University of New Orleans

ScholarWorks@UNO

College of Urban and Public Affairs (CUPA) Working Papers, 1991-2000

Department of Planning and Urban Studies

1996

A model for teaching environmental justice in a planning curriculum

Robert O. Washington
University of New Orleans

Denise Strong
University of New Orleans

Follow this and additional works at: https://scholarworks.uno.edu/cupa_wp

A Model for Teaching Environmental Justice in a Planning Curriculum

R.O. Washington, Ph. D.

Denise Strong, D.P.A.

College of Urban and Public Affairs

University of New Orleans

New Orleans, LA 70148

(504) 286-7102

ABSTRACT:

This article describes a new course (Environmental Justice Movement) initiated at the College of Urban and Public Affairs at the University of New Orleans in the Spring of 1995. It was designed as a companion to another course, *Environmental Planning.*

The course objectives are to prepare planning students to engage in the environmental policy debate by exposing them to its historical, moral, and technical dimensions, and by examining strategies and tactics of planning practice that would enable them to apply their analytic and research skills to appropriate roles of advocacy and mediation and community planing. It is argued that if planning educators are to prepare students to perform planning roles appropriately in the environmental justice struggle, then we have the responsibility to ensure that they have the opportunity to consider the issues deemed essential for the performance of those roles.

The course seeks to connect the environmental justice movement with social movement theory (organizing for social justice), concepts of procedural justice, social justice and advocacy and equity planning. It integrates propositions and concepts about the politics of planning, land use policies and practices with political philosophy, populist beliefs, and what Perry (1995) calls "the street-level Rawlsian approach."

INTRODUCTION

  One of the responses to the increasing polarization of power and wealth and the rising intensity of social, ethnic, and gender conflicts in the United States is the re-emergence of social justice activism (Kling and Posner, 1990) and the revival of grass roots organizing, championing causes on behalf of populations-at-risk. Parallel with this trend has been the formation of a new social movement made up of social activists, environmentalists and civil rights advocates coalescing to find ways to translate the tactics learned during the civil rights, anti-war, and anti-nuclear movements into strategies to address environmental contamination in predominately African-American, Hispanic, Asian, American Indian, and poor white communities. The disproportionate siting of these environmental threats in disadvantaged communities has raised volatile race, class, and equity issues and created a specter of *oppression* and *victimization*. Protests have included language framed variously in the context of environmental equity, environmental racism, and environmental justice.

  In many respects the environmental justice movement is the 1990s version of the "explosion of protest and community activism" (Mollenkopf 1983) that accompanied the pro-growth activities, i.e., urban renewal and downtown redevelopment schemes of the 1960s and early 1970s.

  Environmental justice (the preferred term of these authors) has to do with the rights of all people to benefit equitably from the environment and to be equally protected from the effects of toxic poisons and ecological degradation resulting from human exploitation of the environment. It also implies the right to good health, the right to have viable communities free from environmental risks and the right to social and psychological well-being.

  The environmental justice struggle has evolved into a legitimate social movement; social movements by their very nature focus upon organizing group action against maldistribution of rights, resources, and privileges and toward seeking redistribution of power and influence, as well as creating new institutional structures and belief systems. In other words, the general theme of social movements is *organizing for social justice*. The five implicit aims of this movement are: (1) to prevent the proliferation of such unwanted locations in minority and poor areas where residents are disenfranchised by the lack of economic power and political influence, (2) to force states and the federal government to regulate and manage more effectively and efficiently existing hazardous sites, (3) to force immediate cleanups of abandoned dump sites, (4) to coerce

the EPA to perform competent and reliable risk assessments in communities exposed to toxic pollution and wastes, and (5) to cultivate a more sensitive climate of public opinion conducive to communicating reliable risk data, passing and enforcing laws and other remedies that will enable victims to receive equitable compensation for medical costs, along with punitive damages for illness and diseases resulting from environmental harm.

The irony of this resurgence in advocacy for social justice is that, despite a history of involvement in environmental issues along with an understanding and expertise in local land use policy, advocacy planning, and procedural justice, planners have played a marginal role in the environmental justice movement. History reminds us that advocacy planning was in some respects a response to the urban crisis of the 1960s and gained much of its legitimacy from the failures of urban renewal and the growing popularity of citizen participation (Heskin 1986). Some critics have suggested that any apparent lapse may be another example of the profession's declining interest in issues of poverty, and its retreat from advocacy on behalf of the poor and the minorities (Krumholz, 1990; Mier, 1994; Angotti, 1995; Thomas, 1995). Another explanation might be hidden in Feldman's (1994) suggestion that the political context of planning practice often results in "... planners being called upon to perform new tasks for which they have little training or aptitude." In other words, does the environmental justice movement present a challenge to planning graduates for which we in planning education have not prepared them?

Planners can not ignore their professional responsibility to the issues that the environmental justice movement raises; their participation in zoning, land use, siting and permitting policies—all of which influence decisions about the location of environmental hazards, transportation routes for emergency evacuation and pollution reduction programs—place them in the vortex of the environmental justice struggle. Yet neither planning history nor planning education gives adequate attention to the relationship between racial injustice and current urban planning practices (Hall, 1989 cited in Thomas, 1994). Peterson (1985) frames this omission by asking: " [Has] America's *peculiar* problem, the question of race, affected land use decisions in major metropolitan areas?" The environmental justice movement presents the challenge to planners, particularly environmental planners, to face up to the racial and political conflicts generated by locally unwanted land uses (LULUs), rather than merely "focusing on apparently technocratic concerns, such as waste water treatment" (Feldman, 1994).

Planning education must provide students with an understanding of the planner's role in

developing and implementing appropriate policy and professional responses. This paper describes how the College of Urban and Public Affairs at the University of New Orleans implemented a graduate level course in environmental justice during the spring semester of 1995 (It was taught for the second time in the Spring of 1996 with some revisions). The educational objectives are to prepare planning students to engage in the environmental policy debate by exposing them to its historical, moral, and technical dimensions, and by examining strategies and tactics of planning practice that would enable them to apply their analytic and research skills to appropriate roles of advocacy, negotiation and mediation and community planning. This course is undergirded by the pedagogical proposition that if planning educators are to prepare students to preform appropriately many of the planning roles, then we obviously have the responsibility to ensure that they have the opportunity to consider the issues deemed essential for the performance of those roles.

This paper also examines how the course integrated content designed to illustrate why environmental justice is indeed a fundamental planning issue, and how it incorporated the Friedmann-Kuester (1995) notion that "planning is no longer seen as being exclusively concerned with advanced decision-making...[but rather that] more and more emphasis appears to be placed on diversity than on a consensual public or collective interest that, on most issues, seems impossible to define."

DEVELOPING THE SYLLABUS

Integrating Themes

The course *The Environmental Justice Movement*, was conceived as a companion to an existing course, *Environmental Planning*, which focuses on the impact of public and private planning, policies, and programs on the natural and man-made environments of urban regions. Its content includes environmental law, environmental impact statements, environmental politics, land use policy, air and water resources, energy policy, and solid wastes.

The *Environmental Justice Movement* course uses the heuristic devise of connecting social movement theory (organizing for social justice) with concepts of justice, social justice, and environmental justice. It integrates propositions and concepts about the politics of planning, land use policies and practices with political philosophy, populist beliefs, and what Perry (1995)

calls "the street-level Rawlsian approach."

Blumer (1939) characterized social movements as having two distinctive organizing phases: (a) general — "rather formless in organization and inarticulate in explanation," rejecting the historic emergence of new values, and (b) specific — "[having] a well defined objective or goal...[and developing] a recognized and acceptable leadership and a definite membership characterized by a 'we-consciousness'." The course presumes that the emerging environmental justice movement is clearly in a "specific" social movement phase in which collective action has moved beyond the stage of merely protesting the proximity of residential areas to commercial hazardous waste treatment, storage, and disposal facilities (TSDFs) or preventing LULUs. It also addresses the larger issue of who benefits from and who carries the major burden of negative consequences of economic and industrial land-use policies. This expansion of the concept of environmental justice has elevated the intellectual discourse to a level which raises the question *"How safe is safe enough, and how fair is safe enough?"*(Raynor and Cantor 1987).

The essence of the Environmental Justice Movement is *equity* and *fairness* — concepts that philosophers have examined since the days of Plato's *Republic*. Some writers suggest that the concept of justice was perhaps argued even before Plato by the ancient Sumerians and Babylonians. (Kruegal, et al, 1995). Discussions of justice often begin with discussions of criminal or retributive justice-the question of how and why those who violate the law are to be punished. The more common and familiar questions, however, are those of *distributive justice*-the fair and equitable distribution of benefits and obligations to everyone in society. Both sets of questions come down to a single common query: What do we deserve? "Justice thus concerns the basic workings of society, that is, the organizations of its institutions so that goods are fairly distributed and obligations and duties are fairly assigned. It concerns the punishment of the guilty, but also the reward of the meritorious, fair pay is for good work, and appropriate power in determining how things are done." (Bowie, et al, 1992, p. 728).

Another way to think about the concept of justice is to think, contextually, about why some people are treated differently, particularly when differential treatment is predicated on group differences. Young (1990) contends that in these situations and as a result of which, some groups are privileged while others are oppressed, social justice requires that we explicitly acknowledge and attend to those groups' differences in order to understand oppression. The terms "equity" and "fairness" focus attention on the underlying principle that fairness and equity

are inherent in society's efforts to protect the health of all citizens from the adverse effects of environmental agents. (Cable and Cable, 1995).

Crowfoot, et al. (1983) suggested that "social justice" involves particular structural arrangements in the social order that can be described on three interrelated levels. At the societal level, it involves equal access to basic resources, and equal access to the levels of power guiding the allocation of resources. This presumes participatory structures in both economic and political institutions and policies. At the organizational level, it involves arrangements of work, play, and daily life that serve the needs of different groups of people, those with power and affluence, and those without. Moreover, it requires organizational goals, membership patterns, and social structures — particularly regarding decision making and rewards — that are responsive to groups from different social-economic strata, racial and sexual status, and so on. At the personal level, social justice involves the consciousness of one's group and personal interests, and the freedom to act on them. This includes understanding the ways in which one's personal and group interests relate to the common good of an organization, society or global system, and continuing individual action to affect the world in line with social justice objectives. Social justice at this level also includes a moral and active commitment to realizing one's humanity in relationship to self and others.

Connections between societal, organizational, and personal levels do not occur in the abstract; they occur as a result of actions various groups take to articulate their needs and achieve their goals. As people participate in the macroeconomic and political order, as they participate in informal organizations throughout society, and as they join with other individuals in pursuit of cherished ends, they mobilize information and influence to achieve social justice ends. Environmental justice proponents argue that most communities of color and poor communities have been unsuccessful in mobilizing collectively for environmental justice. Hird (1993) in his review of geographical distribution of Superfund sites found that the likely beneficiaries of Superfund expenditures are in counties that are on the average both wealthier and more highly educated than the rest, and have lower rates of poverty. Bullard (1992) reiterated this argument by drawing a "power" connection between communities at risk and those that have been successful in fending off a threat. He noted that the extent to which sites on the National Priorities List (NPL) are representative of the nation's total hazardous waste sites is a reflection of power arrangements. Thus, communities that are more knowledgeable and

resourceful are more likely to receive assistance through EPA Technical Assistance Grants thereby perpetuating the institutional inequalities that exist in the larger society. "Current institutional arrangements enhance the status quo-providing privileges for the affluent while disadvantaging the less affluent. Studies of distributive and disparate impact ultimately must deal with social inequality. Current institutional arrangements create and maintain inequality."

Young (1990) elucidated the discussion of social justice by suggesting that such discourse should begin with a paradigm of *domination* and *oppression*. Such a paradigm brings out issues of decision making, division of labor, and culture that bear on social justice, but are often ignored. Moreover, such a paradigm also illustrates the importance of social group differences in structuring social relations and oppression. The imperative of social justice for her is the elimination of institutionalized domination and oppression. Moreover, she contends, the concept of social justice must extend beyond the usual philosophical theories which merely emphasize the morally proper distribution of benefits and burdens among society's members. While distribution issues are crucial to a satisfactory conception of justice, Young suggests that it is a mistake to reduce social justice to distribution alone because that tends to focus thinking about social justice on the allocation of material goods such as things, resources, income, and wealth, or on distribution of social positions, especially jobs, rather than on social structures and institutional contexts that often help determine distributive patterns, on the one hand, and ignore issues of decision-making power and procedures, division of labor, and culture, on the other.

Young suggested that since the 1960s, the definitions of oppression in the United States have shifted from injustices imposed by tyrannical power to the structural, systematic constraints on groups that are not necessarily the result of the intentions of a tyrant. They are, rather, constraints embedded in unquestioned norms, habits and symbols, and have become structural-underlying institutional rules and the collective consequences of these rules. These forms of oppression may be classified as follows:

C   Exploitation: The Marxist notion that oppression occurs through a steady process of the transfer of the results of the labor of one social group to benefit another.

C   Marginalization: Marginals are people the system of labor cannot or will not use. This may be the most dangerous type of oppression. A whole category of people are expelled from useful participation in social life, and thus potentially subjected to severe material deprivation and even extermination.

C Powerlessness: Designates a position in the division of labor and the concomitant social position that allows persons little opportunity to develop and exercise skills. The powerless are those who lack authority or power, those over whom power is exercised without their exercising it. The powerless are situated so that they must take orders and rarely have the right to give them.

C Violence: Members of some groups live with the knowledge that they must fear random, unprovoked attacks on their person or property, which have no motive but to damage, humiliate or destroy the person. What makes violence a category of oppression is less the particular acts themselves, than the social context surrounding them, which makes them possible and even acceptable. (pp. 48-62).

Rawls's Notions of Equality, Distribution and Liberty

 Modern day treatment of the subject of fairness often refers to the works of John Rawls. Crowfoot, et al.'s, ideas of social justice are rooted essentially in Rawls's *A Theory of Justice* (1971). However, Young rejects the Rawlsian distributive paradigm on several grounds, but principally because it ". . . may have a bias towards focusing on easily identifiable distributions, such as distributions of things, income, and jobs."

 It is precisely this notion of social justice that makes the Rawlsian distributive paradigm relevant to a course on environmental justice. Beginning from the premise that justice is fairness helps to place in context the question: Who benefits and who bears the burden? He noted: ". . . Justice denies that loss of freedom for some is made right by a greater good shared by others. It does not allow that the sacrifices imposed on a few are outweighed by the larger sum of advantages enjoyed by many."(pp 3-4). In other words, Rawls would temper the utilitarian notion of the "greater good" with justice, liberty, and equality. He argued that if a group of people were developing a social contract for a society and, "behind a veil of ignorance," they had no knowledge of what social or economic positions they would hold in that society, they would choose to organize institutions that would maximize benefits to the least advantaged group since some of them might end up in that position. They would allow absolute inequalities to exist only if those inequalities maximized benefits to the least advantaged (p.83). Moreover, such inequalities would be constrained by the "principle of fair equality of opportunity" which would require access for all basic primary goods such as education, jobs, health care, and a minimum

income.

Framing environmental justice in the context of fairness and distributive justice makes a direct connection between the movement and planning. McConnell (1995) suggests that while Rawls did not refer to urban or related forms of planning, his principles are directly applicable to the illumination of the sorts of value-laden decisions that planners have to make. His ethical theory of justice, for example, can be translated into an ethical theory for planning in which the moral question "Who will gain and who will lose?" can be refined by asking "Would social justice result from a particular decision?" (p.33). Meir (1990) in a similar view summed up the connection by admonishing us:

> *My own point of departure in everyday public policy debate ...has been to pose the question of who the least advantaged are in this issue and what would generally enhance their life circumstances.*

COURSE OUTLINE

The course is divided into two segments. Segment I, conforms to the traditional lecture-discussion approach. Throughout, the instructor attempts to introduce implied planning roles and skills where appropriate. Students are introduced to Mier's (1994) notion of the importance of considering race in planning, Davidoff's ideas about advocacy planning, Krumholz's idea of equity planning, Friedmann's idea of transactive planning and Rawls's concepts of justice.

Segment II consists of organizing the class into "interest clusters." Each cluster selects a topic for a substantive paper or project which examines some aspect of environmental contamination and the relevant issues of equity. Students are given a good deal of leeway in the selection of the topics. During the final weeks of the course, students must share their papers with the other members of the class for the discussion and critique in advance of the due date. The course also includes a series of outside speakers, among whom are local and state officials, community organizers, grassroots officials, and members from communities with abandoned or uncontrolled toxic waste sites. Following is a description of the course:

Weeks 1-2: Perspectives on Environmental Justice.

This unit includes such subject matter as (a) definition of environmental justice, (b) politics of environmental justice, c) economics of environmental justice, and (d) federal responses.

The term "politics" of environmental justice is used to convey the notion of power-drawing upon Lasswell and Kaplan's (1950) idea that "...a political act is one performed in power perspectives." The politics of the environmental justice movement is conceived of as a struggle between individuals, groups, and communities who lack organized political power, on the one hand, and the coalition of corporations, governments, and financial institutions concerned about free-markets, private property rights, and profit-making on the other.

One perspective of the environmental justice struggle is presented in the context of recent shifts in procedural justice and the erosion of environmental rights through deregulation and political retrenchment. As companies find themselves facing greater global competition, they have pressured the government to reduce regulations and de-emphasize citizen participation, arguing that they are costly and affect their competitive advantage (Bandow, 1993; Pulido, 1993).

Another perspective views the environmental justice struggle from the proposition that a major cause of environmental problems is economic growth, which takes place largely through the expansion of industrial production (Cable and Cable, p 37). Industrial production generates grassroots environmental conflicts because of disagreements about the environmental and health consequences of pollution; thus, an understanding of the conflicts requires understanding roles of the state in making decisions about whether to increase, maintain, or limit the rate of economic growth. These conflicts take three forms: a) Conflicts about the private ownership of property b) Competitive pursuit of profits, and c) Inequality in the distribution of social wealth. Thus, the environmental justice movement is caught between two competing functions of the capitalist state: *accumulation*: the state's obligation to create and maintain the conditions under which profitable capital accumulation is possible, and *legitimization*; the state's obligation to simultaneously create and maintain conditions of social harmony, which includes public protection.

Weeks 3-4: **Planning Issues and Social Justice:**

This module was inserted during the spring of 1996 and introduces the Rawlsian

principles of justice and their implications for planning behavior, and ascriptive roles for planners in the environmental struggle. Content includes Rawls's concepts of *just savings, procedural justice*, and *behind the veil of ignorance*. These concepts are infused with discussions of C. Wright Mills's *Sociological Imagination* and his discourse on *personal troubles* and *public issues*. The significance of Mills's conceptualization to environmental justice is that it offers a new set of lens within which to frame the struggle. He helps students to consider how and when the manifestations of individual personal troubles (rage and fear) get translated into public issues and to understand that, more often than not, manifestations of social problems imply that there are contradictions and antagonisms (inequities) in the social structure that need rectification. In other words, to some extent personal troubles are the result of structural changes and social arrangements in society that have to be understood and dealt with. Therefore, both the proper definition of the problem (environmental justice) and the range of solutions must be seen in the context of broad social, economic and political ideologies, and not merely in the framework of personal situations or isolated individual cases. In the case of the siting of noxious facilities, planners and public officials must make the connection between the concepts of social justice and the "tacit understanding" decision makers bring to the siting process. Whether decisions are made on the basis of racism, on the assumption that host communities lack political clout, or on the basis of "dynamic economic variables," students are challenged to consider that it would seem that decision-makers, in a pluralistic society, are required to consider feelings of rage and powerlessness that are likely to ensue.

Other discussions in this module center around implications for planners involved in race- based zoning practices, permitting, and siting decisions. Students are encouraged to consider all possible strategies for advancing the environmental struggle. The instructor also emphasizes that the growing consensus in the environmental justice movement is that, because the struggle is essentially political and economic, planners should emphasize their analytical skills and seek to place themselves in mediating, negotiating and mobilizing roles rather than advocating legal remedies. There are strategic and legal drawbacks to lawsuits; in fact, filing lawsuits may ensure loss of the struggle or cause significant disempowerment of the client community (Cole, 1994).

Weeks 5 & 6: Social Movements and Social Justice

Content for class discussions includes a brief history of social movements, populism, powerlessness, and social ideology. The instructor's lectures draw heavily from the works of (Tarrow 1994), Boyte and Reismann (1986) and Boggs (1986). Major emphasis is on *power* in social movements. Discussions move along a variety of avenues. For example, some discussions focus on the sometime elusive and fleeting power in movements, on their influence on politics and society, theories of collective action as well as the effects of social movements on personal lives, culture, and policy reforms. Drawing on Tarrow, discussion is framed primarily to examine the rise and fall of American social movements as a part of political and social struggles in America and as an outcome of changes in political opportunity structures. Other discussions take a comparative historical approach using a small, selected, number of events. Students are challenged to make comparisons between the fledgling environmental justice movement and such early-American social reform movements as that led by Jane Addams, the populist movement which began in the late 1800s, the labor movement of the 1920s, and the civil rights movement of the 1960s.

The usefulness of comparative history is its capacity to serve as an important check on theoretical explanation of planning behavior/social interaction, by encouraging students to make explicit their own causal arguments and to test various planning theories with practice.

Weeks 7 & 8: Environmental Justice in Louisiana

The state of Louisiana provides a rich venue for viewing environmental injustices and, in turn, extrapolating appropriate roles for planners. The Mississippi River corridor between New Orleans and Baton Rouge, often referred to as "cancer alley", has the highest concentration of manufacturers, users, and disposers of toxic chemicals in the entire United States. Here, the banks of the Mississippi are lined with at least 136 major companies. The majority of them are petrochemical plants, organic chemical and pesticide manufacturers, oil refineries, and manufacturers of plastics and other synthetic fibers-which have located in the corridor to take advantage of the area's low taxes and vast resources of oil, gas, brine, and surface water. The environmental problems of this corridor are well documented and all the statistics depict a state of environmental crisis. Reports from the Environmental Protection Agency have indicated that Louisiana has led the nation in toxic chemical releases since 1992 (Burby, 1995) with over 458 million pounds emitted annually.

This module captures the rich data available about the state. Content and activities include a review of the goals and performance of the Louisiana Department of Environmental Quality, the social well being of the residents living along the corridor, visits to superfund sites in the area, presentations and lectures from DEQ staff, local residents and community activists. Reading assignments include review of news clippings, survey reports, federal and state government documents including EPA/NPL site inspection reports. Many of the documents provide excellent data sources for "interest cluster" projects.

Weeks 9&10: **Point-Counterpoint**

Objectives of this unit are, first, to challenge students to synthesize information discussed in class up to this point and, second, to explore the controversy surrounding charges of "flawed" methodology (Anderton et al., 1994) and racism vs. market forces (Been, 1995; Boerner and Lambert, 1995). To achieve the first objective, the instructor poses two questions to the class for discussions: a) has the environmental justice struggle attained full social movement statues?; and b) is environmental justice a race or class issue?

There are no yes or no answers to either of these questions; they are designed to encourage students to consider a middle ground and to reflect upon socio-cultural as well as economic factors that contribute to environmental inequalities. For example, Cable and Cable (1995) suggest that one perspective from which to look at the environmental justice struggle is to assume that environmental problems are not caused by evil persons, greedy growth coalitions, or by any particular type of individual; but rather that prevailing cultural beliefs and social institutions and social arrangements in society that reflect and reinforce those beliefs are responsible for environmental degradation, as well as the failure to address the problem. Moreover, they note:

> *Abuse of the environment does not just happen. People decide how to use the environment, but they do not decide simply on some objective basis of right and wrong, safe and unsafe. Instead, decisions on environmental use are reached in a social context; they are influenced by such factors as cultural values and attitudes toward the environment, social class, and our relationships to others. Disagreement among social groups over environmental use and what constitutes "right" and "safe" sometimes erupts into social conflict. Thus, environmental issues frequently become arenas of conflict in which social groups with varying levels of power each vie for public acceptance of their particular interpretation of the situation consonant with their own interests.(p.5).*

Thus, in the long run it may not be important at all whether the environmental justice struggle achieves the stage of a social movement. Students are challenged to consider the proposition that what may be more essential is cultivating the public sentiment that achieving environmental justice requires major restructuring of the entire social order. A beginning point for considering basic change may therefore be to assume that environmental injustices are inseparable from other social injustices such as poverty, racism, sexism, unemployment, urban deterioration, and the diminishing quality of life resulting from dominating growth coalitions (Hofrichter, 1993). The lesson for students is that planners, in their roles as negotiators/ mediators, must be prepared to validate the inseparability of *personal troubles* and *public issues* when working with citizens who perceive that they are being unfairly subjected to the dangers of environmental harm in their communities.

The second objective is considered as important as the first. Friedmann and Kuester (1995), in their survey of the imperatives of planning education for the late twentieth century, found that their data suggested three new planning roles for the future: a) entrepreneurial planning (inventing solutions to problems, and going after them); b) mobilizing community action; and c) mediation/ negotiation. The researchers found that respondent educators believed that future planners must posses analytic and research skills balanced with multi-cultural understanding, communications and interactive skills.

These competencies fit the requirements of a planner engaged in issues involving environmental justice. For example, the current controversy regarding methodological flaws in the research design that undergirds the arguments of some of the proponents of environmental justice has compromised the struggle. Anderton, et al. (1994) contend that several studies that assert that TSDFs are disproportionately located in minority neighborhoods are flawed because "....they are regional in scope and define communities too broadly in size." Been (1995) contends that market forces, rather than racism and classism, account for the siting of TSDFs, the promulgation and enforcement of environmental laws and regulations, and the clean up process.[1] She contends that the fallacy in the studies of advocates for environmental justice is that much of their research does not:

> establish that the host communities were disproportionately minority or poor at the time the sites were selected. Most of the studies compare the current socioeconomic characteristics of communities that host various LULUs to those of communities that do not host such LULUs. This approach leaves open the possibility that the sites for LULUs

were chosen fairly but the subsequent events produced the current disproportion in the distribution of LULUs. In other words, the research fails to prove environmental justice advocates' claim that the disproportionate burden poor and minority communities now bear in hosting LULUs is the result of racism and classism in the siting process itself... Because the research fails to prove that the siting process causes any of the disproportionate burden the poor and minorities now bear, and because the research has ignored the possibility that market dynamics may have played some role in the distribution of that burden, policy makers have now no way of knowing whether the siting process is "broke" and needs fixing. Nor can they know whether even an ideal siting system that ensured a perfectly fair initial distribution of LULUs would result in any long-term benefit to the poor or to the people of color. (p. 39).

Hird (1983) found that while the geographic distribution of NPL sites may indeed be related to the socio-economic structure of the residents of the area, the pace of the EPA's cleanups ". . . depends mostly on the site's potential hazard, and not apparently motivated by the localities socio-economic characteristics as political representation" (p.332).

Even more critical than Been are Christopher Boerner and Thomas Lambert (1995) who contend that:

with charges of racism, discrimination, and social negligence being bandied about, discussions of the environmental justice issue are often passionate, and, occasionally inflammatory. Behind emotion, however, two critical questions arise: Does the existing evidence justify such a high level commitment of resources to addressing environmental justice claims? And what reasonable steps should society take to ensure that environmental policies are fairly enacted and implemented?

These authors are particularly critical of the United Christ Church study and some of Bullard's work, and the use of zip codes as areas of analysis rather than census tracts. They argue that because counties and zip code areas tend to be geographically quite large these studies may suffer from aggregation organization errors. That is, the studies reach conclusions, with data from counties and zip code areas that probably would not be valid if smaller, more consistent geographic units were examined. Boerner and Lambert suggest that before approving new regulations on facility siting and permitting, policy makers need to asses both the quality of the existing research and likely costs and benefits of proposed solutions to this problem.[2] "Only with such a critical eye can legislators be certain that the measures ultimately enacted are both cost effective and successful in addressing the equity concerns of minority and low-income communities . . ."

On the other hand, students are introduced to studies and reports which caution them to

carefully consider the limitations of cost-benefit calculations. For example, some policy experts and economists (Stavins 1989; Lindsey 1994) caution against the use of cost-benefit analysis, or setting dollar values on environmental amenities or human health because it has shown to be neither plausible nor reliable because of its reliance on quantitative economic outcomes.

One of the lessons for students is that, in their roles as entrepreneurial planners, community mobilizers, or mediators, their competence in research design and data analysis must be expert enough to enable them to make the distinction between *evidence* which persuades and *proof* which convinces.[3] Class discussions often focus on the practical adequacy of scientific truth (Sayer, 1993) — that is, students are encouraged not to violate the rules of truth and open communication. They are reminded that, in their role as planner-scientist, one of their most profound obligations is to provide factual information about science, technology, the environment, and human health risks in a manner that can be understood by policy-makers as well as the public at large.[4] Another lesson for students to learn is that we live in a pluralistic society, and the planner's definition of the problem and the analysis of the root causes of the problems often run counter to pluralism — the mode of political analysis that has dominated the postwar period. Given society's limited ability to *solve* problems, pluralists tend to *muddle through* by a series of incremental political decisions. Legislative logrolling and vote trading often function with the same effects as the market, thereby facilitating mutually beneficial trades that make all participants better off. (Landy, et al., 1995).

In their mediating roles, planners must understand that pluralistic analysis seldom offers a way of identifying *better* or *worst*, and therefore contributes little to making policy judgements or recommendations about public issues such as environmental justice. This is not to deny that pluralists have contributed to our understanding of procedural justice and our commitment to ensure that public decisions are fair. Yet, as the environmental justice movement has shown, since the distribution of influence among people in and out of any political process tends to be unequal, it is hard to determine how society derives its standard of fairness. Landy, et al. note:

> *. . . the problem is that in a pluralistic world, it is hard to make sense of the idea of the merits of the argument. Exaggerated claims and one-sided advocacy are merely defensible tactics. Counter arguments are to be overcome, not considered seriously. This optimistic irresponsibility presupposes-wrongly-that political and economic resources are unlimited and that in pursuing narrow objectives each party can with impunity ignore the long-term consequences of its own lack of restraint* (p.13).

Students in planning must therefore develop skills that enable them to work on "ill-structured problems" (Mitroff 1983), as well as in conditions of diversity and, at the same time, provide competent advice and assistance.

Perhaps the most important lesson is that, whatever role planners perform, they are ". . . mandated to make democratic citizen participation in the [policy] planning process a reality." (Forester, 1980). Many problems can be aided by research and critical analysis, but the application of these methods, Forester reminds us, almost always exists in the context of conflicting interpretations and interests, established power, and excluded segments of the population-all of which inevitably limit the scope of purely technical "solutions" and scientific truth. Even though planners have little influence on the structure of private property ownership and power in this society, they can nonetheless influence the conditions which make citizens able (or unable) to participate effectively (and organize) around issues affecting their collective lives. Therefore, planners must be able to use "tools" of planning, as well as rhetoric and political instruments to achieve political ends (Throgmorton, 1993). Krumholz and Forester (1990) remind us that the planner's competence goes beyond technically superb research and analysis; it must also include the capacity to communicate in order to persuade. In other words, the planner must be ".....professionally able, organizationally astute, and most of all, politically articulate." (p. 225).

Interest Clusters (weeks 11-16)

The primary objectives of the interest clusters are (1) to enable students to apply some of what they had learned to real problems that exist in the state and (2) to meet, in part, the urban mission of the college and the university through the concept of service learning. The college takes seriously its commitment to linking the teaching-learning process to community service and addressing broader societal issues.

There were 13 students in the first class (1995), who were divided into several clusters. One cluster chose to conduct a health survey among residents in a section of New Orleans which had been placed on the National Priorities List. The survey instrument was completed with the technical assistance of the staff of the State Department of Public Health, but the survey was not conducted because of legal matters over which the students had no control. One group of students explored the legal and economic ramification of community buyouts by tracking the

progress of a local group pursuing that strategy. One student elected to extend her project into a summer independent study during which she assisted the Environmental Justice Group of the Louisiana Department of Environmental Quality in aiding a community in Baton Rouge to develop an EPA Brownfields proposal, and to organize a campaign to have their community rezoned from light industrial to residential. The group did not receive the grant but was successful in getting a zoning change. One student helped organize the University's Earth Day Rally; another wrote a paper on corporate social responsibility to environmental justice. One student, a lawyer, wrote a paper on the limitations of litigation as a strategy for dealing with environmental justice issues.

The second class (1996) included 16 students whose projects ranged from term papers examining the use of Title VI and Title VIII of the Civil Rights Act in environmental justice litigation to the examination of success of Superfund as a public policy instrument for ameliorating contaminated sites. One student completed a six week internship with the Mayor's Office of Environmental Affairs that lasted during the summer and later resulted in half-time employment on an EPA grant. Two students spent a weekend in North Louisiana interviewing and videotaping members of a citizen group who had organized to persuade the U.S. Nuclear Regulating Commission not to grant an operating permit to a company that wanted to build a plant in their community of 1500 residents. Another student worked with a neighboring university law clinic to collect evidence to support a claim of contamination of a site on which a high school was built.

Assessment of the Course

At the end of each semester, students were given an evaluation form on which to assess the course. The form included items on a Likert scale and questions requiring written responses.

Most criticisms at the end of the first semester dealt with the cluster segment of the course. A major drawback was that there was not enough time allowed for project completion. Several students elected to take an incomplete for the course in order to complete their projects during the summer.

The first time the course was offered, only eight weeks were devoted to the lecture/discussion segment. One of the criticisms from the students was that there was not

sufficient time given to planning issues and planning roles. This led to that part of the course being extended to ten weeks and the insertion of the unit on Planning Issues and Social Justice. Students gave high ratings to field trips and presentations by community groups and suggested that some of them should be introduced as early as the third week. Their other complaint of the initial offering of this course related to the schedule. Instead of meeting three times per week for an hour the students recommended that the course meet twice a week for an hour and a half. This change proved to be a major improvement the second time the course was taught because it allowed more time for visiting speakers and field trips. The students also recommended that industry personnel be invited as speakers. Another addition the second time was the use of network news features and documentaries. These presentations were very useful because they supplemented material discussed in class, and the expert reporting made their stories come alive.

In the second evaluation, students expressed strong support for maintaining the "interest clusters" although some activities still were not completed by the end of the semester.

Although most of the students had taken a course titled, *Environmental Sociology*, taught in the Sociology Department, few had taken the *Environmental Planning* course in our program. Their lack of or limited background in environmental impact statements and land use policy have resulted in the incorporation of some of that content into the redesigned syllabus for the third year. Also, insufficient time was devoted to the macro economic aspects of the environmental justice movement, that is, its implications for economic growth (Bailey et al., 1993) versus the improvements in non-market aspects of life. Content in this area will be added to the redesigned syllabus.

Conclusions

In this article, we have provided the theoretical context and a model for teaching a graduate course in environmental justice. We believe this course fills significant gaps in the planning curriculum at the University of New Orleans. It also offers planning education a challenge to begin to address issues the profession has neglected by revisiting the often ignored proposition that race and planning are historically connected. This connection can be traced back to the 1960s, when planners advocated social justice and the empowerment of disenfranchised groups, up to today through the advocacy of social equity planning. On the negative side, it highlights how planners have supported racial injustices through policy tools and practices. Examples are race-based planning in housing, zoning, and environmental policies (Thomas,

1995).

Second, this course places the issue of environmental justice squarely in the ideological and philosophical laps of planners, calling upon them to bring to fore their traditional understanding and expertise regarding land use policies, economic growth with equity, and distributive justice. This presumes that future planners must be trained with this value orientation. Planning educators can ensure this, according to Thomas, by training students to:

> *Oppose discriminatory practices and [by giving] them tools and concepts which can promote social justice within the urban environment. These include equity planning, linkage policies, and community reinvestment tools, but also important is the conceptual basis necessary for the student idealist to persevere and triumph(p. 8)*

The course confirms the authors' convictions that environmental issues are integral to planning and, therefore, constitute a substantive area of inquiry in an urban planning curriculum. Aspects of planning which deals with the use and development of land and other resources, as well as equity in the distribution of benefits and burdens imposed by the use of land and its resources are essential contextual variables to be studied.

In terms of professional training, this course provides students with theoretical frameworks that enable them to interpret and make sense of social justice arguments for themselves. For example, issues of procedural justice provide a framework for planners to bring their own values, norms, and rules of professional practice to issues of fairness in the planning arena. Also, it provides students with a framework for understanding that they, indeed, are not *neutral* experts with no role in the consequences of planing decisions, and it provides them with a framework that will encourage them to examine their own personal and professional values, as well as those of the groups who are making social justice claims.

Students are exposed to alternatives to the traditional sources of expertise. Students learn as much from community people, elected officials, and field trips as they do from the sources we typically rely on in graduate education.

Finally, the importance of integrating theory and practice in professional education is illuminated in this course. The debate on the adequacy of the evidence that supports or detracts from environmental justice claims indicates that good research skills are critical for understanding the issues. The debate further highlights the importance of planners having the ability to convey assumptions that are embedded in their research, as well as the limitations of

social science research methods.

It would appear that the environmental justice movement will continue to evolve as a social movement and will, in turn, continue to make public policy claims that affect the planning profession. It is therefore incumbent that the profession as a whole give attention both in education and practice to developing appropriate responses. Hopkins (1993) suggested that planners are social inventors and the intellectual and professional excitement generated by the tension between cultures that form the planners', their inventions, and the reciprocal effect of their inventions on the culture, is at the core of planning practice. Thus, one of the roles of planners is to demonstrate that a harmonious relationship can exist between society's built environment and its ideals. Clearly, the concept of environmental justice presents this challenge.

REFERENCES:

Anderton, Douglas, et al.. 1995. Studies used to prove charges of environmental racism are flawed. In *Environmental Justice*, ed. David Bender. San Diego, CA: Greenhaven Press.

Angotti, Tom. 1995. Why environmental racism is an issue for planners. *Planners Network Newsletter* Jan 15, 3.

Bandow, Doug. 1993. Environmentalism: The triumph of politics. *The Freeman* 34 (9):332-339.

Baily, Martin Neil, Gary Butlass, and Robert E. Litan. 1993. *Growth with Equity: Economic Policy Making for the Next Century*. Washington DC: The Brookings Institution.

Been, Vicki. 1995. Market force, not racist practices may affect the siting of locally undesirable

land use. In *Environmental Justice*, ed. Bender. San Diego, CA: Greenhaven Press.

Blumer, Hebert. 1939. Collective behavior. In *An Outline of the Principles of Sociology*, ed. R. E. Park. New York: Barnes and Noble, pp. 221-80.

Boerner, Christopher and Thomas Lambert. 1995. Environmental justice can be achieved through negotiated compensation. In *Environmental Justice*, ed. David Bender. San Diego, CA: Greenhaven Press.

Boggs, Carl. 1986. *Social Movements and Political Power: Emerging Forms of Radicalism* in the West. Philadelphia: Temple University Press.

Boyte, Harry C. and Frank Reismann. 1986. *The New Populism: The Politics of Empowerment*. Philadelphia: Temple University Press.

Bowie, Lee G., Meredith W. Michaels, and Robert C. Solomon. 1992. *Twenty Questions: An Introduction to Philosophy*. New York: Harcourt-Brace-Jovanovich.

Bryant, B. and P. Mohal. 1992. *Race and the Incidence of Environmental Hazards: A Time for Discourse*. Boulder, Colorado: Westview Press.

Bullard, Robert D., ed. 1993. *Confronting Environmental Racism: Voices from the GrassRoots*. Boston: South End Press.

Bullard, Robert D. 1992. Use of demographic data to evaluate minority environmental health issues: The role of case studies. In *National Minority Health Conference Proceedings*, eds. Barry Johnson, Robert C. Williams, and Cynthia Harris. Princeton, New Jersey: Princeton Scientific Publishing Company.

Burby, Raymond. 1995. *Through Their Eyes: Survey Results of Lower Income Residents in the Louisiana Industrial Corridor*. Louisiana Environmental Education and Resource Program, University of New Orleans, LA.

Cable, Sherry and Charles Cable. 1995. *Environmental Problems*. New York, N.Y.: St. Martin Press.

Calderon R.L., C. C. Johnson, G. F. Craun, A.P. Dufour, R. J. Karlin, T. Sinks, and J. Valentine. 1993. Health risks from contaminated water: Do class and race matter? *Toxicology and Industrial Health* 9(5): 879-900.

Cole, Luke W.. 1994. Environmental justice litigation: Another stone in David's sling. *Fordham Urban Law Journal* 21(3).

Crowfoot, James, Mark A. Chesler, and Jacques Boulet. 1983. Organizing for Social Justice. In *Handbook of Social Intervention*, ed. Siedman Edward. Beverly Hills: Sage Publications.

Davidoff, Paul. 1965. Advocacy and pluralism in planning. *American Planning Association Journal* 31(3).

Feldman, Marshall M.A. 1994. Perloff revisited: Reassessing planning education in post modern times. *Journal of Planning Education and Research* 13:89-103.

Friedmann, John. 1973. *Retracking America: A Theory of Transactive Planning*. New York: Anchor Books.

Friedmann, John and Carol Keuster. 1994. Comments. *Journal of Planning Education and Research* 14:55-64.

Forester, John. 1980. What are planners up against? Planning in the face of power. *The Bulletin of the Association of Collegiate Schools of Planning* 18(2).

Gelobter, M. 1986. *The Distribution of Outdoor Air Pollution by Income and Race*. Master's Thesis. University of California, Berkeley.

Goldman, B.A. 1991. *The Truth About Where You Live: An Atlas for Action on Toxins and Mortality*. New York, New York: Times Books.

Gould, J. 1986. *Quality of Life in American Neighborhoods, Levels of Affluence, Toxic Waste, and Cancer Mortality in Residential Zip Code Areas*. Boulder, Colorado: Westview Press.

Hall, P. 1989. *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. Oxford: Basil Blackwell.

Heskin, Allen David. 1980. Crises and response: A historical perspective on advocacy. *APA Journal* January: 50.

Hird, John A.. 1993. Environmental policy and equity: The case of superfund. *Journal of Policy Analysis and Management* 12(2): 323-343.

Hofrichter, Richard. 1993. *Toxic Struggles*. Philadelphia, PA: New Society Publishers.

Hopkins, Lewis. 1993. Foreword. In *The Language of Planning*, ed. Albert Z. Guttenberg. Urbana: The University of Illinois Press.

Kling, Joseph M. and Prudence S. Posner. 1990. *Dilemmas of Activism: Class Community, and the Politics of Local Mobilization*. Philadelphia: Temple University Press.

Kluegel, James R., David S. Mason and Bernd Wegner, eds. 1995. *Social Justice and Political Change*. New York: Aldine De Gruyter.

Krumholz, N. and J. Forester. 1990. *Making Equity Planning Work: Leadership in the Public*

Sector. Philadelphia, PA: Temple University Press.

Landy, Marc K., Marc J. Roberts and Stephan R. Thomas. 1994. *The Environmental Protection Agency*. New York: Oxford University Press.

Lasswell H.D. and A. Kaplan. 1950. *Power and Society*. New Haven: York University Press.

Lindell, M. and T.C. Earle. 1983. How close is close enough: Public perceptions of the risks of industrial facilities. *Risk Analysis* 3(4): 245-253.

Lindsey, Greg. 1994. Planning and contingent valuation: some observations from a survey of homeowners and environmentalists. *Journal of Environmental Planning and Management* 14:19-28.

Lober, Douglas J. 1993. Beyond self-interest: A model of public attitudes toward waste facility siting. *Journal of Environmental Planning and Management* 36:345-363.

Maxey, Margaret N. 1992. Managing environmental risks. *Society* March/April: 41.

McConnell, Shean. 1995. Rawlsian planning theory. In *Planning Ethics*, ed. Sue Hendler. New Brunswick, New Jersey: Center for Urban Policy Research, Rutgers University.

Mellenkoph, J.. 1983. *The Contested City*. Princeton, New Jersey: Princeton University Press.

Mier, Robert. 1994. Some observations on race in planning. *Journal of the American Planning Association* 60(2).

Mills, C. Wright. 1959. *Sociological Imagination*. New York: Oxford University Press.

Mitroff, Ian. 1983. Beyond experimentation: New methods for a new age. In *Handbook of Social Intervention*, ed. Edward Siedman. Beverly Hills: Sage Publication

Moses, Marion, E.S. Johnson, W.E. Anger, V.W. Burse, S.W. Horstman, R.J. Jackson, R.G. Lewis, K.T. Maddy, R. McConnell, W.J. Meggs, and S.H. Zahm. 1993. Environmental equity and pesticide exposure. *Toxicology and Industrial Health* 9(5): 913-959.

Moses, Marion. 1993. Farmworkers and pesticides. In *Confronting Environmental Racism: Voices from the Grassroots*, ed. Robert Bullard. Boston, Massachusetts: South End Press, pp. 161-178.

Perry, David C.. 1994. Review of *Social Justice and Local Developmental Policy* (Robert Mier, et al.). *Journal of Planning Education and Research* 14(1): 67.

Peterson, Paul. 1985. *The New Urban Reality*. Washington DC: The Brookings Institution.

Portney, Kent E.. 1991. *Siting Hazardous Waste Treatment Facilities: The Nimby Syndrome*.

New York: Auburn House.

Pulido, L.. 1994. Restructuring and the contracting and expansion of environmental rights in the United States. *Environment and Planning* 26:915-936.

Rawls, John. 1971. *A Theory of Justice*. Cambridge, MA: Harvard University Press.

Raynor and Cantor. 1987. How fair is safe enough? The cultural approach to societal technology choice. *Risk Analysis* 7(1): 3-13.

Sayer, Andrew. 1993. *Methods in Social Science*. Second Edition. New York: Rutledge.

Sexton, K., K. Olden, et al.. 1993. Environmental justice: the central role of research in establishing a credible scientific foundation for informed decision making. *Toxicology and Industrial Health* 9(5): 685-727.

Tarrow, Sidney. 1995. *Power in Movement: Social Movements, Collective Action and Politics.* Cambridge, MA: Cambridge University Press.

Thomas, June Manning. 1994. Planning history and the black urban experience: Linkages and contemporary implications. *Journal of Planning Education and Research* 14:1-11.

Throgmorton, James A. 1993. Planning as a rhetorical activity. *Journal of the American Planning Association* 59(3).

U.S. Environmental Protection Agency (EPA). 1992. *Environmental Equity: Reducing Risk for All Communities*. EPA 230-R-92-008. Washington, D.C.

Wernette, D.R., and L.A. Nieves. 1992. Breathing polluted air: Minorities are disproportionately exposed. *EPA Journal* 18(1): 16-17.

Young, Iris Marian. 1990. *Justice and the Politics of Difference*. Princeton, New Jersey: Princeton University Press.

NOTES:

1.“Most of the studies cited as evidence of environmental inequities document disparities by relying on statistical associations, between demographic characteristics of populations, primarily race and income, and indirect surrogates for exposure, such as residential proximity to pollution sources. These investigations have been consistent in finding that members of disadvantaged groups, including many African Americans and Hispanics, are more likely than affluent whites to : (1) live near sources of environmental pollution, such as waste sites (Gould, 1986; UCC, 1987; Bullard, 1990; Goldman, 1991); (2) reside in urban areas where ambient levels of certain levels of pollutants, such as lead and carbon monoxide, are elevated (Gelobter, 1986; Wernette and Nieves, 1991; Bryant and Mohai, 1992; Sexton et al, 1993); (3) eat significantly greater amounts of contaminated fish (EPA, 1992; Calderon et al., 1993); and (4) be employed in potentially dangerous occupations, such as migrant farm work (EPA, 1992; Moses et al., 1993).” See: Sexton, Olden and Johnson, “Environmental Justice: The Central Role of Research in Establishing a Credible Scientific Foundation for Informed Decision-Making” in Sexton, Ken and Anderson, Yolanda Banks, (Eds.), *Equity In Environmental Health Research Issues and Needs*. Princeton, N.J.: Princeton Scientific Publishing Company, Inc., 1993.

2.Lindsay (1994) points out the danger of applying cost-benefit analysis to problems associated with environmental quality because of the lack of suitable methods for quantifying the value of public goods. Although the contingency valuation method has been used for several years as a means of coping with this problem, he contends that it should not be used in situations related to environmental justice because the measurements derived are neither plausible nor reliable. Moreover, he contends, programs to protect the environment can and should be legislated through the political process. He notes: “...some critics regard the notion of placing value on the quality of the environment as unethical or immoral.” See Greg Lindsay. “Planning and Contingent Valuation: Some Observations from a Survey of Homeowners and Environmentalists” 1994, *Journal of Planning Education and Research*, 14:19-28.

3. Lober (1993) cites several studies, for example, that show that public perception of risk seems to be far out of proportion to the evidence supplied by scientific risk assessments which, in the case of most solid waste disposal facilities, often indicate extremely small health risks. An explanation for this is that perceptions of risk vary along many dimensions. If risks are new, not well known, not equitable, and have catastrophic potential, then public acceptance is likely to be lower than for risks which are older and with more familiar, more fairly imposed and less serious consequences. Lindell & Earl (1983) found that the public perceived risk gradients which varied by type of facility and with distance. Perceptions of risk also vary by social group, such as chemical engineers or environmentalists and by demographic characteristics, with younger respondents, women, and those with children under 18 having more concern about the potential negative effects of environmental wastes. Portney (1991) found that perception of health risk was the strongest determinant of attitudes towards hazardous waste facility siting. He also found that those most likely to oppose were female, of low income, of shorter residence time in the community and less knowledgeable about waste.
See: Douglas J. Lober. Beyond Self Interest: A Model of Public Attitudes Towards Waste Facility Siting. 1983. *Journal of Environmental Planning and Management*, 36:345-363.

4. Margaret Maxey, the bioethicist admonished us that those who are concerned about risk management and risk communication are confounded by whether the central ethical question is “how safe is safe enough?” She notes: “As some researchers have recently suggested, risk has mistakenly been dominated by engineering concerns. As a result, regulators not only reify risks as things “out there” in nature, but also calculate the probability of an adverse event and the magnitude of its consequences in such a way that common concerns of ordinary people have become eclipsed. Rather than probabilities multiplied by consequences, what ordinary people care about are trustworthy institutions, procedures to assure informed consent, and adequate compensation for harmful effects should a project fail.”