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# Ethnicity and variations in wildlife concern: exploring the socio-structural and socio-psychological bases of wildlife values

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## Abstract

With 78% of the American population residing in urban areas (Adams 1994), and mounting scientific evidence regarding the importance of wild plant and animal life for humans, practical measures along with strategic planning and management instruments need to be adopted by natural resource management agencies for efficiently and effectively protecting, conserving and reintroducing nature into urban areas (Lundberg 1998; Sukopp et al.1995; Emery 1986). Considering the significant growth of diverse minority populations (African-Americans, Hispanic-Americans and Asian Americans) in urban areas of the United States (Sessoms & Orthner 1992; Rep. Lewis 1991) and the growing use of urban wildlife areas by ethnic populations (Goldsmith 1994; Daniel 1991), the purpose of this paper is to develop a conceptual model to examine the socio-structural and socio-psychological construct of wildlife concern within ethnic populations, by employing environmental concern paradigms. In this paper, wildlife concern will be operationalized as wildlife relevant behavior influenced by environmental (including wildlife) attitude variables within the broader socio-cultural context (Stern et al.1995).

The literature on environmentalism that has accumulated over the last two decades can be divided into two major streams: 1) studies focused on sociodemographic factors associated with environmentalism and 2) studies of values, beliefs and other social psychological constructs related to environmentalism (Dietz et al. 1998). Review of the literature reveals a paucity of research about the links between social psychological correlates of environmentalism and wildlife concern to sociodemographic variables (Dietz et al. 1998), including ethnicity. Such research might demonstrate how environmental attitudes and wildlife concern are shaped by social context (in this case, ethnicity) and reveal some of the mechanisms by which sociodemographic variables influence environmentally responsible behavior and wildlife concern. The question to be asked is, "What accounts for racial and ethnic variations in environmental and wildlife concern?" In an attempt to answer this question, this paper will employ a modified version of the framework outlined by Stern, Dietz & Guagnano (1995). The proposed framework brings together the five relevant factors collectively identified in the "New Ecological Paradigm Scale," "Norm Activation Model," and the "NEP in social-psychological context": social structure and socialization; value orientations- biospheric-altruistic values, egoistic values, openness to change, traditional values; general worldview and ideology; specific attitudes and beliefs (includes general awareness of consequences); and behavioral indicators. The conceptual model developed through this paper may be utilized by wildlife planners, managers and developers, in urban areas with growing ethnic populations, as a tool for integrating the socio-structural and socio-psychological constructs of wildlife concern (among ethnic communities) within their resource policies and decisions.

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## INTRODUCTION

The development of towns and cities not only represent important forms of human coexistence, but also relationships between man and nature (Sukopp et al. 1995). Urban wildlife areas (parks, green belts around cities, along city streets and scattered tracts) operated by natural resource management agencies (e.g. the U.S. Department of Interior-National Park Service [NPS], Bureau of Land Management [BLM], U.S. Department of Agriculture-Forest Service, State Parks, U.S. Department of Transportation & other U.S. governmental bodies) provide sites for recreation, and provide habitat for wild plants and animals. They also protect and maintain water supplies, filter wastewater, enhance property values, beautify the landscape, abate noise, and cleanse the atmosphere (George 1982). Most importantly, these studies reveal that human interactions with the biophysical environment, including wildlife, can have direct therapeutic effects on the stresses of urbanization (Lundberg 1998; Katcher & Wilkins 1993; Ulrich 1993). Conservation, protection, and reintroduction of urban wildlife resources can support (and benefit) a diversity of wildlife species (Adams 1994) while providing personal, educational, environmental and economic benefits to urban dwellers (Emery 1986). With 78% of the American population residing in urban areas (Adams 1994), practical measures along with strategic planning and management instruments need to be adopted by natural resource management agencies for efficiently and effectively protecting, conserving and reintroducing nature into urban areas (Lundberg 1998; Sukopp, Numata & Huber, 1995; Emery 1986).

There is significant growth of diverse minority populations (African-Americans, Hispanic-Americans, and Asian Americans) in urban areas of the United States (Sessoms & Orthner 1992; Rep. Lewis 1991), and a growing use of urban wildlife areas by ethnic populations (Goldsmith 1994; Daniel 1991). The purpose of this paper is to develop a conceptual model to examine the socio-structural and socio-psychological construct of wildlife concern within ethnic populations, and by employing environmental concern paradigms. For the purpose of this paper, wildlife concern will be operationalized as wildlife-relevant behavior influenced by environmental (including wildlife) attitude variables within the broader socio-cultural context (Stern et al. 1995).

### **Ethnic Diversity in the United States**

The ethnic minority population of the US continues to increase (see Table 1) due to rising minority birth rates coupled with the influx of ethnic immi-

grants to America's cities, suburbs, and towns (Parrillo 1994). Based on present immigration trends, by the year 2050, 22% of the US population will be Hispanic and 10% will be Asian (US Bureau of the Census 1994). In 1996, there were 226 counties where Caucasians represented the minority (see Table 2), and the African-American, Hispanic, and Asian populations, together, represented the new minority-majority. According to county population forecasts, the greatest numbers of minorities will probably continue to be in are metropolitan areas (US Bureau of the Census 1997). Urban ethnic minority groups thus constitute an important and growing user segment of urban parks and forests. These parks and forests not only provide diverse opportunities for recreation, leisure, and cultural activities (Chicago Park District 1989; More 1985), but they also serve as alternative access routes to shop or work and connectors between neighborhoods. They foster diversity of social relationships in much the same way that they foster biological diversity among flora and fauna (Shafer and Floyd 1997). To better manage urban forests and parks, a heightened understanding of the values, attitudes, and behaviors of the ethnic minorities they serve is important.

For legislators, biologists, developers, regional planners, and others to make sound decisions concerning the research and management of wildlife in urban environment, keen knowledge about the preferences and attitudes that urbanites (including under-represented communities) hold toward wildlife and the environment, in general, is quintessential (George 1982).

### **Integrating Multiculturalism in Urban Forests and Parks**

Development of effective urban forestry programs requires intensified efforts by urban forestry and park programs to meet the needs and interests of America's growing multi-cultural, diverse ethnic minority communities (NUCFAC Mission Statement). Furthermore, cultivation of public understanding and appreciation of the economic, environmental, social, and psychological benefits of maintaining and managing urban trees, wildlife, community forests and related resources within ethnic minority communities is essential. This cultivation leads to the development of effective, self-sustaining municipal and volunteer urban and community forestry programs in urban areas with high ethnic minority populations.

As part of a long-term plan for meeting public needs and building healthy urban forestry and park programs, it is important to assess and address the perceptions, values, and needs of our nation's growing multi-cultural populations with respect to urban wildlife and its management (NUCFAC Action Plan). Forestry programs can effectively meet existing needs

of urban populations by recognizing and incorporating the diverse set of values, perceptions and needs of ethnic minority communities regarding urban trees and wildlife. It is important to involve ethnic minority communities in planning, decision making, and implementation of urban forestry and park initiatives (Grove et al. 1993).

Local community involvement and participation in urban forestry and park projects is important for the development and preservation of healthy urban and community forests (Talbot 1993). Existing studies suggest that trees planted in community-sponsored tree plantings have better survival rates than those planted without community participation (Grove et al. 1993). Educating ethnic minority populations' about the importance and value of urban and community forests and programs, and meeting needs in this area, should lead to increased feelings of ownership and responsibility for urban trees, wildlife, community forests and related resources (Sklar and Ames 1985).

Community involvement in the protection and expansion of forests and parks in urban areas requires additional research. Forestry program planners and managers need to better understand the relationship between urban forestry and park resources and ethnic minority populations: What are ethnic minority populations' values and perceptions of the environment? Of the trees and wildlife in their cities and towns? Are there underlying differences among and within ethnic minority communities that could have implications for planners and managers trying to meet the needs of an increasingly diverse clientele (Godbey and Jeong 1999; Gobster and Delgado 1993)? What can be learned to help managers understand more clearly the meaning of the urban forests to ethnic minority citizens (Westphal 1993)? What kinds of educational programs should be developed to reach ethnic minority communities with an urban and community forestry message?

Past research has shown that ethnic minority groups, in general, differ in their urban park and open space landscape, and natural setting preferences (Zhang and Gobster 1998; Talbot and Kaplan 1993; Kaplan and Talbot 1988). They differ in park needs and interests (Zhang and Gobster 1998; Gobster and Delgado 1993), urban park use and leisure participation (Godbey and Jeong 1999; Gobster 1998; Dwyer 1993; Hutchinson 1993; Taylor 1993), recreational experiences (Carr and Williams 1993; Keefe and Padilla 1987), park visitation patterns and attitudes (Carr and Chavez 1993), and environmental attitudes (Floyd and Noe 1993; Noe and Snow 1990). Less seems to be understood about the perceptions, values and needs of the largest, fastest-growing segments within urban Hispanic (Cuban, Mexican, Puerto Rican, Dominican, etc.) and Asian American (Chinese, Korean, Japanese, Filipino, etc.) populations

(Hutchinson 1993), with respect to urban forests, parks, trees, wildlife and their management.

Prior studies have also failed to investigate social demographic and social psychological differences. Intra-ethnic and inter-regional variations in the perceptions, values, and needs of ethnic minority communities with respect to urban and community forests, parks, trees, wildlife and their management needs to be studied also. Accordingly, the following section presents a conceptual model for exploring urban and community forestry-related environmental and wildlife attitudes and concerns, and urban recreation characteristics among ethnic minority communities residing in urban and community areas in the U.S., based on their social demographic and social psychological characteristics.

### **Utilizing Environmental Concern Models for Understanding Wildlife Concern Among Ethnic Populations**

The literature on environmentalism that has accumulated over the last 2 decades can be divided into 2 major categories: 1) studies focused on sociodemographic factors associated with environmentalism, and 2) studies of values, beliefs, and other social psychological constructs related to environmentalism (Dietz et al. 1998). Researchers have linked indicators of environmental concern to standard social-structural (sociodemographic) categories such as age (Mohai & Twight 1987), gender (Stern et al. 1993; Mohai 1992), race/ethnicity (Caro & Ewert 1995; Mohai, 1990), and religion (Shaiko 1987; Kanagy & Willits 1993). Numerous social scientists (Schultz & Zelezny 1998; Steel 1996; Stern et al. 1995; Dunlap et al. 1993; Jones & Dunlap 1992; Black et al. 1985; Van Liere & Dunlap 1980) have examined the associations between environmentalism and social psychological factors. These factors include attitudes, beliefs, values, and worldviews (Dunlap et al 1992; Dunlap & Van Liere 1978; Schwartz 1977; Stern et al. 1995).

Review of the literature reveals a paucity of research about the links between social psychological correlates of environmentalism and wildlife concern to sociodemographic variables (Dietz et al. 1998), including ethnicity. Such research might demonstrate how environmental attitudes and wildlife concern are shaped by social context (in this case, ethnicity) and reveal some of the mechanisms by which sociodemographic variables influence environmentally responsible behavior and wildlife concern. Ethnicity may potentially influence wildlife concern through indirect effects on beliefs, attitudes, and values. Thus, environmentalism and wildlife concern among ethnic communities may be a joint product of social structure, socialization, and social psychological processes. There are pioneer studies

that have attempted to understand the constructs of public environmental concern. Those that have gained considerable popularity in academic circles include: the "New Ecological Paradigm Scale" commonly known as the NEP scale (Dunlap et al. 1992; Dunlap & Van Liere 1978), the "Norm Activation Model" or "Theory of Altruism" (Schwartz 1977), and the "NEP in social-psychological context" framework (Stern et al. 1995). These theories identify several key factors that influence environmental concern and predict pro-environmental behavior. The factors identified and discussed in these theories are important. However, the theories lack the cultural component and are not adequate to answer questions, such as: what accounts for racial and ethnic variations in environmental and wildlife concern? In an attempt to answer this question, this paper will employ a modified version of the framework outlined by Stern et al. (1995). The proposed framework brings together the relevant factors collectively identified in the "New Ecological Paradigm Scale," "Norm Activation Model," and the "NEP in social-psychological context". Factors relating to wildlife values are ingrained within the concept of environmental concern.

The proposed model (see Figure 1) includes 5 components as follows -

I. Social Demographic Characteristics: This category includes items relating to ancestry, generational status within the U.S., length of residence within the U.S., education, political affiliation, religion, etc.

II. Social Psychological Characteristics: Extracted from the multi-culturally validated instrument developed by Schwartz (1992), this category includes items identifying the importance attributed towards value orientations such as equality, unity with nature, protecting the environment, welfare, physical and mental health, etc.

III. Attitudes towards urban forestry and wildlife: A modified version of the NEP scale developed by Dunlap et al (1992) will be utilized to identify attitudes toward sustainable urban forestry and park policies. Examples include the importance of urban forests and wildlife for the well-being of individual human health and welfare, need for preserving existing tree cover and wildlife in urban areas for the benefit of America's communities, infrastructural significance of urban forests, trees, wildlife, etc.

IV. Urban park use and related outdoor recreation characteristics: This category includes outdoor recreation patterns within urban forests and parks, types of recreation activities engaged in within urban forests and parks, the level of satisfaction with recreational facilities offered by urban forests and parks, and importance of urban forests and parks for outdoor recreation.

V. Behavioral Intentions: Adapted from Stern, Dietz, and Guagnano's (1995) validated instrument, this category assesses willingness towards involvement in urban and community forestry- and urban parks-related programs through collective political action, tax payment, volunteerism, fund-raising, etc.

The proposed model can be utilized by urban forestry and park researchers for the following purposes: identifying social demographic and social psychological predictors of attitudes toward urban and community forestry, parks and wildlife of ethnic minority communities; and identifying outdoor recreation participation characteristics of ethnic minority communities. Also, identifying behavioral intentions of ethnic minorities in regard to urban and community forestry, parks and wildlife; examining regional variation in regard to the previous through urban area comparisons; developing outreach environmental education frameworks for educating ethnic minority communities regarding the importance and value of urban forestry, parks and wildlife.

## DISCUSSION

Currently, urban and metropolitan areas in the United States consist of diverse ethnic communities, and these communities continue to expand due to increasing growth rates and the influx of immigrants. The conceptual model developed through this paper may be utilized by wildlife planners, managers and developers, in urban areas with growing ethnic populations, as a tool for integrating the socio-structural and socio-psychological constructs of wildlife concern (among ethnic communities) within their resource policies and decisions.

Understanding the social demographic and social psychological bases of urban and community forestry and wildlife attitudes, and urban parks recreation characteristics of the fastest-growing urban ethnic minority populations will assist urban forestry and park agencies in developing and implementing effective components of strategies. These strategies are geared toward increasing the number of community groups actively involved in efforts to manage and improve urban forests and parks. Managers of urban and community forests and parks across the U.S. can better identify and invest in actions that will keep their programs and efforts congruent with changing citizen values and needs.

Both empirical and qualitative studies based upon the proposed conceptual model will enable urban forestry and park agencies in making sound, scientific decisions regarding the protection and improvement of the urban environment in terms of funding, promoting, and operating urban and community forestry facilities and programs. Educational frame-



works developed through such studies will help guide urban forestry and park agencies in the development of outreach programs that educate ethnic minority communities. Such outreach programs will cultivate partnerships and support volunteerism from ethnic minority communities and organizations. Overall, the conceptual framework presented in this paper furnishes groundwork for initiating studies focusing on environmental concern and urban wildlife values, and outdoor recreation characteristics of growing urban ethnic minority communities.

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**Table 1: Top-Five Metropolitan Areas Ranked By Numerical Increase in Hispanics and Asians**

Rank	Metropolitan area	Numerical gain 1990-1996	1996 population
<b><u>HISPANIC</u></b>			
1	Los Angeles-Riverside- Orange County, CA CMSA	1,028,141	5,850,261
2	New York -Northern New Jersey-Long Island, NY- NJ-CT-PA CMSA	447,867	3,325,071
3	San Fransisco-Oakland- San Jose, CA CMSA	250,747	1,228,470
4	Houston-Galveston- Brazoria, TX CMSA	222,144	1,004,935
5	Chicago-Gary-Kenosha, IL-IN-WI CMSA	221,308	1,124,558



ASIAN

1	Los Angeles-Riverside- Orange County, CA CMSA	305,860	1,712,608
2	New York -Northern New Jersey-Long Island, NY- NJ-CT-PA CMSA	294,485	1,222,350
3	San Francisco-Oakland- San Jose, CA CMSA	240,969	1,197,820
4	Washington-Baltimore, DC-MD-VA-WV CMSA	87,208	341,941
5	Chicago-Gary-Kenosha, IL-IN-WI CMSA	70,966	339,558

**Note: Metropolitan areas refer to CMSAs, MSAs, and NECMAs (in New England) as defined by the Office of Management and Budget. Source: William H. Frey (1997), In American Demographics: Diversity in America, Projections for Minority, Black, Hispanic American, and Asian American Populations to the Year 2001**

**Table 2 New Minority-Majority Counties within Metropolitan Areas by County and Metro, 1996 Population in Thousands, Percent White, 1990 and 1996, and Minority Distribution, 1996).**

County	Metropolitan Area	1996 Population	Percent White			1996 Percent Minority		
			1990	1996	Black	Hispanic	Asian	Eskimo
Philadelphia County, PA	Philadelphia Wilmington-Atlantic City, PA-NJ-DE-MD CMSA	1,478	52.0%	48.1%	41.5%	6.8%	3.4%	0.2%
Alameda County, CA	San Francisco-Oakland-San Jose, CA CMSA	1,328	53.0%	47.6%	17.2%	17.1%	17.6%	0.5%
Dekalb County, GA	Atlanta, GA MSA	590	51.9%	46.8%	44.7%	4.1%	4.2%	0.2%
Fort Bend County, TX	Houston-Galveston-Brazoria, TX CMSA	307	53.7%	49.2%	20.3%	22.2%	8.1%	0.2%
Merced County, CA	Merced, CA MSA	192	54.1%	47.6%	4.2%	38.3%	9.4%	0.6%

**Note: Metropolitan Areas listed are for new minority-majority counties that are within a metropolitan area**  
**Source: William H. Frey (1997), In American Demographics: Diversity in America, Projections for Minority, Black, Hispanic American, and Asian American Populations to the Year 2001**

**Table 3 Conceptual Model for Exploring Urban and Community Forestry-Related Environmental and Wildlife Attitudes and Concerns; and Urban Recreation Characteristics Among Ethnic Minority Communities Residing in Urban and Community Areas in the US.**

