dependent variable of interest in this paper, we examined the factors that were associated with a positive assessment of perceived quality of life. In the univariate analysis, 28% of the national sample reported that their subjective quality of life was difficult and another 9% reported that it was very difficult, compared to only 17% of the kibbutz members and 16.5% of the parents who reported that their life was difficult, and 3–4% that reported very difficult self-perceived quality of life. Multivariate logistic regression analysis showed that kibbutz residents were almost one-third as likely to perceive their lives as difficult than were subjects in the national sample (OR=0.33: 95% CI=0.23-0.48 for the parents and OR=0.43: 95% CI=0.30-0.61 for the kibbutz members) after adjusting for demographic, health, functioning, and social characteristics. Other factors that were found to be significant risk factors for poor self-perceived quality of life were difficulties with activities requiring physical robustness, ADL, reported medical conditions, presence of depressive symptoms, and level of physical activity (Table 5).

Table 4: Social Network and Social Contact Variables by Study Group, Standardized* Percentages

	Kibbutz Members		Parents		National Sample		P Value
Daily Contact with Children:							
Men		51.4		83.5		33.2	<0.001
Women		48.4		85.6		30.5	<0.001
Emotional Support:							
Very low	(18)	3.6	(5)	1.4	(41)	8.5	0.001
Low	(84)	17.1	(46)	12.4	(61)	12.6	
Moderate	(239)	39.5	(126)	30.1	(114)	23.6	
High	(113)	21.5	(127)	30.3	(154)	31.8	
Very high	(116)	18.4	(127)	25.8	(114)	23.6	
Instrumental Support:							
Very low	(138)	26.6	(127)	28.5	(204)	42.2	0.001
Low	(80)	15.4	(59)	17.5	(49)	10.1	
Moderate	(9)	15.2	(33)	9.8	(41)	8.5	
High	(105)	18.0	(101)	25.0	(76)	15.7	
Very high	(148)	24.9	(94)	19.1	(114)	23.6	
Caregiving to another person:							
No	(366)	67.9	(276)	63.5	(297)	61.4	0.1
Yes	(204)	32.0	(138)	36.5	(184)	38.0	
Unknown		-		-	(3)	0.6	
Social isolation:							
Very high	(41)	7.4	(11)	2.7	(75)	15.5	0.001
High	(284)	48.6	(288)	59.7	(139)	28.7	
Moderate	(6)	1.1	(7)	1.4	(69)	14.3	
Low	(13)	2.3	(4)	1.3	(46)	9.5	
Very low	(226)	40.6	(104)	34.9	(155)	32.0	
Self-perceived Quality of Life:							
Good	(292)	34.7	(179)	44.1	(134)	27.7	0.001
Fair	(238)	42.2	(142)	36.1	(166)	34.4	
Difficult	(99)	17.5	(78)	16.5	(136)	28.1	
Very difficult	(28)	4.8	(14)	3.1	(44)	9.1	
Unknown	(3)	0.9	(1)	0.2	(4)	0.8	

* *Direct standardization for the joint distribution of age, gender, and education in national sample*

Discussion

This study attempts to draw together some of the strands of research done to date on aging in the kibbutz, since there is much evidence that the kibbutz provides an environment in which "successful aging" can occur. The kibbutz has undergone important changes in organization, economic viability, and social arrangements in the years prior to the study. The kibbutz system was established primarily on the basis of a common ideology, which served as the organizing principle of the entire kibbutz system, but changes have occurred in those organizing principles which may have significant effects on the trajectory of aging on the kibbutz.

This study examined three separate sub-populations within the population of Israel aged 75–94: kibbutz members, residents of kibbutzim who are frail parents of kibbutz members, and a comparable group (European-American born) randomly selected from the Israeli old-old population. We found that there were few statistically significant differences in the objective measures of health and functioning among those three populations. Nevertheless, kibbutz members had significantly better subjective health and significantly fewer reported depressive symptoms as compared to the other two groups, despite the fact that there was no significant difference in the number of reported medical conditions or number of prescription

Table 5: Factors Associated with Difficult Self-Perceived Quality of Life, Final Multiple Logistic Regression Model			
Variable	O.R.	95% CI	P Value
National sample	1.0		<0.001
Parents	0.33	0.23–0.48	
Members	0.43	0.30–0.61	
Nagi:			
No impairment	1.0		0.03
Low	1.45	0.97–2.16	
High	1.75	1.16–2.68	
ADL:			
No limitation	1.0		0.03
With limitation	1.48	1.04–2.09	
Severe Diseases:			
Low	1.0		<0.001
Moderate	1.16	0.74–1.81	
High	1.51	0.97–2.37	
Very high	2.32	1.52–3.55	
Depressive Symptoms:			
No	1.0		<0.001
Yes	3.07	2.28–4.13	
Physical Activity:			
No	1.0		0.03
Moderate	0.65	0.43–0.99	
High	0.64	0.43–0.95	

medications consumed. This may be explained by easily available health services (every kibbutz has a health care clinic) which allows early identification and diagnosis of problems, with nursing and medical care provided by a team that is well known to the patients, and that has been caring for the health of those patients for many years. There is continuity of care and deep knowledge of the patients (Matalon, Yinon, Goldman, & Antonovsky, 1994) which may contribute to a feeling of well-being.

The lower rate of depressive symptoms among kibbutz members may be explained by the kibbutz way of life. This way of life was described in the introduction to this paper, but we will review some of the most salient characteristics here: stability in living arrangements; no economic concerns (Kurlowicz, 1993; Blazer et al., 1987; Goldberg et al., 1985); full medical and long-term care; extensive life-long social networks; high levels of physical activity; frequent cultural activities; and no retirement from active work.

There were no significant differences in levels of ADL

kibbutz in the first place to be near a child, the kibbutz members reported higher perceived instrumental support but lower level of emotional support than did the two other groups. This may be because emotional support on the kibbutz is based on long-term intimate daily interactions which have gone on for so long and are so taken for granted that they may not be perceived in the same way as in the national sample. The emotional support is so pervasive that it may be invisible and therefore not reported (Stueve & Lein, 1979). On the other hand, the high level of perceived instrumental support is due to the fact that there is a visibly supportive environment in which extensive instrumental assistance is available.

In terms of self-perceived quality of life, the kibbutz members and parents of kibbutz members who have been allowed to move to the kibbutz as a way of receiving the all-encompassing kibbutz services, in the place where at least one of their children lives, are one-third to 40% (respectively) less likely to report poor self-perceived quality of life as compared to members of the national

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"For kibbutz members, the long-term effect of the supportive kibbutz environment is expressed in their high perceived quality of life."

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difficulties among the three study groups, but we found kibbutz members to have significantly fewer difficulties with IADL and with activities requiring physical robustness. This may be associated with the fact that the kibbutz members were also found to be much more likely to be physically active than were either parents or the national sample. Kibbutz members had engaged in hard physical labor all their lives, and continued to work, even for a few hours a day, long after the official retirement ages of 60 for women and 65 for men. We found that about four out of five of both women and men who were kibbutz members were engaged in productive work at least on a part-time basis, as compared to 66% (men) and 56% (women) of the parents (who were of course kibbutz residents and therefore expected to work, no matter their physical condition), and only 22% of men and 6% of women in the comparable national sample.

With respect to the social network factors, although there were extremely high levels of daily contact with children by both kibbutz members and, especially, by parents of members, who of course had come to the

sample. This relationship remains significant after adjusting for potential demographic, functional, health, and social confounders, and is independent of health and functional status. For kibbutz members, the long-term effect of the supportive kibbutz environment is expressed in their high perceived quality of life. For parents, this effect is most likely due to the contrast between the current, extremely supportive environment, and the previous environment which the elderly parent left. This finding points to the important contribution of a positive environment to feelings of well-being, even for those who are already frail and of very advanced years.

An early study of the elderly on the kibbutz found that psychological adjustment and satisfaction among the elderly were similar to that of other age groups on the kibbutz, and high in absolute terms, and were higher than for elderly persons outside the kibbutz. These authors concluded that the special character of kibbutz life appeared to make a significant independent contribution to elderly members' satisfaction (Leviatan, Am-Ad, & Adar, 1981). A later article by the same author summarized

twenty years of research about the elderly members of kibbutzim, and concluded that their "successful aging" is mostly due to the social arrangements and policies adopted by their communities in the domains of work, social relations, stability in social roles, and surroundings (Leviatan, 1999). A study that compared 82 kibbutz members with a random sample of 677 urban elderly Israelis of Western origin aged 70 and over also found that the kibbutz members in comparison to other elderly groups reported better self-rated health and greater life satisfaction in general, in spite of similar reports about objective health and physical functioning, as well as a higher level of expressed well-being among kibbutz members (Carmel, Lapidot, & Mutran, 1995).

We can conclude that although the physical health and functioning of the kibbutz residents do not differ significantly from that of a comparable group of Israelis of advanced years, the kibbutz residents, including frail elderly who moved to the kibbutz late in life, have a more positive outlook on life, as indicated by higher perceived quality of life and lower levels of reported depressive symptoms. This points to a role for the kibbutz in improving subjective health and quality of life, and in reducing reported depressive symptoms even for recent residents who are already very old and frail.

In conclusion, the hypothesis that the kibbutz way of life can provide a framework for successful aging is supported by the data presented here. We found that even those who moved to the kibbutz late in life had more positive assessments of quality of life, and suffered lower levels of depressive symptoms, than did a comparable group of Israelis living outside the kibbutz. Nevertheless, there have been changes in the kibbutz way of life that may affect the future aging trajectories of those currently aging in the kibbutz environment.

Strengths And Limitations

This study is based on two separate samples. The European-American born Israelis were selected as part of a national, randomly selected stratified sample of the entire population aged 75–94. Because of the low number of people living on kibbutzim, we had the luxury of being able to select almost all of those aged 85 and over, and a high proportion of those aged 75–84. The resulting kibbutz data base includes nearly one-fourth of all kibbutz residents aged 75–94. The two data bases used to study the European-American born Israelis living elsewhere, and the kibbutz residents (both members and parents) include both community and institution residents. We must emphasize that the analyses presented in this paper have not been weighted to reflect the entire populations from which the samples were drawn, and so are not generalizable to the entire population.

It is important to note that the kibbutz members are a self-selected group, who chose the communal kibbutz way of life at a time when that involved great physical and economic hardship, as well as no little physical danger. Therefore, these members of the founding generation may have been a hardier, more optimistic, and less depressed group of people throughout their lives. Unfortunately , this hypothesis cannot be examined by the data collected in the course of the current study. To the extent that there are similarities among the three groups, then we can conclude that the groups are basically similar. Differences between kibbutz members, on the one hand, and the frail parents and the European-American born members of the national sample, on the other, would not provide conclusive information on the effect of the kibbutz way of life, since some of the differences may have been present even at younger ages and were expressed by the decision to join the pioneering kibbutz movement. But the important findings of this paper point to the fact that the responses of both groups of kibbutz residents, both members and frail parents, differ from those of the comparison group of European-American born Israelis. Therefore, one can draw the conclusion that the difference in the responses is due to the difference in environment, which is to say, living on the kibbutz, since the kibbutz residents differ significantly from those of a similar type of citizen who lives in any other place in Israel.

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Reconnecting the Disconnect
Integrating Community Service into Literary Studies

Susan Danielson

> I will tell you something about stories,
> [he said]
> They aren't just entertainment.
> Don't be fooled.
> They are all we have, you see,
> all we have to fight off
> illness and death.
> —Leslie Marmon Silko, *Ceremony 1*

Over the past two decades universities and educators in the professions have come under increasing pressure from local communities and the state to reexamine their curricula and goals, demanding accountability to and integration with the locations that provide a majority of their students and a percentage of their funding. Although modern professional education encouraged a scientific detachment from local communities and concerns in an effort to reach universal norms and protocols, some contemporary scholars are urging a move toward a "scholarship of engagement" (Boyer). As a consequence of or as a spur to this crisis, professional organizations representing both literature and allopathic medical faculties have called for a reconceptualization of the educational

training that future professionals undergo. Changes in health professions education, for example, must reflect the newly emerging health care system and incorporate "attention to the epidemiological, economic, and social elements of practice. . . . this means our students need to learn to be different physicians from those who came before" (Greenlick, 1995). Grounding in the humanities and in the community beyond the physician's office or hospital may help future medical practitioners meet the needs of the individual, their caregivers, and the larger community. Similarly, a thematic and community-based approach to literary study may attract a more diverse population to the humanities and suggest alternative career opportunities. My experience in developing and teaching a community-

based learning course, "Literature and Medicine in the Community," suggests one strategy for meeting these challenges and inspires the title of this paper—to reconnect the disconnect. Is it possible to offer a broader, more "engaged" liberal arts and professional education without sacrificing scholarly and disciplinary integrity? The answer is, clearly, "Yes."

Calls for Change

The Modern Language Association believes we have reached a "turning point" in graduate education, and their 1997 Committee on Professional Employment explored "The disparity between the expectations and assumptions about college teaching that most graduate programs inculcate." The report urges graduate programs to introduce students "to strategies through which abilities developed by higher education in the humanities can be translated into proficiencies useful in nonacademic careers." In keeping with this shift, emerging theoretical approaches, from feminism to cultural studies, examine the disconnect between literature and society that came to prominence in the 1940s and 50s. They assert that imaginative literature is both a repository for and a reflection of images and themes in society as well as a crucial part of a dynamic cultural process in which meaning is created and contested. Now when literary scholars analyze a text, they interrogate the cultural landscape out of which it was produced: In what ways, for example, does this text support, refute, or suggest alternatives to contemporary social roles and public policies? Scholars recognize the ways in which literature has often provided a voice for the voiceless as well as a location for imagining alternative futures.

Analogous changes are taking place in health professions education. Although Glenys Parsell (1998) and her colleagues are writing about medical education in England, her suggestions apply equally to the United States:

> The new approach to health care education is to produce the doctor, dentist or therapist who is adaptable, flexible, and a good communicator and collaborative team worker and who shares the same goals as other health care professionals. (304)

While Greenlick and Parsell focus on the needs for a new type of physician, Arthur Frank writes of a new "postmodern" type of sick role that has gradually replaced the passive one outlined by Talcott Parsons in the 1930s as well as a new "postmodern" type of illness. In the earlier biomedical, modern model, it is the physician who trans-

lates the symptoms of a patient's illness into a disease that the doctor both names and treats. The patient's voice is silenced. Frank speaks of the need to hear the patient's voice, to let them tell the stories that the medical story cannot tell: " . . . [the] postmodern experience of illness begins when ill people recognize that more is involved in their experiences than the medical story can tell" (1995). In this reconception of what he calls "the illness story," patients will no longer be viewed as a bunch of unreliable symptoms but can be valued participants in the medical process of diagnosis and treatment. By conflating the biological condition and the patient's experience of that condition, practitioners can begin to trace the ways in which culture directly affects health (Morris, 1998: 41). Today, "counternarratives" (voices of patients, nurses, lay caregivers, and alternative healers) take their place next to the physician's story offering perspectives and insights often inadvertently silenced by allopathic medicine (Nelson, 1997). Most recently, in *Illness and Culture* (1998), David Morris has called for a shift from a biomedical to a biocultural view of illness and speaks to the centrality of narrative in this process:

> Postmodern illness, because of its complicated links to the culturally constructed environment, ultimately demands that we rethink sources of medical knowledge. Laboratory tests and scientific studies cannot reveal everything that doctors need to know. The social, cultural, and personal dimensions of illness must be understood through other means, and one neglected but useful resource is narrative. Narrative, we might say, constitutes a mode of understanding appropriate for situations too variable and too untidy for laboratory analysis. Further, storytellers thrive at the margins of power, casting a skeptical eye on contemporary culture . . . narrative . . . confront[s] self-consciously the ways in which their culture has taught them to think about illness, to imagine ways in which they might experience a healthier relation to the earth. (89)

Literature and Medicine in the Community

"Literature and Medicine in the Community" addresses several of the concerns raised by both health professions educators and the Modern Language Association by integrating community-service learning and literary analysis. All students are required to complete twenty hours of community service, prepare an ongoing Reflective Journal, write several short literary analysis papers, and present to the class a final project. Through in-class discussions,

reflective writing, and literary analysis, we weave together the aesthetic, personal, and cultural concerns that emerge in their classroom and community experiences. Their final project involves the creation of a physical artifact that represents for them what they consider to be the central meaning of all these experiences.

Organized around the concept of narrative and counter-narrative, "Literature and Medicine in the Community" connects medicine to narrative and moves us beyond the barriers erected through professional hierarchies to connect with a whole array of issues and voices. Traditional literature and medicine courses pose questions related to health care delivery and interactions especially between doctor and patients. They examine "themes of illness, suffering, and death in literature, or what might be called images of disease; second, images of healer; third, the type of physician-poet or the physician-writer; and fourth, literature as a mode of healing" (Jones 11). Often such readings enable students to focus on ethical dilemmas, to help them develop a capacity to tolerate ambiguity, and to demonstrate the connections between literary analysis and diagnosis. Perhaps because the audience for such courses is still predominantly allopathic medical students, they invariably privilege the allopathic physician as the center of the medical encounter, often reading the literature under discussion as an exemplum of whatever disease or procedure is currently under discussion. While the allopathic physicians are characters or narrators in some texts that I chose, in most they play a minor role. Instead, this course deliberately foregrounds new and previously marginal voices in the conversation about the meaning and experience of health and illness in a variety of cultures; the AIDS hospice worker in Rebecca Brown's *Gifts of the Body*; the Native American returning soldier who suffers from shell shock in Leslie Silko's *Ceremony*; the Curandera who saves the family in Rudolpho Anaya's *Bless Me, Ultima*; Lionel, the narrator of Jonathan Letham's *Motherless Brooklyn* who comes to recognize the bounty offered by his Tourette's Syndrome. Students often note in their Reflective Journals that the decentering of the physician in these texts reflects their experiences in their community service project: care-giving and contact with health care delivery systems more often than not takes place without a physician present.

Equal in importance to the literary content of the course, "Literature and Medicine in the Community" connects narrative to action. In his classic work *The Aims of Education,* Alfred North Whitehead speaks to the importance of the connection of literary study to community practice:

> The insistence in the Platonic culture on disinterested intellectual appreciation is a psychological error. Action and our implication in the transition of events amid the inevitable bond of cause to effect are fundamental. . . . Essentially culture should be for action. . . . (qtd in Townsend, 1973: 481)

Student service placements range from serving food in nursing homes to providing entertainment at children's health centers, from volunteering at veterinary clinics to performing their regular jobs related to health care delivery or as caregivers to family members. Andrea is the only caregiver for her seven-year-old daughter, Brie, who was born with Down's Syndrome. Karen's grandmother suffers with Alzheimer's disease, and she often spends weekends providing care. Marge works as a laboratory technician at OHSU. John volunteers regularly at a North Portland clinic, and Geoff is a house counselor for mentally ill adult males. I encourage these students to use their current care giving setting as their community placement for the course. For other students I provide a list of possible placements including the American Cancer Society, the Alzheimer's Foundation, the Perry Center, the Virginia Garcia Clinic, and numerous programs for the elderly. To monitor placement I contact volunteer coordinators at a site, and, if possible, they provide follow-up assessment on the effectiveness of the community service.

Community engagement is integrated into the classroom in other ways. With support from the Oregon Mountain Writers and Portland State, nurse practitioner and poet Cortney Davis came to my class and participated in a panel discussion with local nurses, physicians, and alternative healers for the Oregon Mountain Writers program. Last Spring Patricia Bachlar, a bio-ethicist, and Jeremy Goodwin, a pain physician, came to class to discuss and debate "meanings" in Richard Selzer's classic piece, "Imelda." Later that term the class went to see "Wit," a performance at ART of a play we had read for class, and we

participated in a workshop led by Floyd Skloot, a local nonfiction writer who suffers from a rare debilitating virus.

Keeping a Reflective Journal allows students to describe and reflect on the interconnections among their personal lives, the literature under analysis, and their experience in the field. Here they can integrate their various, often fragmented experiences during this course to construct a new set of meanings. Jamie, an x-ray technician at a local hospital, is returning to school to prepare to apply to medical school. "Literature and Medicine in the Community" had obvious appeal, particularly when I told her that she could use her day job for her community service project. Over the course of the quarter her reflective journal entries document a growing discomfort with something she considered to be a necessary part of her job, "detachment from my patients. . . ." By her fifth journal entry Jamie's reflections on her service project (e.g., her job) integrate concerns and analyses from the literature discussed in class:

> I've been working in the medical field and it's become a job . . . just that. . . . Much of the reading I've done this term has re-introduced me to some of the reasons I chose health care as my career: to Help People. . . . In the "Narrative Road to Empathy," Charon suggests methods for increasing narrative competence and therefore "the capacity for empathy." [Until this course] I have imagined some of my patients as victims . . . the literature read this term opened my eyes to other people's perspectives . . . on being ill, having a loved one being ill, as well as perspectives of different kinds of caregivers.

Her final project, an original poem, "Exposure," encased within two sheets of transparent glass, extended, actualized, and even problematized her theme about detachment:

Exposure
From behind this leaded glass
I can see you, but I cannot touch you
I can hear you, but I cannot comfort you

From behind this leaded glass,
Your story cannot be heard
You must be still, you mustn't talk
"Hold your breath."

From behind this leaded glass
You are an image; a shadow of your true self
A self I rarely see

You may be uneasy
Or even frightened
But your benefits
Outweigh your risks
Diagnosis enables treatment

I am at risk,
I become vulnerable,
I am exposed
When I step out
From behind this leaded glass.

In presenting her final project to the class, Jamie wrote: "The glass affords me protection, not only from the radiation I deliver, but it also provides a level of detachment from my patients. . . . I realized I cannot totally remove myself from the suffering of others; I must be able to listen and to help whenever I can; but I also realize it will take a conscious effort. . . ."

Unlike Jamie, Katherine was not working in a health care field but was interested in becoming a veterinarian. She fulfilled her service project by volunteering at a local veterinary hospital several hours a week. By her second reflective journal entry she confessed: I like to have blood on my hands. . . . It makes me feel as if I've done something and now I have some sort of physical proof. I wear the blood on my hands and clothes the way a soldier wears a war wound . . . unlike these comparisons, the blood can be washed away . . .This is, I think, representative of my very real feelings of inadequacy. . . ." Her final project was a poster divided in half. On one side were words cut out from newspapers and chaotically strewn across the page; on the other side, the words had been reordered as a series of quotes from the various novels and poems we had read. Between the two sides was a pair of glasses. Her journal explained: "The literature, then, has been like a new pair of glasses in which I view the world I have been living in. While this journal may not continue in the physical sense after this course is over, it will continue in my mind. Now that my eyes have been opened, I cannot shut them."

Jessica, who volunteered at a local nursing home and developed a special friendship with 97-year-old Patsy, cooked the class a dish of "kasha and varsvnishka" (an Eastern European dish) for her final project. Her connections with the literature became clear during her presentations:

> In *Motherless Brooklyn* Lionel uses food as a ritual. There was a connection for me between Lionel's need for food to calm his Tourette and

Tayo's need for ceremony to calm his sickness, in the book *Ceremony*. Food in my family is not only a ceremony but a story that goes along with it. By spending time with Patsy, I renewed my need for connection with my grandmother and found significance in the capacity that food and family gatherings play in my life as a way to pass on stories and traditions.

Perhaps the most profound realizations and connections came from Sarah, a young woman who felt she did not have time for a local service project and finally settled on researching the causes of pancreatic cancer that her grandfather was dying from in North Dakota:

I have spoken with my grandpa now four times. I did a series of interviews asking him questions like, how has cancer affected you? What does cancer mean for you? . . . Doing the interviews told me a lot about myself and how I actually feel about the cancer that is going to take his life . . . for my project I am going to do a mobile about his cancer. He is an old man and his life literally hangs from a thread. . . .

This project has been such a disaster and a really great learning experience. . . . I never heard back from the Pancreatic Cancer Association, wasn't allowed to tour a pesticide facility, and couldn't find a doctor who was willing to support my claim of a link between pesticides and cancer. . . . However, I got more out of my project doing it this way then if I had found scientific research. . . .

I most relate my Grandpa's story to Tayo's story in *Ceremony*. Everyone in Tayo's life wanted to change him and make him "normal," while he needed to go through the grieving process to come out alive. It is this way with my Grandpa and me; he is comfortable with his situation, where I am not ready to accept it as fate. I feel like I am all of Tayo's friends trying to get him to come back; I am trying to fix something in my Grandpa that is broken. The important thing is that both Tayo and my Grandpa don't need it to be fixed. My Grandpa doesn't fear death, or ask why, . . .

This project has forced me to deal with some issues and ideas that I did not agree with, but now I feel that I have a better understanding of how to analyze to see what is really happening, and how to pick out the important information.

Reconnecting the Disconnect

As these selections from Reflective Journals suggest, students in this course are highly motivated and often

strong readers and writers. Most are returning to college often after years of working in the community; in fact, most of them continue to work close to full-time and raise families as they pursue their degrees. Most are not English majors; one of the major benefits of this course has been its capacity to draw to the English Department new students excited by the promise of a literature course closely connected to their more applied interests. Used to working within a set of competing demands, these students have the capacity to identify common themes and subtle shifts in meaning that help to uncover new levels of meaning among the texts and between themselves and their community service. Here, for example, is Jeanne's final Reflective Journal entry:

. . . I did have one very powerful realization that may be related to the journaling but may also just be the total impact of this course. One night I awoke and realized that my life is also a story and that if I wanted to, I could stand back and "read" my own life of the past and present, as chapters in a book. More important, I could also look beneath the superficial details to detect the hidden messages, meanings and symbols of my own process. In a way, my own reality shifted and I saw myself as not separate from the characters in all the stories.

"Literature and Medicine in the Community" is challenging to teach, tiring, and often emotionally draining. Last term, five of the patients students were working with died, and we acknowledged that loss during class time. Sometimes the connection feels too close; after all, I am not trained as a therapist, nor do I wish to function that way in the classroom. But, in fact, students do not ask that of me. Our sharing of experiences deepens our capacity to read the literature and to understand community service. Sandi's final literary analysis paper addressed just this issue:

In medicine and health, sometimes the gap between sick people and well people can seem very wide. It may even cause well people not to want to be with sick people and vice versa. Recently, I was afraid of someone's sick situation, their special setting. I thought I wouldn't know what to say or what to do, so I just wanted to avoid the whole situation. But we can't let sickness or wellness or any of the special settings that each of these books represented separate us because we are not really separate. We're all human and at some point or another we all will need someone's help. We need each other to be

able to empathize, we need each other, period. Don't be *tricked* into thinking otherwise.

Professional education, particularly in literary studies and medicine, are in a crisis—certainly a crisis of confidence and a crisis in funding. Possibly we are in the midst of a cultural shift, one that is analogous to the challenges posed by the professionalization of education and medicine from the 1830s to the 1850s. Those years were often chaotic but also extremely fertile, giving birth to what are still the cornerstones of institutional society in the United States: the prison, the public school, the clinic, and the asylum. In part this social turmoil and institutionalization grew out of a challenge to medical licensure in 1830. With the suspension of the licensing system, alternative medical practices that emphasized people's right to be involved in their health care and promoted alternative attitudes toward diet, disease, and health, competed openly with scientific "heroic" medicine. Water-cure, mesmerism, phrenology, and homeopathy were the therapeutic options of choice for most Americans; not until the founding of the American Medical Association in the 1850s, when many of the innovations from these alternative fields had been incorporated into allopathic medical practice (hygiene is the best example) were major campaigns launched to discredit these practices. And of course, even with the successes and funding of scientific medicine over the past 150 years, alternative medicine continues to thrive into the 21st century. A recent *New Yorker* article by Michael Specter noted that "Americans spent 27 billion dollars on unproven remedies in 1997 . . ." and "42% of American adults have used some form of untested therapy. Supplement sales have topped 15 billion dollars." Recent recognition of alternative medical practice by insurance companies, the introduction of nurse-practitioners and physician assistants, and the explosion in technology and Health Maintenance Organizations, etc., underscore the need for rethinking medical education and the delivery of health care in the United States.

Post-secondary education is facing a shift of equal magnitude. Certainly liberal arts education, or as some might have once called it, "education for its own sake" has undergone profound change in the past 25 years and is clearly on the decline. A recent article in *Change* magazine noted that the numbers of liberal arts majors in elite liberal arts schools has fallen from 70% in the 1970s to around 7%. Faced with such a climate, liberal arts and health professions educators can either dig in their academic heels and dismiss these calls for change as irrelevant and barbaric, or they can begin the more challenging task of discovering the interconnections between their scholarly field and their community. The latter choice seems to me to hold the promise of a complex, relevant, and engaged scholarship.

Here is the course description:

"Literature and Medicine in the Community" examines the ways in which creative literature, including poems, novels, and short stories, can provide a site for complex theoretical, ethical, and emotional debates concerning health care practices, providers, and patients. Since this is a community-based learning class, all students are expected to participate in at least twenty hours of community service at a site authorized by the instructor. Students will be expected to reflect on the interconnections between narrative representation, personal and public perspectives, and their community experience. Although many already are in or intend to pursue careers in health care delivery, other types of caregivers also sign on: parents whose children have suffered from birth defects or major illnesses, x-ray technicians and group home leaders returning to finish their degrees. Some students suffer with chronic disease or disability. And even students with no immediate involvement in the healthcare system/industry register, recognizing that we will all have some relationship to health care during our lifetime—this course is not abstract in any way.

VOLUNTEER MANAGEMENT

Can you think of **any** career that could not benefit from:
• learning how to lead and motivate people
• analyzing how societal trends influence programs & projects
• knowing how to discover the resources of your community
• learning how to collaborate with multiple organizations for the common good
• knowing how to plan for and evaluate programs?

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Community Resource Mapping & Collaboration	An analysis of the systems that measure community assets & resources
Volunteer Program Planning & Evaluation	An overview of volunteer program planning with special emphasis on evaluating programs

For more information, please contact Pamela Sybert in the Educational Consortium for Volunteerism, School of Community Service at 940 565-4417 or e-mail sybert@scs.cmm.unt.edu or cporter@scs.cmm.unt.edu   Check out our web-site at: www.unt.edu/untvols

Article

Composition of Residential Solid Waste in Denton, Texas[*]

Patricia D. Brady, Paul F. Hudak,
and Minhe Ji

Introduction

Using material resources more efficiently to prevent resource depletion, waste, and pollution is a critical component of sustainability. According to the U.S. Department of Energy's Center of Excellence for Sustainable Development (DOE, 2000), materials efficiency requires:

§   Designing goods and services to require much less virgin material;

§   Creating policies that promote and support materials conservation, recovery, and efficiency;

§   Developing creative strategies for materials efficiency and waste prevention in homes, businesses, and institutions;

§   Recovering the maximum amount of materials from the waste stream; and

§   Fostering a robust economy for secondary (recovered) materials.

The City of Denton is researching strategies to recover recyclable materials from its municipal solid waste (MSW) stream. MSW includes durable goods, nondurable goods, containers and packaging, food scraps, yard trimmings, and miscellaneous inorganic wastes from residential, commercial, institutional, and industrial sources (EPA, 1999).

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Minhe Ji is an assistant professor in the Department of Geography at the University of North Texas. His areas of expertise include geographic information systems, remote sensing, and cartography.

Through public education programs the City encourages voluntary source reduction and recycling. Recyclable materials are recovered through locally distributed drop boxes. The City collects yard waste separately, mixes it with dried biosolids from its wastewater treatment plant, and sells the compost. It also recycles discarded appliances and bulky items, and separately collects and disposes household hazardous waste.

Additional waste reduction measures are being considered, including a materials recovery facility, an intermediate processing center, and curbside recycling. Determining the waste stream's composition was necessary to understand the potential benefits of these options. By determining the makeup of the waste stream, waste characterizations provide valuable data for setting waste management goals, tracking progress toward those goals, and supporting planning efforts (EPA, 1999). This study characterized curbside residential waste in Denton. It was a joint effort between the City of Denton and University of North Texas (UNT).

Study Area

Denton is located in north-central Texas, at the northern edge of the Dallas-Fort Worth metropolitan area. The City is currently home to approximately 79,250 people (NCTCOG, 2000), with 19,590 residential solid waste customers. The City's Solid Waste Department collects residential waste and disposes it at the Denton Landfill.

Approximately 115,000 tons of total waste were disposed to the landfill in 2000, compared to 56,100 tons in 1990. Denton's per capita discard rate is 7.2 pounds/day, compared to 4.5 pounds/day nationally (EPA, 2000). At current disposal rates, factoring in projected growth, Denton's landfill will be full in approximately 30 years.

Methods

The City provided a database containing 19,590 residential customer addresses and a digital map of its 14 residential collection zones. Using the ArcView geographic information system (Environmental Systems Research Institute, Redlands, CA), addresses were mapped to a street network, and each address was assigned to a collection zone. Addresses for garbage sample collection were selected randomly from each zone, with the number of selected addresses proportional to the percentage the zone contributed to the total residential waste stream. Each selected address was sampled twice during the week of November 6–10, 2000, conforming to the regular collection schedule.

Curbside waste was collected each morning and delivered to a parking lot at UNT. Working in 90-minute shifts, 18 groups of 15 to 20 undergraduate environmental science students sorted the waste. A total of 345 students participated in the project. Denton's landfill manager, a hazardous materials specialist, and UNT research associates supervised them. Each participant wore a Tyvekâ suit, vinyl (inner), Kevlarâ (middle), and rubber (outer) gloves, safety goggles, and a dust mask (Figure 1).

Figure 1

Students sort waste
at a UNT parking lot.

Table 1. Waste Material Categories (Recyclables Underlined)

	Category	Examples
Paper	•_Newspaper_	printed ground-wood newsprint and other minimally bleached ground wood; glossy paper inserts
	•_High-Grade Paper_	printing and writing papers including ground wood and thermochemical pulps
	•_Corrugated_	cartons and boxes, waxed and unwaxed cardboard
	•_Magazines_	glossy papers in catalogs, magazines, and mailings
	•Other Paper	paper not included above or that is not easily recycled, including carbon paper, tissue, napkins, paper towels, foil-lined paper, and container board
Plastics	•_Plastic Bottles #1_	PET (polyethylene terephthalate) bottles
	•_Plastic Bottles #2_	HDPE (high-density polyethylene) bottles
	•Film and Bags	LDPE (low-density polyethylene) plastic such as dry cleaning bags, bread bags, plastic shopping bags, and plastic wrap
	•Other Plastics	all other plastics, including polyvinyl chloride, polypropylene, and polystyrene
Food	•Food	vegetative matter, animal byproducts
Textiles/Rubber/ Leather	•_Textiles/Rubber/ Leather_	clothing, rubber mats, shoes, cushions,curtains, rubber tubing, carpet
Wood	•_Wood_	dimension lumber used in construction, plywood, stumps, wooden furniture, large prunings
Yard	•_Yard_	leaves, grass clippings, garden waste, brush
Glass	•_Glass Bottles and Jars_	
	•Other Glass	window glass, mirrors, light bulbs, ceramics
Metals	•_Ferrous Metals_	tin cans, steel cans, metals to which a magnet adheres
	•_Non-Ferrous Metals_	aluminum cans, house siding, cookware, metals to which a magnet does not adhere
Other Waste	•Disposable Diapers	
	•Other Organics	animal carcasses, hair, wax
	•Miscellaneous	non-distinct material, mattresses, computers, items made of mixed materials

Waste was sorted into 20 18-gallon bins labeled for different materials (Table 1). Scales were tarred to remove bin weight, materials were weighed, and data were recorded on a sample tally sheet. Surveyed material was discarded to a large dumpster. Sorting continued until hazardous materials such as shotgun shells or hypodermic needles were observed and removed by City personnel. If further sampling was considered unsafe, sorting of that sample was discontinued and the remaining volume discarded.

Results

Thirteen thousand pounds of residential MSW were sorted during the week. By far paper was the largest material category, accounting for 45.0% of the total waste stream (Table 2). Newspaper and magazines accounted for almost half of the discarded paper. Approximately 50.8% of the waste stream was composed of recyclable material. By comparison, a previous survey of Denton's commercial MSW showed a 58.4% recyclable fraction (Brady et al., 2000). During the current study, commercial and residential MSW accounted for 51.8% and 20.8%, respectively, of the total waste received by the landfill. Construction/demolition, industrial, and government waste, special pickups, and individual drop-offs accounted for the remaining 27.4%. Given the large percentage of commercial and municipal MSW in the waste stream, and the large fraction of recyclable material in each of these categories,

Table 2. Waste Composition (Weight Percent)

		Category Total (Denton, National)
Paper		
Newspaper	13.2	
High-Grade Paper	2.9	
Corrugated	4.8	
Magazines	6.7	
Other Paper	17.4	45.0, 38.2
Plastics		
#1 Plastics	1.7	
#2 Plastics	1.7	
Film and Bags	4.7	
Other Plastics	3.3	11.4, 10.2
Food	8.1	8.1, 10.0
Textiles/Rubber/		
Leather	3.4	3.4, 7.0
Wood	3.7	3.7, 5.4
Yard	1.5	1.5, 12.6
Glass		
Glass Bottles and Jars	7.2	
Other Glass	0.4	7.6, 5.7
Metals		
Ferrous Metals	2.7	
Non-Ferrous Metals	1.3	4.0, 7.6
Other Waste		
Disposable Diapers	4.0	
Other Organics	7.9	
Miscellaneous	3.4	15.3, 3.3

more aggressive recycling could substantially reduce the amount of waste being placed in the landfill.

Table 2 compares findings from this study with a national study (EPA, 2000). Yard waste showed the largest difference, reflecting separate hauling of that material by the City. Denton also had lower percentages of food, textiles/rubber/leather, wood, and metal, but higher percentages of paper, plastics, glass, and other. Different survey methods account for some of the lower percentages observed in this study. The EPA study considered all MSW, including food, textiles/rubber/leather, wood, and metal from commercial sources, whereas the present study considered only residential MSW. A substantially lower yard waste percentage in Denton's residential waste stream contributed to higher percentages for other categories.

Conclusion

The residential MSW characterization project was a successful collaboration between the City and University. It provided the City with valuable information for planning waste reduction measures to extend the life of its landfill. University students learned about recyclable materials in the waste stream to which they contribute.

A Conversation with Raymond Murphy

Thomas E. Drabek

Rationality and Nature: A Sociological Inquiry into a Changing Relationship. By Raymond Murphy, Westview Press, Boulder, CO, 1994, 294 pp.

Raymond Murphy is a sociologist with a message! In several works (e.g., 1994, 1997) he has chastised his colleagues for their failure to understand nature. This failure has deflected their analyses and blurred their vision. Consequently, they too often focus on the wrong questions, use methods that point toward inappropriate conclusions, and formulate ill-conceived public policy. Elaboration on these points requires careful reading of and reflection on Murphy's work. What follows is a detailed review of his 1994 treatise wherein he first detailed his views in a hard hitting and no-nonsense manner. Hopefully, it will stimulate you to start, and then continue, your own conversation with Raymond Murphy.

It was a snowy morning. We had been enjoying a few days working at our mountain retreat nestled high in the San Juan mountains of Colorado. Among my chores was this review. As the flakes floated past our windows, I began my "conversation" with Raymond Murphy. After studying the bibliography, I left for town to pick up the mail and a few groceries. When I rounded a snowpacked curve, I encountered a massive truck filled with ore. "Guess the gold miners are back," I recall thinking.

The truck was covered with mud. My wandering mind pictured the winding jeep trail I knew he had slid down. I pictured the massive tire chains clawing the fresh snow and soil beneath. In admiration of his skill, I thought momentarily of the risks this driver had taken while bringing that shipment down off the mountain. "And think of the ruts he's cutting into that road; how many more scars will these people inflict?"

As my self-righteous judgments began to swell, I recalled the two plastic containers I had just trashed when I had added oil and power steering fluid to our old 4-wheel drive. "But I'm not an environmental polluter; a guy has to have a vehicle! I'm not destroying the environment any more than anyone else; guess we are all to blame." Upon returning to our retreat, I resumed conversation with Raymond Murphy and gradually came to realize how simplistic my thinking on this matter had been. And to anyone who has an interest in the quality of life that will be found on this planet centuries from now, I highly recommend this masterfully written analysis.

Murphy has successfully integrated an astounding collection of materials from multiple disciplines so as to provide a rigorous and exceedingly well-written assessment of theories and social policies pertaining to the changing relationship between humans and nature. This is a topic he has thought about for a long time. In a disclosing footnote (p. 161) he reveals his memories of a summer job during the 1960s in a pulp and paper mill where he asked why those receiving the profits of production did not have to pay for the environmental costs of their operations. His capacity to penetrate this complex matter has been helped enormously by his past work, including careful study of Max Weber's writings, which he quotes frequently. In this way he brings to readers, especially those whose training and experiences differ, an array of sociological insights that are required if one is to conduct rigorous analysis of environmental policies, especially their underlying assumptions. Murphy, himself a sociologist, has extended his critique in *Sociology and Nature* (1997).

The book is organized into three parts: (1) the intensification of rationalization and its alternatives; (2) the sociology of environmental degradation; and (3) toward a symbiotic relationship with nature. Through the five chapters that comprise part one, Murphy skillfully moves the reader through a series of philosophical positions that have guided social policy during the past three centuries as humans have implemented rationality to free their species from bondages of nature. As this social process has evolved in its countless forms of human activity, most assumed a limitless plasticity of nature, that is, ". . . that the relationship between humans and their natural environment can be reconstructed at will by humans" (p. 17). And many sociologists, most of who have assumed that nature is beyond the scope of their discipline, have limited their focus to social constructions of reality. They have done so at their own peril, Murphy suggests, for such limited vision has precluded their assessment of critical interdependen-

cies. Obsessed with establishing the social nature of the phenomena they are studying, they have failed to grasp the processes and consequences of social action being embedded in nature.

Having established that nature lacks the plasticity that typically has been assumed (Chapter 1), Murphy dissects the irrationalities that have resulted from rationalization (Chapter 2). Here he employs Weber's work to demonstrate that proponents of both capitalism and state socialism ". . . have been oriented toward the efficient mastery of nature, with little regard given to the harmful, irrational consequences of the accumulation of waste and the degradation of the natural environment" (p. 37). Thus, " . . . from an ecological point of view, the sequel to Weber's classic work *The Protestant Ethic and the Spirit of Capitalism* could be entitled *The Spirit of Capitalism and a Parasitic Disposition*" (p. 37).

Of course, nature has had its advocates. So having detailed the irrationalities produced by widespread acceptance and applications of rationalism, Murphy examines the doctrines of "greenness" in their various shades (Chapter 3). Those in policy making positions at all systemic levels would do well to review his critique of "sustainable development," one of the popular panaceas that lace the rhetoric of many today. "The very concept of sustainable development could prove to be a contradiction in terms" (pp. 51–52). So too he finds important inadequacies in the tools and conclusions of "neo-malthusians" who have employed such concepts as "carrying capacity" to argue that our planet has finite limits, both in nonrenewable resources and the absorption of waste. These false prophets proselytize doctrines of population control without regard for the negative impacts on civil liberties or much

understanding of other economic and social implications.

"Just as it is misleading to perceive only humans shaping a plastic natural environment, so too is it misleading to perceive only limits fixed by the natural environment determining its carrying capacity. Rather it is the dialectical relationship between social action and the dynamics of nature that is crucial in this regard" (p. 63).

Others are appearing on the horizon, thereby validating an earlier prediction of Weber's, who reflect an ecological age of "mechanized petrification." Who are they? Most social ecologists, especially those arguing that the only solution to human efforts to dominate nature is the elimination of the domination within all human societies. Similarly, those who argue that the environmental crisis stems from images of nature as cruel or stingy err when they propose that solutions require an alternative image—one of fecundity.

"The premise of the fecundity of nature and the assumed escape from the necessities of nature by means of reason, far from being part of the solution to ecological problems, have been and continue to be part of the problem. An ideology of nature as fecund, and failure to appreciate the necessities of the human-supporting nature environment, can only intensify the consumption ethic" (p. 73).

And too, "enlightened feminists" make similar errors when they argue that the institutional structure of rationalism, rather than rationalism itself, is the source of all environmental problems. Such a line of reasoning, Murphy argues, has led them, and others, to start down the erroneous path of policy options rooted in a posture of derationalism. This topic is dissected in detail in Chapter 5. Here both "ecofeminism" and "deep ecology" are critiqued extensively; both positions assume that preferred

solutions require reversal of the trends characterizing human societies during the past five centuries, especially rationalism and inequality (pp. 84–93).

"Just as Marxists perceive the bourgeoisie exploiting the proletariat, and feminists perceive men dominating women, and theorists of racism perceive whites oppressing blacks, and dependency theorists perceive the developed world exploiting the Third World, deep ecologists perceive humans dominating and exploiting nonhuman forms of life" (pp. 93–94).

But it is the deep ecologists, those whose motto is that we learn to "think like a mountain," who offer the key insight required to go beyond current policy positions. "It [deep ecology] has increased awareness that other species and nature in general are not mere instruments to attain human goals and human pleasure, rather they have intrinsic value of their own" (p. 95). Unfortunately, despite this key insight, deep ecologists have not been able to go beyond simplistic policy proposals rooted in erroneous assumptions of egalitarianism, not just among human populations, but for some, interspecies as well. Murphy finds such thinking to be shallow, at best.

"In what sense then, are the Irishman and the pig he eats, or for that matter, the potato, equal? If a virus has the human body as its sole habitat, would interspecies equality not require that we meet the needs of that species as much as our own?" (pp. 99–100).

These detailed and carefully argued analyses set the stage for Part Two, i.e., the sociology of environmental degradation. Waste, rather the political economy of waste, is addressed first (Chapter 6). This, Murphy argues, is the missing element in most analyses completed by users of various political economy models.

It might be argued that this is a trivial matter, since waste had been dumped (into rivers, into the air, etc.) at no cost to the capitalist. But that is precisely the point. It is only now, after the accumulated effects of dumping waste over a long period of time (since the advent of industrial engines and the industrial revolution) as well as the development of particularly dangerous technologies, that people are becoming more and more conscious of the fact that such dumping has indeed a cost that someone, or the environment itself and therefore everyone, must pay. (p. 108)

So those who profit from the production processes must be pressed to assess the cost of the waste they produce, and its disposal, when they evaluate the effectiveness and efficiency of their operations. Of course, they don't. Instead, they usually plead ignorance and ignore the fact that their profit margin and capital accumulations are possible largely because "the filthiest has been the fittest for market competition. Capitalists are very much aware of this survival-of-the-filthiest dynamic in the market, although they express it in more euphemistic terms" (p. 121). Once this principle is recognized, an extension of accounting—one of the key components of rationalism—becomes a requisite step. This requirement is assessed carefully and numerous strategies, including risk analysis and environmental accounting, are critiqued as Murphy advances toward his vision of solutions. Environmental accounting *and* accountability for waste are key, but neither has developed much under either capitalist liberal democracy or state socialism (Chapter 7). "Accounting for waste—and for its effects on the provision of needs—in numerical, calculable terms, and accountability

for waste, are the missing elements in the intensification of rationality in the economic sphere" (p. 160). The barriers and potentials for implementing social policies reflective of this requirement are the topics addressed next (Chapter 8). The chapter is entitled "Environmental Classes and Environmental Conflict" and focuses on the questions of: "Who is responsible for the continuing accumulation of this environmental debt, who are the beneficiaries, and who are it victims?" (p. 164).

Part Three is comprised of two chapters entitled "Science and Applied Science as Partial Knowledge" and "Parasitism: A 'Light Cloak' or an 'Iron Cage'?" Herein Murphy completes his critique of social constructionism: Weber " . . . did not lose sight of the autonomy of nature and the material world" (p. 197). Nor did he confuse or equate science with magic. Although both are social constructions, science is unique in its specificity and in being grounded in nature. Like Weber, Murphy argues that we must not abandon science, but rather redirect it. But the required redirection goes far beyond the activities of scientists or their inventions. "Redirecting science and its applications involves not a technical fix, but rather redirecting society" (p. 219).

"Ecological recklessness would be replaced by ecological prudence as a guiding principle. Information about probable consequences could be used to choose ecologically appropriate technologies and directions for scientific development. Such information would be based on rational principles of accounting and accountability for pollution" (p. 221).

Is there much hope for such a vision? Murphy concludes his analysis, again highlighting insights obtained from Weber, by examining five "theories of transition" whereby we

might move from our current relationship with nature, which is essentially parasitic, to one rooted in symbiosis. After brief examination and rejection of the first four, he concludes the book advocating the last—a position rooted in ecological experience and ecological knowledge. Like Dunlap, Catton, and others, Murphy proposes that the natural environment must be perceived ". . . not just as a stage upon which human actors play out their social action," but rather as " . . . a dynamic ecosystem of which human activity is but one part" (p. 253). Of course, there are no guarantees that this position will become dominant during the next century. While not predetermined, at least the potential is there. And in that potential lies hope. Hope that disinformation will not mask ecological problems. Hope that environmental degradation will not be left unattended (p. 254).

After I read, and then reread, Murphy's final chapter, my gaze lifted upward and I saw that the snow had stopped. Beneath a brightening sky, a mountainside of trees seemed to be straining with what had just been dumped on them. I too felt strain, for this conversation had been demanding. But unlike those trees, I believe, I was able to be self-conscious about my new growth. I sensed greater depth in my emotion of oneness with this environment. And I know others will too if they take the time to converse with Raymond Murphy.

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Additional works cited:
Sociology and Nature: Social Action in Context. By Raymond Murphy. Westview Press, Boulder, CO, 1997, 321 pp.

What Others Are Saying
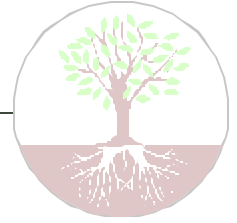
Transportation and the Environment

Elizabeth Deakin

Talk about transportation and the environment, and most engineers and planners will tick off a long list of concerns: air pollution, water pollution, noise, petroleum consumption, community disruption, habitat loss. Since the 1970s, a variety of federal and state laws has aimed to minimize harm done to the environment by transportation programs. The benefits have been significant.

Probably the greatest success has been the reduction of air pollutants. Today's cars produce only a small fraction of the pollutants their predecessors emitted. Almost all the reduction is due to legally mandated emissions control technologies on new cars. Even with massive growth in auto ownership and vehicle-miles traveled, most cities exceed pollution limits only a few days a year.

Fuel economy has also improved since the '70s, when autos averaged about fourteen miles per gallon. Pushed by CAFÉ standards and pulled by consumer preferences, today the average is over twenty mpg, even with large numbers of light trucks and sport utility vehicles in the mix.

We are discovering, however, that these gains are not enough. Recent evidence points to adverse health consequences for children and the elderly at lower pollution levels than we previously recognized. Truck use is growing, and the small particles emitted from burning diesel fuel are particularly bad for human health. With low fuel prices, consumers are again buying less efficient cars and trucks. We are learning, sometimes the hard way, that we must watch out for unanticipated system effects—as

when the fuel additive MBTE, introduced to reduce air pollution, turned out to be a dangerous water pollutant.

We are also discovering new cause for environmental concern. Emissions of the naturally occurring gas, carbon dioxide, a by-product of burning fossil fuels, are now proving troublesome. CO_2 is building up in the atmosphere, causing the Earth's average temperature to rise. Forecasted temperature increases could produce marked changes in precipitation patterns, rising sea levels, and altered ranges for plants and animals. The changes could be so rapid that neither natural systems nor social systems will be able to adapt easily. The issue comes back to transportation choices: a quarter of CO_2 emissions come from the US, and our surface transportation produces a quarter of that.

The longstanding debates about land use and transportation in turn have environmental dimensions. People and firms deal with traffic congestion by relocating. Relocation further allows many to secure affordable housing, find better schools, and escape crime or the fear of it. Still, development at the suburban fringe, supported by transportation investments, often comes at an environmental cost. Formerly open lands are consumed, wetlands filled, and habitats fragmented. Outward movement also has consequences, some good but others negative, for those who remain behind.

Research has important roles to play in improving transportation's environmental performance. Current research on new vehicles and fuels aims to produce environmentally benign automobiles. Trucks, our main mode of freight transport, are especially in need of researchers' attention. Likewise, more research remains to be done on land use options. Researchers tell us that alternative approaches promoted so far produce modest results at best, but most have looked only at direct and short-term transportation effects, not at the broader range of environmental concerns. Development strategies that protect habitat and preserve important farm and forest lands are being tried out, as are strategies that aim to

improve the distribution of environmental costs and benefits. We don't know yet how well they work, or what they will cost, or where transportation fits into these strategies. Nor do we know what price consumers are willing to pay for environmental protection and enhancement.

So researchers have much yet to do on transportation and the environment. The agenda should cover both the natural and the built environments and should consider direct and indirect effects and their distributions. Research topics must range from vehicles and fuels, land use and transportation, air pollution and energy, to planning and institutions.

Access: Transportation Research at the University of California, Fall, 2001.

News
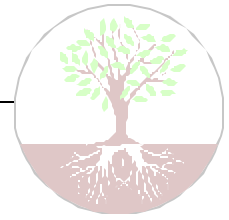
"Green" Forestry: Struggles in Brazil and Oregon

Illegal Logging in Rain Forests, Brazil

Miriam Jordan, reporter for the *Wall Street Journal* (November 14, 2001/B1), linked our consumption of $16,000 solid mahogany dining tables to the illegal logging in the Brazilian Amazon rain forest. Greenpeace lists some 70 companies that allegedly purchase illegal mahogany. Greenpeace charge that companies in North America, Europe, and Japan are aiding and abetting high-level crime. One single tree can fetch up to $130,000 in "green gold." There are qualified mahogany operations in Mexico and Central America, but not in Brazil. Brazilian authorities designated thirteen areas where logging is authorized.

One of the chief distributors of mahogany lumber is DLH Nordisk, Inc., of Greensboro, North Carolina. They claim to support the new Brazilian initiative to halt illegal mahogany logging, and they stated that they import only wood that is accompanied by the necessary legal documentation. DLH Nordisk, Inc., supplies mahogany to furniture makers such as Ethan Allen Interiors, Inc., Life Style International Furnishings and L. & J. G. Stickley. Noteworthy is that this report is in the *Wall Street Journal* and relies upon Greenpeace reports as well as other interviews. This review shows how complex it is to determine what is an illegal mahogany log in our global community.

Eco-Friendly Employment: Oregon

According to Jim Carlton in the *Wall Street Journal* (November 15, 2001/B1), northwestern loggers who left jobs in recent years are finding it pays to go green. These loggers now go into the reforested areas with the MeriCrusher to reduce a chest-high thicket of shrubbery to pulp, thus giving a stand of towering Douglas firs more breathing room. New jobs are largely due to an unusual effort by Sustainable Northwest, a group based in Portland, Oregon. This group works to revive local economics with eco-friendly projects. They have created some 100 green jobs which offset, in part, the 400 timber jobs lost. It seems that similar partnerships to balance economic and environmental needs are forming across the country in places like ranches in Arizona and strawberry farmers in Monterey County, California. The local Joseph Timber Co. mill in Wallawa County now sells timber cut from new-growth trees to Bend, Oregon, home developers under the label *Healthy Forest, Healthy Communities*.

Introduction

Hiram Friedsam, Book Review Editor

Although the first book reviewed below has Ecological Integrity as its title, all of the books reviewed are related to that concept in one way or another because, as the first reviewer notes, the sustainability of human communities depends upon a sustainable natural environment. Thus, several of the books address this relationship directly by examining what is happening—or what could happen—to water and forest resources on which communities must depend and on the threat of toxic waste to their members. Two books are coupled into a single review because the authors express conflicting views of global warming, which many persons regard as the major threat to ecological integrity. Another book approaches the relationship from a different perspective by emphasizing the problems that the rapid growth of cities, especially in the developing societies, pose for integrity and sustainability. Many of the same problems are posed in an unusual context, that of persons displaced by the internecine warfare throughout the developing world that is lapping over into more developed countries. In contrast, one book looks at how—and with what success—the United States, the world's most highly developed economy, has responded to environmental issues through public policy. The two brief reviews with which the section concludes call attention to books whose orientation is more personal, more local, and perhaps more optimistic than the others reviewed.

Ecological Integrity: Integrating Environment, Conservation, and Health. Edited by David Pimentel, Laura Westra, and Reef F. Noss. Island Press, Washington, 2000, ix + 428 pp. Index.

The editors have assembled an impressive collection of papers by a very distinguished group of contributors from a variety of disciplines. Heavily represented in this volume are the disciplines of philosophy and ecology, but well represented also are applied biology, epidemiology, economics, law, political science, and veterinary medicine. Many of the contributors are associated with the Global Integrity Project. While the concept of sustainability is not reflected in the title, it is, nevertheless, a conceptual thread running through many of the essays in this book. Sustainable human communities necessarily depend upon a sustainable natural environment. Or, put another way, because the human economy is embedded in—and indeed a subset of—the environing economy of nature, the sustainability of the former depends on that of the latter. But how can we understand what constitutes a sustainable natural environment or economy of nature? Biotic communities that exhibit integrity and/or healthy ecosystems are sustainable natural environments. About these fundamental conceptual relationships, most of the contributors to this book agree.

But what, more exactly, are ecological integrity and health? Here the authors often provide divergent and dialectical views—that is, some authors

challenge the views of others on these concepts central to the book and offer alternatives. One contributor, animal ecologist James Karr, has been struggling to articulate these concepts longer than any of the others and provides the following definition: "Biological integrity refers to the condition of places at one end of a continuum of human influence, places . . . with little or no influence from industrial society." Karr has famously formulated a useful Index of Biological Integrity (mainly based on the presence or absence of indicator species) to measure and monitor the integrity of various biotic communities. Because human influence is now ubiquitous and may have been for ten thousand years, perfect ecological integrity existed everywhere only in the distant prehuman evolutionary past and was steadily eroded as *Homo sapiens* slowly spread over the planet, multiplied in numbers, and grew more influential through technological sophistication, until now perfect ecological integrity exists nowhere. Nevertheless, the ideal of integrity is, Karr argues, a useful benchmark in reference to which we can compare biotas that deviate from it, more or less. Ecological health is a condition that is closer to the integrity end of the continuum and the further from that end an environment is, the less healthy it is. Karr also simply equates ecological health and sustainability.

There are many obvious problems with Karr's way of defining and linking the concepts of ecological integrity, health, and sustainability. Paradoxically, a remote mountain little influenced by human beings, but ecologically devastated by a natural volcanic eruption would remain in a condition of near-integrity and perfect health, while one that has been strip-mined or clearcut and then replanted to trees would be hopelessly unhealthy and unsustainable, as author Alan Holland points out. Cannot heavily influenced, but carefully husbanded lands remain healthy and sustainable? This suggests that ecological health and the allied concept of sustainability might be defined independently of ecological integrity, perhaps in terms of ecological function. Other authors note that ecology is a shifting science in which concepts such as balance and equilibrium, implicit in Karr's definitions, are no longer current.

Assuming that the concepts of ecological integrity, health, and sustainability can be adequately defined and mutually related, what changes in human outlook or worldview, values and ethics, economics and politics, management and planning will be required to preserve, maintain, and restore such conditions? These are the questions addressed by many of the contributors to this book. The global challenge is truly gargantuan. Many of the authors, especially those who follow Karr in thinking of

both ecological integrity and health as relative freedom from human influence, are profoundly pessimistic that, short of a massive reduction in human population and consumption, it can be met successfully. Those who decouple ecological health and sustainability from ecological integrity are a little more sanguine, for we can then posit a more achievable goal. We can envision, that is, a world largely inhabited and influenced by human beings, in which, nevertheless, vital ecological processes and functions remain unimpaired. Ecological integrity, in such a world, may be preserved to the greatest extent possible in biodiversity reserves, while the remaining areas subject to extensive human influence may be managed with an eye to ecological health (understood functionally) and thus sustainability.

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People and Forests: Communities, Institutions, and Governance. Edited by Clark C. Gibson, Margaret A. McKean, and Elinor Ostrom. The MIT Press, Cambridge, MA, 2000, 274 pp.

Deforestation can have profound consequences at local, regional, and global scales. These range from hardships for rural communities stemming from loss of food, fuel, and building material to biodiversity loss, erosion, and climate change at regional and global scales. Traditionally, forest management has been viewed in the context of national models, which ignore or downplay the role of local communities. However, a growing body of research has shown that management practices of local communities, whose circumstances do not fit national or regional policy, profoundly influence the condition of forests. *People and Forests* explores relationships between forests and communities at local levels. The book comprises nine chapters and an appendix.

Chapter 1 highlights the role of local institutions in deforestation and discusses contributions of subsequent chapters. The book fills two critical gaps in current forestry research, including a lack of: (1) comparable local scale studies, and (2) studies that address the influence of local institutions on forest use and condition.

Differences between types of forestry goods, property rights, and owners—the first step toward understanding interactions between people and forests—are covered in

Chapter 2. The author describes how these differences affect the distribution of benefits and the condition of forests.

Chapters 3 to 8 describe several case studies in local management of forest resources that include a large amount of social and biological empirical data. The wealth of empirical data from extensive fieldwork is clearly a strong point of this book. The case studies are based on forests in Bolivia, Ecuador, India, Nepal, and Uganda. Each chapter describes variations in local management practices and their impact on forest conditions. The studies underscore multiple forest products and user groups, give the reader an appreciation for the complexity of forest management, and offer many policy insights. Each chapter includes examples of management successes and failures that can assist policymakers in constructing appropriate roles for local, regional, and national authorities.

The final chapter and the appendix summarize lessons learned from the preceding chapters and give directions for future research. Key points made are that local users do perceive deterioration and conservation alternatives, common property can be an efficient form of property rights in relation to common pool resources, and local actions vary widely in the degree to which they sustain forest resources. The appendix outlines strategies of the International Forestry Resources and Institutions research program, which played a central role in producing this book.

Overall the book is coherent, logically organized, and well written. The articles are thoroughly researched. There are relatively few tables and illustrations, but those included effectively augment the text. This book should be an important resource for forest policymakers, and should also be valuable to biologists, social and environmental scientists, and anthropologists who study interactions between local communities and the forests that sustain them.

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Sustainable Cities in Developing Countries. Edited by Cedric Pugh. Earthscan Publications Ltd., London and Sterling, VA, 2000, 237 pp.

Over half of the world's population resides in cities. Cities are growing fastest in the developing world where 90% of the new population growth in cities will occur. A contributor to this volume notes that in urban spaces in developing countries, one in four of the inhabitants live in cities with populations more than 500,000 and one in ten in cities with populations more than 10 million. Given these statistics, it is obvious that understanding and improving today's world means understanding and improving urban life. By 2025, three out of five people will live in urban areas, primarily in developing countries where 40 to 70 percent of the population will be in low income settlements, which means, according to another contributor, that the highest proportion of urban people will be in the poorest areas of the world. Thus, cities pose some of the most dramatic problems for human survival our planet has ever faced. In this book Cedric Pugh and his coauthors attempt to assess the environmental, social, economic, and political consequences of urbanization in the 20th century and suggest courses of action for the beginning of the 21st century. They know that of which they speak. They are specialists in urban economic development, housing and health, urban and regional planning, and urban environmental problems and law, and they have worked for the United Nations, the World Bank, and other international, national and regional organizations in China, India, Europe, Africa, and Latin America.

Pugh and his coauthors bring their wealth of expertise on urban issues together to address the important topic of sustainability in urban environments. The notion of sustainable cities suggests a marriage of environmental concerns with social welfare and political economy. Central to this is the formidable task of lifting urbanites out of poverty while contributing to the success of the urban economy and improving the environment. Pugh explains the new idea of sustainable urban development in terms of a multidisciplinary endeavor which is more than just the tabulation of conditions of household living. Instead, it places "urban" in economic, social, political, and environmental space and as part of larger national and international processes. To understand cities in the 21st century is to understand this dynamic.

As the chapters in the book suggest, sustainable urban development is and will be difficult to achieve. As McGranahan and Satterthwaite explain in their chapter, there are conflicting agendas for sustainable development. They analyze the conflicts and convergences between the green agenda (the goal being to stop environmental degradation) and the brown agenda (the goal being to solve environmental health issues). In some cases the agendas are in agreement, in others they are not. For example, proponents of the brown agenda advocate sewer systems in order to improve health while proponents of the green

agenda are concerned about the environmental costs of such large commitments of water. Thus, advocates for good must weigh the costs of one improvement against another.

Other articles confront theoretical issues involving urban sustainable development. Carolyn Stephens forcefully describes the significance of power. In building cities with healthy inhabitants and sustainable environments, the question of power cannot be ignored. One of her most interesting points is made clear through a graph showing how the people of Calcutta rated a list of needs in order of the importance of alleviating the needs. The group with high-incomes rated noise and air pollution as the most important needs to address while the group living in squatter settlements did not mention noise and air pollution but rated education and poverty as the most important issues to them. The high income group had not rated education and poverty at all. Stephens' point is that it is the wealthy who are the powerful and the powerful set the agendas. The poor are not asked to set the agenda and therefore their issues are frequently not even on the table.

The book contains several informative and interesting case studies. Amanda Perry's case study of Bangalore demonstrates the difficulties of urban change. Her detailed account acquaints the reader with the multiple levels of bureaucracy at work in Bangalore. She documents cases in which it was impossible to accomplish a simple task due to the intricacies of the bureaucracy. For example, in 1995, 70% of the fish were killed in Sankey tank. Deciding the cause and the cure involved the forest department, the state fisheries department, the state horticulture department, the corporation horticulture department, the city corporation (responsible for governing the city), the water board and the state tourism department. All had a voice in declaring the cause and disagreeing about the responsible parties. Given the complexity of responsibilities, this problem could be expected. Perry's account provides details which emphasize the difficulty of instituting new policies for urban sustainable development in an environment crippled by bureaucracy. Shanghai, on the other hand, presents a more successful picture in the case study by Peter Abelson. Although it endures water and air that are heavily polluted and many parts of the city have inadequate solid waste collection, there is reason for optimism. Shanghai has experienced rapid economic growth and expects continued economic prosperity. Housing conditions, air and water quality, and waste collection have improved in the last ten years. Thus, Shanghai is presented as an example of hope that sustainable urban environments in some cities in some contexts may be achievable.

All in all, Pugh has assembled a provocative and informative volume that includes theory, practical application, and case study. It gives the reader an understanding of the new thrust of sustainable urban development as well as of the immense problems in redesigning cities with sustainability in mind. The book confronts the reader with a fact: we cannot save the planet if we cannot save the cities, and sustainability must be foremost in our minds as we try.

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Warming the World: Economic Models of Global Warming. By William D. Nordhaus and Joseph Boyer. MIT Press, Cambridge, MA, 2000.

Contraction and Convergence: The Global Solution to Climate Change. By Aubrey Meyer. Schumacher Briefing No. 5. Green Books Ltd., Foxhole, UK, 2000.

Of the many global issues that politicians must face, the warming of the planet due to the emission of trace gasses such as carbon dioxide and other ozone-depleting chemicals is possibly the most uncertain, complex, and difficult to address. Alternating between the science sections, the front page, and the editorial pages of the nation's popular press, climate change (the "greenhouse" effect) has emerged as a hot button issue that invariably provokes passions among and between diverse groups of experts, politicians, and the general public. Although no consensus is yet at hand regarding assumptions and expectations, if in fact a potential catastrophe exists, it is generally acknowledged that negotiating a course of action will require unparalleled international cooperation and compromise. Due to the disparate stages of development of the world's economies, any meaningful reduction in emissions would naturally entail enormous differences in the sacrifices that nations would be called upon to make. Short of the emergence of a universal governing body, the politics of the issue suggests a problem that is virtually intractable.

The two monographs under review (Meyer, 2000; Nordhaus and Boyer, 2000), one advancing the "green" and the other the "economic" perspective, represent some of the more serious and thoughtful work of proponents of opposing positions on how the world community is to

resolve the distributional issues that will attend the reduction of emissions required to avoid a putative environmental crisis. The economists, Professors Nordhaus and Boyer, adopt a strategy of systematic economic evaluation and quantitative modeling that lends an air of objectivity to their arguments. In contrast, Aubrey Meyer, representing the greens in the tradition of Schumacher's "small is beautiful," is more passionate and personal in his appeal to two universal values, global justice and equality, values that are easy to identify with but are bound to irritate the economists. As one would expect, the difference between the two positions and suggested solutions is enormous.

Meyer initially lays out the problem of global warming as the result of overconsumption in the advanced economies and inequality in the distribution of resources between nations. He then offers a "contraction and convergence" blueprint for action that requires a universal agreement among the world's leaders on the necessary reduction of carbon emissions (contraction) to be followed by a uniform per capita allocation of emission rights or permits across the world's population to meet the agreed on reduction. As a result, while reduction in emissions in the aggregate is underway, the industrial countries, whose emission levels far exceed the allocation of emission rights, would simultaneously purchase rights from the "energy-frugal" countries, leading , in the author's words, "to a steady flow of purchasing power from countries that have used fossil energy to become rich to those still struggling to break out of poverty" (convergence). Thus, not only do we save the planet, in Meyer's "system," but the seemingly intractable poverty problem of the less developed nations is solved as a by-product. Such is the gist of the argument in an otherwise serious tract by an otherwise serious scholar of the issues.

In contrast to the multiple solutions advanced by Meyer, Nordhaus and Boyer are too wise and cautious to offer a way out. Instead, they adopt the approach of the economist *qua* advisor, following in the humble tradition of economists whose chief virtue is that they "don't make policy." Instead, the authors fashion the trade-offs and the benefits-to-costs of alternative courses of action that policy makers should at least consider. *Warming the World* is the latest update and revision to years of analysis leading to the development of a couple of models that attempt to integrate the scientific and economic effects of alternative courses of actions. They continue their work on two quantitative models that integrate essential parameters of "climate" and "economy," providing the policy maker with

a tool to better understand the future economic and environmental implications of alternative courses of action.

Neither of these monographs is an easy read and would, at a minimum, require of the reader a deep interest in environmental issues. In spite of the surreal (he calls it "pragmatic") nature of Meyer's solution to global warming in *Contraction and Convergence*, he does present an insightful review of the economic, social, and political history of the debate over climate change, an informed discussion of the potential consequences of the problem of global warming, and a scathing critique of U.S. representation at the world conferences convened to deal with the crisis he assumes to be on the horizon. *Warming the World* seems best suited for the environmental economists who quite possibly will inform the discussion among policy makers, if, and when, a serious discussion takes place.

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This Organic Life: Confessions of a Suburban Home-steader. By Joan Dye Gussow. Chelsea Green Publishing Company, White River Junction, VT, 2001, 161 pp.

This is a true garden adventure story that is funny, insightful, and hard to put down. Joan Gussow, a maverick nutritionist teaching at Columbia University, decides she will put into practice what she preaches: that bringing food-growing closer to home might be the only thing that could assure the world enough food forever. She enlists the help of her artist husband Alan and begins planting the first of many gardens designed to meet their food needs year round. Her adventures effectively convey the possibility, the effort, the frustration, and the joy of year-round eating from local sources as she pursues her long journey to vegetal self-sufficiency.

After the Gussows purchase an old house on the banks of the Hudson River the adventure picks up speed. Planning to use the foundation and structure, they carefully gutted the old house only to find to their dismay that they must rebuild from scratch. Joan chronicles successes and failures over several years with her house and riverside garden. Keeping the varmints from destroying their garden kept the Gussows creative and busy. Tales of routing invaders such as woodchucks, raccoons, and skunks from the garden provide exciting chapters. Controlling the river

rats that devoured Joan's beloved tomatoes was an ongoing fight. The *coup de grâce* was the storm of the century that roared down the Hudson two days after they agreed to buy the property. The riverfront was inundated, the boardwalk was torn up, and their home was flooded. This was the first of many floods that plagued their lawn and garden over the years.

Along the way Joan shares favorite recipes made from her garden produce. One of my favorites is gooseberry pie, included in the chapter "Gooseberries and the FBI." Especially helpful are hints designed to add variety to meals when produce is plentiful. She also shares menus she has served guests from her garden in the dead of winter.

Along with the descriptions of the catastrophes and joys of organic gardening, Joan discusses genetically altered food, eating produce made cheap due to the labor of poorly paid workers, the insanity of eating food more traveled than you, organic gardening, organizing a community garden, and much more. The skill with which she weaves her deep concerns into her story while holding your rapt attention is the mark of a great journalist. Her engaging, conversational style leads into the heart of the matter as you are absorbing the truth of what she is presenting.

I recommend this book to everyone for good reading. It is a must for those who are concerned about the sustainability of our planet.

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Reflections on Water: New Approaches to Transboundary Conflicts and Cooperation. Edited by Joachim Blatter and Helen Ingram. MIT Press, Cambridge, MA, 2001, 358 pp.

Reflections on Water has a high probability of becoming one of the short list of books that business and government leaders, environmental activists, conservative strategists, environmental economists, agriculturists, city planners—in short the full gamut of people whose disciplines, professions, or lay or livelihood interests embrace the primal role that water plays in life on Earth—must study, learn from, and use within the foundation of their knowledge and experiential bases. All will find the book's messages vital to forging present and future water policy and practice through more effective wielding of argument and influence.

This book is of major benefit to all for whom investigation and role implementation methods link limits of knowledge about the origins of meaning and interconnectedness of water to decisions and actions. The fabric of the natural world lapped by the web of human culture and society is illustrated by examples and explained by analysis. The authors' probing, untangling, articulation, and logical systematizing of the complex, often confounding, labyrinth of issues and ideas that define ways of thinking and governance about the boundaries, and the cross-linking over those boundaries, of water will help decision makers execute equitable and functional judgments. Analytic tools are provided to study and interpret and effectively deal with dogmas, perceptions, beliefs, investments, use practices, acquisitions, transfers, natural and political influences, etc., as factors evolving historic, current, and future cultural and social constructs dominating transboundary water resources management. These tools help engender competent, functional, decisional insight. Illustration and explanation of these tools make this new book a "Principles" text for everyone concerned with formation and execution of water policy and practice.

Transboundary water policy methods, objectives and strategies are fashioned to deal with often incalculable or uncontrollable "meanings" of water. The authors portray transboundary water policy analysis in an ecological, multidisciplinary perspective. Included are law, environmental sciences, economics, engineering, political science, anthropology, ethics, and sociology. All disciplinarians as well as leaders and bureaucrats of government or business hierarchies that interact with and impact water stakeholders can gain competency through comprehensive command of the combined inductive and deductive approaches to cooperation, reasoned and illustrated, of the editors and their colleague authors.

Perhaps the greatest virtue of *Reflections on Water* is spurring of analysis with examples; or perhaps expressed in the obverse, masterful use of real examples to punctuate the power of analysis. Skillfully authored transboundary case studies are presented to gain insight into, motivate, and then command application of social ecology, network analysis, discourse analysis, and ethnographic tools to help resolve or reduce conflicts and move society toward cooperation in drafting and implementing water policy within the harsh competitiveness of the real world. These cases interpret transboundary decision evolution in the dynamic flux of local, national, and global socio-political and economic forces.

One analytic tool that the editors and case authors minimize, and thereby neglect, is cost-benefit analysis. Cost-benefit analysis is unjustly relegated to the dust-bin of profit calculation. This is an unfortunate neglect because in delimiting water use, correlation of costs and benefits can be used with great power to force accounting for the negative as well as positive effects (cost and benefit effects, including external impacts) derived from alternative choices in water use. For example, correlation between benefits of alternative hydroelectric generation methods and the costs of each method reflected as fisheries or species losses, mitigation costs, or even recreation losses, is a an example with poignant transboundary significance that could have been developed in the text. Providing such a cost-benefit case-study focused on hydropower methods choices could demonstrate the use of this extremely powerful analytic tool to help shape major technological applications alternatives as means to reclaim cooperation and friendship where acrimony and hatred now prevail across national boundaries and in international waters, such as in the Pacific Northwest of North America. Omission of a powerful cost-benefit analysis case is unfortunate; but that said, *Reflections on Water* remains an extremely important, must-read book for all entrusted with the waters of Planet Earth.

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Toward Sustainable Communities: Transition and Transformations in Environmental Policy. Edited by Daniel A. Mazmanian and Michael El Kraft. The MIT Press, Cambridge, MA, 1999.   pp.

The editors begin by arguing that we have had three epochs in the U.S. in environmental reform movement: 1) National regulation for environmental protection (1970–1990), 2) Federal focus upon efficiency-based regulatory reform and flexibility (1980–1990s), and 3) a regional or local focus toward sustainable communities (1990s). The changes or assumption in 1970s was that pollution was caused primarily by callous and unthinking business and industry. This view created corporate resistance, and thus some searched for a less conflictual approach, or a non-regulatory approach. In the 80s and 90s, flexibility and decentralization started to enter the Federal and State

discourse. Attempts to create market-mechanism to stimulate "sustainable" corporate policies emerged. Both a strength and a weakness of the "sustainable" community movement may be its more vague focus, i.e., it embraces an eco-centric ethic, or brings into harmony human and natural systems on a sustainable basis according to its advocates.

The volume provides detailed chapters on the struggle to clean the air in Los Angeles, control pollution in Fox-Wolf Basin in Wisconsin, and preserve open-spaces in California,plus the history of environmental reform in Pittsburgh, and the emergence of the "environment city." The impact of the Federal Intermodel Surface Transportation Efficiency Act of 1991 on transportation systems across the country and the preservation of water quality of the Greater Lake Basin, which is one-quarter of the world's fresh water, are remarkable.

Lamont C. Hempel in chapter two lays out the conceptual and analytical challenges in building sustainable communities. He notes that Berman in 1982 wrote that the growing interest in sustainability can be explained, in part, by this mainstream of perpetual disintegration that threatens global ecology, cultural diversity, and democratic institutions, or what Toffler called "future shock." Others note that it may be the outgrowth of nostalgia—for simpler times, less traffic congestion, more open space, and an abating sense of place. Hempel sees sustainability as a social movement that promises to remake the world through reflection and choice. While sufficiently ambiguous to be embraced by diverse interests, it is coherent enough to inspire movement in a particular direction. He sees four major orientations contributing to community sustainability: 1) capital theory, 2) urban design, 3) ecosystem management, and 4) metropolitan governments.

The editors conclude this excellent overview by mapping out some directions to move toward more sustainable communities. Reflection means that pilot studies or research into community life, metropolitan planning processes, and larger regional initiatives are constantly needed. Finally, this volume is a primer for all theorists and activists concerned with sustainability on this resilient, but frail planet.

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Internally Displaced People: A Global Survey. Edited by Janie Hampton. Earthscan Publications. Ltd., London, 1998,   pp.

The end of the twentieth century witnessed a surge in ethnic/internal conflict throughout most of the world. These armed conflicts have forced millions to leave their homes for better security, but there is a distinction between refugees—that is between people who cross national boundaries to seek safety and those who stay within their national borders and try to move to other secure places. While both groups suffer from destitution, insecurity and need protection, refugees have the advantage of having international protection and help. The second group—known as the Internally Displaced Persons—do not have legal or institutional bases for the international community to assist them.

Internally Displaced People surveys the problems of this category of people about which little is known. The Foreword, written by Francis Deng, Representative of the UN Secretary-General on Internally Displaced Persons, notes that what is needed is information on dimensions of this displacement—"its causes and its manifestations, the degree of access of the displaced to basic services, their protection concerns, the capacity and willingness of governments to address their needs, and the response of the international community." The Global IDP Survey launched by the Norwegian Refugee Council is an effort to develop an international system to deal with these prob-lems. The final aim of the survey through all the informa-tion collected, is to advocate, educate and create a data-base that would go toward helping the IDPs.

Internally displaced persons have been defined by the United Nations as

> Persons or groups who have been forced to flee or
> leave their homes or places of habitual residence
> as a result of, or in order to avoid, in particular, the
> effects of armed conflict, situations of generalized
> violence, violations of human rights or natural or
> human-made disasters, and who have not crossed
> an internationally recognized state border.

Using this definition, Part I of the book examines the issue from different perspectives. Displacement changes people's perception of their environment and new circum-stances determine local coping mechanisms and power relations. While to most observers, displacement is seen in terms of transport, shelter, resettlement, etc., for those in

the midst of it, displacement leads to some fundamental changes in life. For example, the 1994 genocide in Rwanda resulted in widespread widowhood—a personal loss—after which women emerged as community leaders. Research indicates that alongside the economic, aid agencies ought to look at providing emotional support for people displaced by conflict. The social trauma that people undergo can vary from culture to culture. Thus, self-help groups have tried to understand women's coping strategies through their own eyes.

Another important issue that the book discusses is displaced children, and what the international community has to do to effectively help these children. The "act of displacement itself—its disruption, insecurity, the loss of role models, the experience of seeing adult protectors rendered powerless—can impair a child's capacity for normal development," writes one of the authors, James Kunder. In addition, children may suffer other forms of abuse—making their loss even more difficult. Kunder discusses the approaches needed to meet the needs of the children, and how to overcome the gaps that exist toward a better understanding of displaced children.

Part II is a discussion of various regions in Africa, Asia, Latin America, and Eastern Europe. For anyone not well versed on the topic, this book provides a good overall view of the issues and areas involved in dealing with IDPs. The discussion of various countries gives the reader adequate information about them. Overall the book does meet many of its targets of presenting information about internally displaced persons.

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Reclaiming the Environmental Debate: The Politics of Health in a Toxic Culture. Edited by Richard Hofrichter. MIT Press, Cambridge, MA., 2000, 356 pp.

A central theme of this book is that, in order to produce a healthy society, we need to ". . . focus on the causes of ill health associated with the production, use, and disposal of resources, and, more important, social inequality" (p. 5). Richter argues that the debate over human health and environment has been subverted by the very corporations that are the major sources of environmental pollution. Advertisements for SUVs invite environmentally conscious drivers to " . . . experience the wild world of jungles,

forests, deserts, and . . . underwater ecosystems" (p. 211), never mentioning that the SUV uses more gas than smaller cars, thereby contributing to the depletion of the earth's fossil fuel reserves. Health conscious consumers have increasingly turned to "pure" bottled water as their drink of choice, increasing sales 144% in the past decade, not realizing that the plastic bottles in which the water is packaged is made from fossil fuels, and contains many different highly toxic chemicals that are released into the atmosphere and the soil when these bottles are destroyed in landfills. Companies such as Exxon, Chevron, and Mobil are spending millions of dollars producing materials about the environment that they pass out free to elementary schools around the nation to young consumers-to-be, "greenwashing" concerns about environmental pollution. Richter argues that we live in a "toxic culture," by which he means, a culture where we take it for granted, that production and consumption in a capitalist society inevitably lead to pollution and to ill health. Ill health, especially among minorities and the poor, is the inevitable price we pay for our affluence. The authors of the articles in this book focus on raising questions about the relationship between the distribution of social, political, and economic power in capitalist societies and toxic culture and the consequent production of ill health.

The authors of the articles in this volume come from a variety of disciplines: environmental studies, public health, sociology, political science, law, and psychiatry on the one hand, and community activists, writers, communications studies, actors, and artists on the other. The book is divided into three parts. In Part I, the authors look at the conventional perspectives on environmental pollution and challenge them. In the conventional perspectives, the focus of the debate is on issues of promoting progress, growth,

production, and consumption, and limiting risks to acceptable levels through the application of science, medicine, and technology. The authors raise questions about the roles of social determinants of environmental pollution and of social structure in creating environmental hazards. In Part II, the authors examine the role of advertising, media, and public relations in the debate over environmental pollution. In this section the authors present a series of situations where corporations attempt to subvert the green movement, promote themselves as environmentally conscious producers, co-opt environmental groups through infiltration of the groups and corporate "gifts," and to seduce environmental scientists with research support. In Part III, the authors present four examples of how communities have fought corporations over environmental issues using innovative programs that have included conventional legal challenges and media campaigns, on one hand, and theater and art, on the other.

I found this book to be highly readable and informative. I truly could hardly put it down once I started reading it. It would be suitable for a general lay audience interested in environmental issues, as well as advanced undergraduates and graduate students in courses in the social sciences, public health, and environmental studies.

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