Theme 5: New Ideas in Built Environment Research

The Role Of Place Attachment And Sense Of Place In Community Development And Participation.

Symposium Chairs: Manzo, Lynne (City University of New York, NY), and Perkins, Douglas D. (Vanderbilt University, TN).

Place attachments, perceptions, memories, preferences, and cultural meanings are a critical part of person-environment transactional phenomena that foster the development of community physical, social, political (organizations), and economic environments. People are motivated to seek, stay in, protect, and improve places they care about and that are meaningful to them in some way. Discussion will not focus so much on a "sense of place" that is inherent in the physical environment (i.e. an architectural or geographic aesthetic), but rather on understanding how neighborhood spaces can motivate ordinary residents to act collectively to preserve or improve their community. City and regional planners may understand places in every objective sense and work well with local government and leaders of larger community organizations, but they do not always understand residents' subjective sense of, and attachment to, place. Further, their level of analysis of community places is often too large to encourage, or even connect with, small-scale, grass-roots community organizations (e.g. block and neighborhood associations). This symposium will present and integrate theories, research, and action, both planning and grassroots organizing, to aid our understanding of how particular place preferences, perceptions, and emotional connections to place relate to community social cohesion and organized participation and community development or historic preservation strategies. This session is designed to follow up on the 2000 EDRA Working Group "Community Psychology, Community Development, Environmental Design Research: Opportunities for Interdisciplinary and Organizational Collaboration", which was part of the ongoing inter-organizational collaborative discussions between EDRA members, the Society for Community Research and Action (SCRA), and the Community Development Society (CDS). The session format will include 15-minute presentation, a 10-minute commentary by the discussant, and 20 minutes of informal audience-generated discussion. Presenters include:

Lynne Manzo (City University of New York, NY),
Douglas D. Perkins (Vanderbilt University, TN),
Courtney Larsen (University of Utah, UT), Susan Saegert (City University of New York, NY),
Gerda Speller (University of Surrey, UK),
Nancy Chapman (Portland State University, OR).

Neighborhood/community, planning/development, participation/political action, behavior change, place attachment.

A Sense Of Place And Place Attachment: Redefining Citizen Participation And Community Action.

Manzo, Lynne (City University of New York, NY), and Perkins, Douglas (Vanderbilt University, TN).

This paper seeks to draw critical connections between the rich body of theory and research in the environment and behavior field on people's emotional connections to place with theory and practice of community organizing and community-based action projects. Each of these areas of scholarly work has much to offer the other, yet very few links have been made between them. Typically, place attachment has focused on individual feelings and experiences in places, and has not placed these bonds in a larger socio-political context. Conversely, work on community participation and organizing often takes a macro-structural approach, overlooking the individual's emotional connections to place. Yet, it is these attachments to place that can form the foundation for effective community participation and action. In particular, the local neighborhood, and people's attachments to it, can provide the basis for communication and cooperative action among different groups, as it is literally and figuratively the common ground upon which diverse people can begin to work toward positive community change. This paper demonstrates that place attachment and rootedness in the community has formed the basis of some of the most effective local organizing efforts documented. Examples of community-based projects grounded in environment-behavior research will be discussed.

Psychological Predictors Of Neighborhood Revitalization: A Sense Of Place In A Changing Community.

Larsen, Courtney (University of Utah, UT), Perkins, Douglas D. (Vanderbilt University, TN), and Brown, Barbara B. (University of Utah, UT).

Empirical study of the effects of place-based psychological ties (place pride and attachment, sense of community, community satisfaction, community confidence) and community-focused behaviors (neighboring, citizen participation), and a neighborhood revitalization project, on incumbent upgrading in two adjacent, declining urban neighborhoods in Salt Lake City. The revitalization project involved subsidized private development of 84 middle-income homes in one of the neighborhoods. The new homes and lots are significantly larger than the surrounding homes. Past studies found revitalization spillover effects to be either negligible or geographically limited. But they, and most revitalization projects themselves, have ignored place-based psychological ties to the community. Data were collected on 60 street blocks in two waves: during subdivision planning and construction (1993-95; N=315) and three years post-completion (1998-99; N=467). Data include: (1) an objective environmental inventory of all selected blocks and individual properties, (2) a subjective resident survey of community attitudes and self-reported home repairs and improvements, and (3) a city archive of 1993-2000 building permits. Proximity from each home to the new subdivision is measured both psychologically (survey) and in aerial distance (GIS). GIS maps will also be used in an exploratory analysis of spatial patterns in the data. Results of this intervention and study may help guide future neighborhood revitalization programs and research.

Organizing, Ownership And The Right To A Home Place.

Saegert, Susan (City University of New York, NY).

This paper will use a case study of neighborhood and tenant organizing in a two-block area in the Bronx to develop the connection between place theories and neighborhood change. The initiative supported residents in organizing to make claims on the legal owners and public agencies responsible for their neighborhood and move toward a sense of social ownership. Tenant organizing for cooperative ownership and the engagement of local property owners (including public institutions like schools) highlighted the critical role of mediating institutions for channeling the attachment and actions of neighborhood residents into legitimate claims on their home place. Physical char-

acteristics of multi-family buildings and the local urban geography also supported change efforts. The case study illustrates how a community organization can successfully engage residents, leverage their involvement to make claims on public and private institutions, and thereby stabilize the neighborhood and improve the quality of life. Sense of community, place attachment, place identity and territoriality are resources for neighborhoods that require cultivation and institutionalization to withstand social and economic forces that can lead to displacement through property abandonment or gentrification.

The Re-Siting Of A Redundant Coal Mining Community.

Speller, Gerda M. (University of Surrey, Guildford, UK).

The concern of this paper is with residents' understanding of and responses to the mostly unforeseen cultural changes within their community which occurred after their relocation from traditional late 19th century terraced housing to new semi-detached housing. Empirical findings suggest that the impact of the relocation included a change in cultural patterns at spatial, social, psychological and economic levels. In the old village, the space outside houses was mainly public space whereas much of the new outside space consists of private front and back gardens, distancing contact, resulting in increased privacy. This privacy is welcomed by many but felt as isolation by others. The environment appears to have imposed new standards in collective behavior, indicating new values and new priorities. The former cohesive identity has been diminished and replaced by an emphasis on individual elements of identity. Fewer opportunities for 'casual encounters' (Cooper-Marcus & Sarkissan, 1986) and passive interaction in the new village have reduced the level of connectedness to others. The findings highlight the crucial importance of the spatial environment and illustrate the essentially dynamic relationship between person/group and place.

The Real And The Production Of Meaning.

Symposium Chair: Franck, Karen (New Jersey Institute of Technology, New York).

This symposium, following the EDRA 2001 symposium "Is this a Real Place?", takes a broader look at questions of real and unreal, authentic and fake and their relation to the production and reproduction of meaning. The first presentation, by Kim Dovey, continues the theme of the creation of places from the first symposium, addressing two elements that are linked

to authenticity - authority and authorship. A particular kind of place, museum exhibits, is the topic of the second presentation by Stephan Klein who analyses them as the producers and not simply the portrayers of truths, showing how they teach us what to believe and to feel. Finally, the presentation by Donald Jacot explores the meaning of reality in realists, photorealist, and hyperrealists painting using his own work as examples and suggesting how the paintings may give us a greater appreciation of our surroundings, linking us to the real in a different way. We live in a world where the distinction between what is real and what is not, what is authentic and what is fake is increasingly hard to make. That seems to be a condition of our time. We are not intending to determine the prescriptive criteria for creating authentic communities or real experiences. We are instead, with the cases in the first symposium, exploring the characteristics of places that seem for whatever reason less real than others and the concepts that help explain the importance of those characteristics. And we are exploring how the creation, arrangement, and display of artifacts in exhibits and paintings produce meaning and, in so doing, a kind of reality. Organizer:

Karen A. Franck (New Jersey Institute of Technology, NJ). Presenters:

Kim Dovey (University of Melbourne, Australia),

Stephan Klein (Pratt Institute, NY),

Donald Jacot (San Francisco, CA). Discussants:

Quentin Stevens (University of Melbourne, Victoria, Australia),

Daniel Levi (Cal Poly, CA),

Jan Teklenburg (Eindhoven University of Technology, The Netherlands).

Authenticity Authority Authorship.
Dovey, Kim (University of Melbourne, Victoria, Australia).

What are we to make of the concept of authenticity in a world where placemaking is increasingly conducted through representation, hyperreality and virtuality? Authenticity is a dangerous term because it claims deep roots in an era when all such claims are suspect. Authenticity is deeply connected to authority and to processes of authorization. The discourse of authenticity is a legitimating discourse, which sets up certain oppositions (process/product, surface/depth, perception/action) that can be usefully deconstructed. While some would condemn such discourse as essentializing, questions of authenticity become more pertinent in a world dominated by the authority of the 'surface'. This paper will explore this connection of authenticity to authority, but also to questions of authorship - the prac-

tices by which places are created and attributed. Architecture, planning, theory, meaning.

Realing Them In: Museums, Visitors, And The Production Of Truths.
Klein, Stephan Marc (Pratt Institute, Brooklyn, NY).

Last year museums in the U.S. received over 800 million visits, more than twice the total attendance at all major professional sporting events! Museum professionals in accounting for this continually rising popularity often claim that in an age of burgeoning virtuality, museums provide visitors with opportunities for contact with the real. But do museums display truth or do they produce Truths? I will argue that museums are more than just sites for aesthetic and educational display of objects; they are agents in the on-going, contended process of cultural production and reproduction. Much of what we believe about cultures, our own and others', comes from the stories museum exhibitions tell. Museums and their exhibitions influence our sense of how our worlds come to have meaning, what and who to value or disparage, what merits interest, what to ignore. They affect our feelings - about ourselves and others. I will first discuss how museums produce and reproduce social memory metonymically through the display of objects, then I will describe an exhibition designed and built by students in a course I teach that investigated and critiqued the roles that museums play in the creation and validation of memory and knowledge.

What Is Real?
Jacot, Donald (San Francisco, CA).

In this presentation I will demonstrate, through slides of my photorealist oil paintings, my evolution from a faithful landscape portraitist into a constructor of fictional still-life environments. And I will explore the meaning of reality in realist, photorealist and hyperrealist painting. When oil paintings are done with the aid of photographs, is this a violation of our sense of fairness about depictions of reality or can it lead to an enhancement of our visual sense, which improves our awareness? When alterations are made to the subject matter of photographs used for the painting, is this again an impingement upon our certainty of what is real? Or could it be seen as license to guide our perception into new capacities for hyper-awareness and an elevated appreciation of what is around us? My paintings successively telescope from a macro view of the grand urban landscape about us into a subterranean closeup world of small, beautiful objects found in shop windows. When objects are linked and composed into themes by their arbitrary or intuitive selec-

tion and placement in a painting, is this mere artifice of 'reality' or should it be thought of as a creative kind of reality of the mind, sometimes whimsical, sometimes serious, which could be no less plausible, no less fantastic than what 'really' takes place?

The Walled City And Country Seat: Real Places In Dutch Suburbia?
Teklenburg, Jan A.F. (Eindhoven University of Technology, Eindhoven).

Dutch planning policy is aimed at preserving as much open space as possible. For that reason new housing developments are restricted to areas within or adjacent to the existing city. Although the implementation of the policy seems successful and houses in the developments adjacent to the city are in high demand, complaints are made about the rather dreary atmosphere of these new developments. It seems hard to turn them into, or experience them as, real places. This paper analyzes a very special example of Dutch planning policy: the case of Brandevoort in the city of Helmond. The city government, developers and architects have chosen very distinctive themes to make this neighborhood stand out in the landscape of mediocre suburbia. "The walled city" combined with "the country seat" are intended to create a southern-Dutch village atmosphere which, according to the brochures, will be comparable to southern-Dutch medieval cities (that is, cities that have preserved large parts of their medieval cores). The questions asked in this paper are: do these themes create real places, can we rely on historical themes to create real places or does the 'real' in a place refer to something other than traditional architecture and historic layout of streets and squares.

San Luis Obispo: The Best Downtown West Of The Mississippi?
Levi, Daniel (Cal Poly, San Luis Obispo, CA).

San Luis Obispo, California has been designated as the best downtown by several travel and lifestyle magazines. This honor is the result of an over 30 year effort to make the downtown more attractive to tourists. This effort has come at a cost to the residents - the City is becoming less of a real place to live. The downtown is filled with historic and pseudo-historic buildings that are difficult to tell apart. The focal point is a 200 year old mission that looks perfect, because it was renovated to look right rather than to be historically accurate. Although murals are not allowed because they appear too commercial, bubblegum alley remains as a 1950s tourist attraction. The downtown creates a wonderful shopping experience for visitors, but residents must leave town to buy hardware, appliances, and regular clothes. It contains the largest farmer's market in California, but most residents buy produce at smaller markets not geared to tourists. During special events, teenagers hang out at certain "no hassle" blocks so that they will not be seen by the tourists. The downtown churches are forbidden to feed the homeless, who have services provided to them at the edge of town.

Play Explores The Reality Of A Postmodern Landscape.
Stevens, Quentin (University of Melbourne, Australia), and Dovey, Kim (University of Melbourne, Australia).

Postmodern landscapes of desire, designed with a theme park mentality, often aim to produce places of urban spectacle, wherein spontaneous and playful urban life is simulated, choreographed and passively consumed. Such goals have largely driven the redevelopment of the urban riverfront of Melbourne, Australia during the 1990s. This transformation has produced a good deal of contrived spectacle and choreographed street theatre and has attached high densities of people to the riverfront promenade. Yet it has also created conditions for many less structured, less instrumental forms of play. These forms of play often depend upon the larger urban spectacle for their opportunities and audiences. Yet they often fill the interstitial spaces and times where and when that spectacle is less intense. In other cases, play arises as new and unexpected uses of the spectacular landscape, which defy all efforts to capture and commodify desire. The spontaneity, creativity and risk of such play makes this place more real because it cuts through the prepackaged spectacle, and creates a closer experience of and engagement with the space and the other people within it.

Is This A Real Place?
Symposium Chair: Franck, Karen (New Jersey Institute of Technology, NJ).

As the first in a pair of EDRA 2001 symposia addressing the real and the unreal, "Is This A Real Place?" focuses on three existing communities, in the Netherlands, the U.S. and Australia.. The three places, in their design, management and patterns of use, present excellent material for discussing questions of what makes a place real, or unreal. In each community a combination of design and management is self-consciously directed at creating a particular surface appearance. In each case this emphasis on appearance, the meanings that appearance alone are expected to generate, and the discouragement of spontaneity all help to create more of a simulated place than a real one. The design and ongoing planning and control of two communi-

ties - Brandevoort, Holland and San Luis Obispo, California - are based on the explicit adoption of historical referents to create particular identities. Brandevort created its historically - based appearance from scratch (to suggest a southern Dutch village); Sal Luis Obispo already had 200-year-ole historic buildings in place. With new buildings it attempts to imitate the historic ones and through planning controls, seeks to cater to tourists and not its own residents, forcing them to fulfill practical needs of daily life elsewhere. In Melbourne, Australia, it is the redeveloped urban riverfront that is intended to attract visitors to its theme park atmosphere where they can observe planned entertainment events. Here, however, the real breaks through in spontaneous and unpredictable acts of play. While appearance is often the explicit basis of design and planning decisions, the concern with appearance alone, contrived meanings and, in some cases, the discouragement or banishment of certain activities make these places unusual, providing good cases for discussion in this symposium and the following one, "The Real and the Production of Meaning". (Presenters at the second symposium will serve as discussants in this one.) Organizer:

Karen Franck (New Jersey Institute of Technology, NJ).
Presenters include:
Quentin Stevens (University of Melbourne, Victoria, Australia),
Jan A.F. Teklenburg (Eindhoven University of Technology, The Netherlands),
Daniel Levi (Cal Poly, San Luis Obispo, CA). Discussants include:
Kim Dovey (University of Melbourne, Australia),
Don Jacot (San Francisco, CA),
Stephan Klein (Pratt Institute, NY).

Ethical Concerns In Environmental Research And Practice.

Working Group Chairs: Rivlin, Leanne G. (City University of New York), Kirby, Andrew (City University of New York).

The nature of environmental research and practice opens up many issues that go beyond the professional codes and institutional review board regulations. Most of our work is grounded in the field, addressing the everyday lives of people across different cultures. We use observations of ongoing activities and qualitative approaches posing open-ended questions that lead respondents in their own directions for answers. Some of us also are involved in participatory research and politically grounded activities. These realities offer some basis for the problems we face. Often there is no

228

recourse or mechanism to help those facing troubling ethical and moral questions. This working group offers one approach to dealing with the ethical dilemmas, providing an opportunity to discuss these concerns with people who share our interests. Beginning with examples from the working group organizers, we then will turn to those attending for their experiences. The goal is to use the discussion to search for possible directions to take. We also will address the effectiveness of this approach and whether it should be a regular offering for future EDRA conferences. This opportunity to share is open to all EDRA meeting attendees.

Environmental Transitions.

Minami, Hirofumi (Kyushu University, Japan),

The term "Environmental Transitions" is used here to refer to a variety of transformations of the physical environments that form the settings of people's lives, as well as to the forces that are altering the ways in which people relate to their environments. We focus particularly on certain contextual circumstances that are challenging and forcing a rethinking of people-environment interrelationships. One kind of environmental transition, disasters, natural and human caused, have wrought stark and sudden changes in the environments of people. Resource restrictions, magnitude of destruction, spread of disease, sheer numbers of people affected, and the need for speedy action have guided efforts at amelioration of these conditions. Reconstruction efforts have focused on quickly building some form of shelter. Another type is less sudden. Cultures' relationships with the environment are being transformed by the introduction of ideas, construction techniques, and designers from other places. Rapid economic changes in many developing countries are requiring the introduction of new building types and transformation of existing ones. A third type is the environmental transition brought by the change in stage of life. A fourth kind of transformation is driven by the introduction of technology, such as computers, and use of the internet. A parallel and new world of virtual environments has emerged to add new dimensions to how people relate to their physical environments. These environmental transitions and their effects are not well understood by environmental design researchers. They have led to questioning of how our knowledge of people-environment relationships is being altered by these contextual changes. Nor are environmental designers and environmental design researchers ready to offer criteria for selection of appropriate solutions. This workshop is intended to be a discussion of issues related to environmental design research

surfaced by these different and disparate considerations. The discussion will highlight issues related to environmental transitions and people's responses to these transitions as well as questions important for environmental design researchers to address. Questions of methodology and new strategies for conceptualizing and managing environmental transitions also will be addressed in this workshop. Offering different conceptualizations of environmental transitions and their management will be a panel of international researchers and practitioners. Presenters:

Dr. Seymour Wapner (Clarke University, Worcester),
Dr. Daniel Stokols (University of California, CA),
Dr. Masami Kobayashi (Kyoto University, Japan),
Dr. Semra Aydinli (Istanbul Technical University, Turkey),
Dr. Aytanga Dener (Istanbul Technical University, Turkey),
Dr. Hirofumi Minami (Kyushu University, Japan).

Identity Of Place

Local Identity Of Place: Towards A Working Model.
Kim, Joongsub (Lawrence Technological University, MI).
There have been growing concerns that local communities and towns are losing their identity in the midst of globalization and urbanization. It is, however, difficult to find research that defines principles of local identity of place in the design field. On the other hand, social scientists have long studied place identity from the perspective of personal identity or self-identity. This paper attempts to develop a working model of place and its identity. The goal is to understand views of the design and social science fields on local identity of place, by drawing on materials from the literature. Although both fields focus on different aspects of local identity, their identity of place models concentrate on five dimensions: continuity, uniqueness, significance, compatibility, and cohesiveness. While the design field focuses on a physical identity construct, relying on physical attributes of local identity, the social science field focuses on a self-identity construct, emphasizing personal-social attributes of place identity. Both models have weaknesses, since they focus on limited aspects of identity of place. Both identity constructs can compliment each other to achieve a greater understanding of identity of place. Thus, by combining the major strengths of both models, I propose an alternative model based on group identity or collective attributes of identity that result from a community-based place making process. The model underwent pre-tests but requires further empirical tests for improvement.

Local Identity Of Place: Case Studies.
Kim, Joongsub (Lawrence Technological University, MI).
In the design field, although there have been many debates on the loss of identity in the built environment, it is rare to find an empirically-based research that investigates what constitutes local identity of place. The primary goal of this study is, through case studies, to test an alternative identity of place model proposed by this author. The two major hypotheses that have motivated this study are the following. Identity of place in the local environment includes both physical and personal-social attributes. Uniqueness, continuity, significance, compatibility, and cohesiveness constitute elements or characteristics that imbue the built environment with identity of place. In order to investigate these hypotheses, several communities in MI and NY were studied. A survey-questionnaire focusing on local residents was used. The survey findings confirmed the hypotheses. Although this study is limited, it is a useful step for further research in the field of local identity.

The Meaning And Perception Of School Buildings.
Pasalar, Celen (North Carolina State University, NC).
This study explores how people interpret and perceive the physical environment. It also demonstrates how specific meanings are attached to buildings and how these meanings influence people's judgments. The focus of this research is school buildings since few research studies have concentrated on issues related to imageability and symbolic meaning. The survey included eight photographic images representing different architectural styles of school buildings, a semantic differential rating scale, and questions related to familiarity, friendliness, and appropriateness for future education systems. The sample group consisted of students from the School of Education. Results were analyzed by using descriptive statistics. Preferred school building images were described as dynamic, complex, attractive, interesting. Disliked images were static, common, boring, simple, and unattractive. In general, high-tech and post-modern school building images, which were not very familiar, were considered more appropriate for providing a variety of spaces to accommodate different programs and facilities than traditional school building types. All subjects disliked modern school buildings. Results from this empirical study in environmental perception can be influential in expanding the people's vision of building images

beyond their everyday experiences with school buildings.

Moving Through Place: A Studio Project.
Wasserman, Judith (University of Georgia, GA).

Movement patterns dictate the shape of the built environment. At times grand parades shaped estates such as Versailles. And at other times dance choreography was consciously used to guide spatial decisions, such as Halprin's Lovejoy Plaza. To test the effectiveness of choreography in design, I ran a process oriented studio based on ideas of movement and landscape. The setting for the design was a children's zoo within the larger context of the Phoenix Zoo. The purpose was to teach children about other animals through an experiential adventure. The project progressed through five steps: 1) Reading about modern dance and dance choreography, 2) Selecting an animal to design an exhibit about, 3) Inventing a notational system and notating the animals movements, 4) Creating a "cube of motion" - a little black box which was a three-dimensional interpretation of the motion, 5) And finally, applying the abstract pattern to an actual site. This work served as a starting point to analyze the interconnection of movement, ritual and the design of landscapes. Through this process, students developed new techniques for invigorating place.

Familiarity & Desirability, A Strong Causality?
Hu, Jianxin (North Carolina State University, NC).

A Cross-Cultural Study Of People's Perception And Evaluation Of House Images. A cross-cultural experiment was conducted between Chinese and American students, focusing on the process underlying people's perception and evaluation of traditional housing images from the countries all over the world. The findings of the experiment have modified Purcell's "Difference Model", which argues that people's evaluation is the function of their perception of familiarity to house images. According to the results of the present study, the correlation between the level of familiarity and people's evaluation of housing images is not as strong as defined by "Difference Model" if the variable perceived economic status is included. Instead, when people evaluate house images from different cultures, perception of economic status is much more important than familiarity. The present study presents a more comprehensive model which emphasizes the importance of perceived economic status. It was also shown in the study that people are not necessarily more familiar with the images within or geographically close to their culture than the ones from different cultures. The dramatic increase of information access in this new age has made the role of geographic location less important than before.

Ikata: Mode Of Being In Places Of People As A Resource To Recognize Environment.
Suzuki, Takeshi (Osaka University, Japan).

When a person takes a position in a public space, whether he or she desires it or not, many relations and modes are generated around him or her. For these modes and relations, I defined the term "ikata" in Japanese, and "mode of being in places" in English. Ikata is a concept and language to describe and analyze and design "a person in a place or in a scene". Through field observations and examination of photo and video data of urban public spaces in Tokyo, Taipei, Paris, New York, several types of mode of being in places such as Placing oneself in public, Happen to be present, Each in one's own way, Standstill, Being in urban structure, Come and go, were obtained. Based on analysis of relations and structures of these types, I argue that persons can recognize environment through other person's mode of being in places, in other words, Ikata of other person is an important resource to recognize spatial and social environment.

Methods For Studying Movement In Designed Space.
Workshop Chair: Benne, Marcie (Georgia Institute of Technology, GA), and Zimring, Craig (Georgia Institute of Technology, GA).

The purpose of this workshop is to offer instruction on several methods that can be used in the study of human movement. Overviews of each method will include the method's history in the study of human movement, the method's advantages and disadvantages, and basic information for implementing the method. Two outcomes are expected for this workshop. First, individual attendees can communicate personally with investigators who have implemented and experimented with each method. Second, the entire group of attendees will engage in an ongoing conversation about how methods used in the study of human movement can be improved. The methods presented in this session include procedures for analyzing ambient visual information into measurable units, procedures for assessing individuals' pathway knowledge through interactive computing, procedures for computing cultural differences in movement and procedures for analyzing environments into G.I.S. and isovist spatial units. Presenters include:

Ryuzo Ohno (Tokyo Institute of Technology, Tokyo, Japan),

Ann Devlin (Connecticut College, New London, USA),
Marcie Benne, Jean Wineman (both of Georgia
Institute of Technology, Atlanta, USA),
Charles Gordon (Carleton University, Ottowa, Canada).

Design Psychology Applied: Hands-On Design Using Psychology as the Principal Design Tool

Symposium Chair: Painter, Susan Lee (ForrestPainter Design, AC Martin Partners, UCLA Interior Design Program, CA).

This symposium extends work presented at EDRA 1999 and EDRA 2000 that introduced the theory and techniques of Design Psychology. Environmental psychologists have recognized the profound and formative influence of the intimate connection between person and place (Cooper Marcus, 1976; 1995). Design Psychology is a client-centered approach in which the psychological aspects of the client's design needs are identified, interpreted, and translated into specific design elements by the designer. In this symposium, Design Psychology tools, techniques and approaches are demonstrated in the design and architecture of residential and workplace settings. In Paper I, Toby Israel, Ph.D., an environmental psychologist, describes Design Psychology interviews with noted designers of workplace environments in which she explored their histories of place through the use of her design psychology techniques. She demonstrates the ways in which their own early experiences of the environment have been expressed in their design of workplace settings for corporate clients. In Paper II, Clare Cooper Marcus, M.A., M.C.P., Professor Emerita, Architecture, describes role-playing techniques for working with clients to help them articulate their needs regarding house, home, and neighborhood setting. Building on her pioneering research in *House as a Mirror of Self* (Berkeley: Conari Press, 1995), the author discusses the pros and cons of using these techniques as a professional "House Counselor". In Paper III, Constance Forrest, Psy.D., a clinical psychologist and interior and landscape designer, presents a case study in the application of design psychology tools and techniques in the architectural remodel and landscape design of a professional office complex. The author demonstrates the way in which her interview and projective assessment process allowed the client to articulate previously unrecognized professional goals. The representation of those goals in the built project facilitated the client's developmental growth and resulted in a built project that was significantly evolved from the original program specified by the client at the out-set of the project. Presenters include:

Toby Israel (LRK Research, NJ),
Clare Cooper Marcus (University of California),
Constance R. Forrest (ForrestPainter Design, CA).

Design Psychology And The Corporate Designer.

Israel, Toby (LRK Research, NJ).

Environmental psychologists have recognized the profound influence of a person's "environmental autobiography" in establishing not only a sense of place and home but also the very sense of self (Cooper Marcus, 1976; 1995). Previous EDRA presentations (Israel, 1999; 2000; Forrest, 1999; 2000; Painter, 1999; 2000) introduced the theory and techniques of Design Psychology, the practice of architectural, interior and landscape design in which psychology is the principal design tool. This paper explores the impact of Design Psychology further by discussing the hidden influence of an individual's place history in their design of the workplace environment. Key questions the paper addresses include: How does a corporate designer's personal environmental autobiography lay the foundation for their sense of place? How is that personal history of place reflected in the workplaces they design? How can designers more consciously draw on their past history of place to create fulfilling offices? In answering these questions, the author describes in-depth interviews she conducted with three eminent corporate designers, illustrating how they reworked their past history of place, unconsciously interweaving their personal development, the creation of their private home and their office designs. Discussion will include the far-reaching implications of design psychology for workplace settings.

House Counseling: The Use Of Role-Playing With Clients.

Cooper Marcus, Clare (University of California, Berkeley, CA).

Having published the book, *House as a Mirror of Self: Exploring the Deeper Meaning of Home* (Berkeley: Conari Press, 1995), to enable non-designers to understand their psychological connections to home, the author received many requests for assistance from people with "house problems". These included people who had never felt "at home" in the house where they lived; people who had lost their homes in a fire; people who wanted to sort out their needs before hiring an architect; and people considering "moving to the country". For a period of time, the author offered her services as a "House Counselor". Methods used to assist

clients are presented and discussed, including role-playing, free association, and guided meditation. The presentation concludes with a discussion of the professional dilemmas and ethics raised by moving from "researcher" to "counselor."

Design Psychology: Transforming the Client, Transforming the Space.
Forrest, Constance R. (ForrestPainter Design, Venice, CA).

Constance Forrest, Psy.D., a clinical psychologist who is also an interior and landscape designer, presents a case study that demonstrates the application of Design Psychology tools and techniques to the creation of an architectural remodel and landscape design for a professional office complex. By designing a physical environment that reflects past experiences of place and then articulates and realizes new directions, the author shows how the in-depth interview process can facilitate developmental change. The author assesses for high, positive psychological experiences associated with the physical environment. These memories and associations are then used in the design, translated into the specific use of color, light, texture, the arrangement of space and the use of significant personal symbols to trigger a re-experiencing of powerful positive experiences related to the physical world. The investigation of the client's environmental history and the understanding gained through the use of the author's projective assessment tools brought unique insight into the client's current professional circumstances and allowed her to articulate her vision of a much-enhanced future. This resulted in a design and a built project that both anticipated and facilitated the development of the client's work, and was significantly evolved from the original program specified by her at the outset of the project.

Transdisciplinarity In Theory And Practice: Obstacles And Opportunities.
Symposium Chair: Horlick-Jones, Tom (University of Wales at Cardiff, Wales).

Environmental change, at whatever geographical scale and pace, needs to be understood by innovative concepts and methods. New ideas are needed. Our capacity to deal with environmental problems is insufficient due to their complexity, compartmentalization of knowledge and expertise, the sectoral division of tasks by professionals, and the different societal contexts of agendas for scientific research and policy decision-making. This symposium considers transdisciplinary approaches, insights and obstacles to the advance of theory, knowledge and practice posed by disciplinary perspectives. The lack of effective collaboration between scientists and policy makers, the so called 'applicability gap' in many sectors of environmental design and planning, has led to criticisms of researchers by professional practitioners and conversely. These criticisms stem from sectoral and disciplinary divides which illustrate misunderstandings about the different contexts of research, policy definition and implementation. To promote more effective links between scientists and policy decision-makers, approaches are needed which involve researchers from different disciplines, policy decision-makers and laypeople. Obstacles to effective partnerships include: 1. Conceptual barriers such as inept analogies, metaphors and models used by academics and professionals who do not address the complexity of the human-made environment but promote rational, utilitarian approaches to interpret the layout, use and management of human habitats. 2. Institutional barriers stemming from the professionalisation, segmentation and bureaucratization of expertise and knowledge, by which 'experts' apply technocratic knowledge in order to apply instrumental rationalism, based largely on quantitative proposals at the expense of qualitative dimensions including the tacit know-how of laypeople. 3. Social barriers produced by social differentiation, compounded by shortcomings in formal education, in information transfer and communication between professionals, politicians, interest groups and the public. Democratic practices, such as the involvement of citizens in the design and management of human habitats, are not common. Laypeople are often unaware of the policy decision-making instrumental in environmental change. The symposium considers transdisciplinary obstacles, challenges and opportunities, in terms of theory and case studies. The discussants are *Gabriel Moser (Universite Paris, France) and Joyce Tait (University of Edinburgh, Scotland)*. The presenters are:
Thierry Ramadier (CNRS-Universite Louis Pasteur, France),
Roderick Lawrence (University of Geneva, Switzerland),
Tom Horlick-Jones (University of Wales at Cardiff, Wales),
Katie Begg (University of Surrey, England),
Bill Thompson (University of Salford & Heriot Watt University, Scotland).

Living On The Border: Cross-Boundary Research And Practice.
Horlick-Jones, Tom (University of Wales, Cardiff, Wales).

Boundary-work (according to Gieryn) is the drawing of ideological lines between domains of knowledge in such a way that claims on resources can be favorably maximized (e.g. science v. religion). In this paper cross-boundary research and practice refers to the generation and application of theory, research and knowledge across the metaphoric borderline between disciplines and institutions (thereby posing a potential threat to each domain's ideology). Research also takes place in accordance with frames of reference which co-exist within disciplines (e.g. qualitative v. quantitative research). Aspects of disciplinary 'immersion', pluralistic ignorance, local and global (trans-spatial) information systems and transdisciplinary research in 'real world' contexts, are considered. A nomenclature of sub-, multi-, inter-, and trans-disciplinary people-environment research and practice, is proposed. A sub-discipline (e.g. environmental psychology) may also belong to a field of study, thereby facing opposing centripetal (disciplinary) and centrifugal (transdisciplinary) forces. Links between disciplines are objective worldviews. Transdisciplinarity is reviewed as a realm of theory generation, knowledge and inquiry, and a process of democratic engagement in environmental decision making. Whilst appeals are often made for disciplinary 'purity', transdisciplinary research is arguable more likely to advance people-environment theory ideas and practice.

Challenges For Transdisciplinarity In Urban Space Studies.

Thierry, Ramadier (CNRS-Universite Louis Pasteur, Strasbourg, France).

A distinction is made between unidisciplinary, multidisciplinary, interdisciplinary and transdisciplinary research of environment and behavior. An objective is to consider the challenges and opportunities transdisciplinarity offers in terms of the emergence of new ideas for theory and application. The costs and benefits, advantages and constraints of a transdisciplinary approach in the field of urban studies are then considered, and compared with other cross-disciplinary approaches (multi- and interdisciplinary). Firstly, a brief history of the concept of transdisciplinarity is presented, indicating how an interdisciplinary approach has been evolving into one which is transdisciplinary. Secondly, the scientific context (application and theoretical goal, unit of analysis) is identified. Thirdly, conclusions are drawn about the perspective that researchers need to adopt if a transdisciplinary approach is to be effective (looking for coherence versus paradoxes). All of these reflections on transdisciplinarity are supported by the re-

search experience gained in a study of Canadian suburbs, conducted by the Centre de Recherche en Amenagement et Developpement (Universite Laval, Quebec, Canada). This has involved researchers who come from a range of disciplines such as architecture, urban planning, geography, sociology and psychology. To illustrate the points made, the paper focuses on the representation and perception of urban space.

Building Partnerships: Moving From Theory To Practice.

Lawrence, Roderick J. (University of Geneva, Switzerland).

Transdisciplinary research and practice require a common conceptual framework, analytical methods, terminology, mental images and goal. Once formulated, a research agenda is developed, based on diverse data and information. Transdisciplinary approaches include problem-solving as applied to a prototype, small-scale and locality specific exercise. Nonetheless, this approach illustrates factors pertinent to problems that are frequently complex, unpredictable and conflictual. The author is a representative of the University of Geneva in the Cantonal Housing Observatory, a partnership of representatives of the private sector; the public sector; the City of Geneva; the Association of tenants; building unions and the University of Geneva. By common consent these partners decided to examine quantitative and qualitative aspects of housing demand in the Canton of Geneva. The various viewpoints were used to define the topics and methods of research. An exploratory study with 205 households led to the identification of key issues interpreted with respect to information and data analyzed statistically and represented by a Geographical Information System. This study involves many groups of actors at the outset in order to formulate a pertinent research agenda for policy decision makers. This innovative approach enables each actor to maintain and share expertise while learning from other partners.

Computing Participation In The Future.

Thompson, Bill (Heriot Watt University, Scotland).

Computations called Artificial Intelligence and Artificial Life produce models showing that simple rules produce complex environments and evidence of emergent features appearing as novel and unplanned parts of an ordered system. This contact with unexpected novelty transforms experts into novices even within the system historically providing the opportunity for

expert status. Understanding that these changes are innate within ordered relationships is the principle requirement in transdisciplinary approaches. The 'traditional discipline' approaches learning as self-conscious, having self-improvement of itself and its members as an aim. Traditionally effort is made to identify the problems and solve then in a logical and positive manner. Because of this positive attitude, people (and disciplines) have become self-conscious and self centered rather than conscious of their condition as part of a richly diverse and complex world (which may not share human aspirations but must share our future if we are to have one). Transdisciplinary approaches remove interdisciplinary barriers because those barriers encourage naïve societies and ignorant experts. Embracing the concept of constant change must be encouraged with the help of digital transport, global politics and symbiotic knowledge systems using computers as conjectural devices capable of complex what if questions relative to many interests.

Psychological Factors in Design

Applying The Transactional Approach To Research On Subjective Density.

Michal, Mitrany (Israel Institute of Technology, Haifa, Israel).

This paper aims at presenting principles that may help researchers to apply the transactional perspective in empirical research. The challenge is to develop a research methodology that will incorporate the transactional approach. Altman (1990) contributed to our understanding of the issue by stating that: "A capstone principle of the transactional approach is methodological eclecticism". The way to get a holistic answer is to first divide the question into many 'small' different questions that can be answered by specialized research methods and methods of analysis. A comprehensive research must use varied methods, qualitative, quantitative and graphic, in order to answer different 'small' questions with the most appropriate tool. The integration of all pieces of information obtained by the different methods allows us to view the whole picture, a picture we could not obtain by relying solely on one method or getting answers to only a narrow band of questions. The integration of all these 'small' answers should be done in the summary stage. The summary should include back and forth movements between findings from each method. The focus of this paper is the relationship between subjective density and building type. The paper will demonstrate the manner in which I used the principle of 'separation and integration' in order to gain a better understanding of the re-

lationships between subjective density and building type.

The Influence Of Mood On Choice Of Environmental Location.

Regan, Clair L. (University of Southampton), Horne, Sandra (University of Southampton), and Remington, Bob (University of Southampton).

Purpose: to expand on the work of Francis and Cooper-Marcus (1991) who found that people tend to report going to places with high nature content when experiencing negative emotions. The present research also examines choice of location when experiencing positive emotions. Method: one hundred and fifty free response questionnaires were completed by a wide group of participants (age six to 79) approached either by post of by personal contact. This qualitative data was then summarized into a numerical form. This was done using a code book that had been written with reference to, and incorporating elements of, the work of Francis and Cooper-Marcus, Hart (1979) and Malinowski & Thurber (1996), and following the first author thoroughly immersing herself in the data. Findings: unfortunately it was not possible to analyze the data in time to submit this abstract but as all the data has been collected the findings should be available very soon.

Environmental Psychology As Science.

Evans, Gary W. (Cornell University).

Designers need to develop a set of principles approaches in conjunction with quantitative research designs can provide a reliable, valid knowledge base that practitioners can count on. Both approaches have inherent limitations that cannot be overcome without the use of the other. Qualitative research designs alone do not provide evidence of casual relations between design and behavior. Quantitative designs suffer from low external validity, risk studying the wrong design variables, and de-contextualize human-environment relationships. To put it differently, qualitative designs cannot answer the important questions and quantitative designs ask the wrong ones.

Toward A Theory Of Personality Of Place: A Pilot Investigation.

Dally Geboy, Lyn (University of Wisconsin - Milwaukee, WI).

For more than a century, 'personality of place' has been an intuitive yet enigmatic concept. Place personality is defined as the set of characteristics commonly associated with a place, and perceived as unique to a place,

consistent within place type, or correspondent across related place types. This study used an ethnographic nomothetic approach with a sample of undergraduate and graduate architecture students (N - 46) to determine 1) if places are recognized as having personalities, 2) what personality characteristics are spontaneously associated with either place type Hospital or Nursing Home, and 3) any consensus on personality characteristics associated with each place type. A constructionist framework is used to address why there is consensus regarding place personality characteristics. Results found a significant majority perceived of places as having personalities and supported 'place personality' as a tool for architects to use to communicate about design with lay persons. Consensus-based personality profiles of each place type revealed *cold* as the leading Hospital personality characteristic, and *people* the leading Nursing Home personality characteristic. Place component analysis suggested both place type personalities are influenced most by characteristics relating to the human system component of place, and least by characteristics relating to the physical setting component.

Operationalizing The Physical Forms Of The Built Environment.
Davey, Jon Daniel (Southern Illinois University, IL).

There is a need to operational define the contents of city images, their physical forms which Lynch has conveniently classified into the five elements of: paths, edges, districts, nodes, and landmarks. The need for unambiguous verbal assertions about paths, edges, districts, nodes, and landmarks is paramount to the concern with the new urbanism and virtual worlds, but how much more than verbal descriptions are pictorial operational definitions. Little research has been attempted to operationalize these five elements from a verbal description to pictorial definition. This paper presents a study completed to operationalize the elements into a pictorial definition including a demographic sampling differentiating architects, interior designers, planners, rural/suburban and male/female images. The present study was undertaken as a contribution to improving the tools designers' employ creating new communicable environments.

Measurement in Design.

Increasing Public Participation Through Choice Experimentation
Davies, Ann-Marie (The Robert Gordon University, Aberdeen).

This paper presents the results of a study aimed at bet-
ter incorporating public participation into the design process. It establishes values that people attach to the type and quality of streetscapes. The research combines economic methodologies, computer visualization techniques, and sociological studies of public participation in urban design. The research project to date has concentrated on developing the choice experimentation methodology such that public participation becomes a major way in which the attributes included in the design are meaningful to those who will ultimately be affected by the changes. Several techniques were used leading up to the choice experiment including focus groups, multiple sorts, and ranking tasks. The purpose of the focus groups was to discuss possible redevelopment scenarios for the case study area, and obtain some ideas on possible attributes that could improve it. Multiple sorting was used to determine which features of urban trees and plants stood out the most, and the ranking study was used to assess the popularity of different types and styles of streetscape attributes. The information gathered from the focus groups, multiple sort study and ranking tasks was then used to form the basis of the choice experiment looking at alternative design scenarios.

Multidimensional approaches To The Prediction Of Environmental Behavior.
Garcia Mira, Ricardo (University of Corunna, Spain), Real Deus, Jose Eulogio (University of Santiago de Compostela, Spain), and Romay Martinez, Jose (University of Corunna, Spain).

The inconsistency between attitude-behavior has been emphasized in many studies (Wicker, 1969; Ajzen & Fishbein 1977; Sabucedo et al. 2000; Garcia-Mira et al. 2000). In spite of the increasing preoccupation with the environment the reality is that the people's behavior has not been less harmful towards environmental resources. Our conception of the model for the explanation of environmental behavior is inspired by the Reasoned Action theory (Fishbein & Ajzen 1975) in the sense of its one-directionality in its causal assumptions. Since it represents processes of individual decision the role of individual differences and the influence of a set of socio-demographic and socio-structural variables are analyzed as differentiators of the way people are affected by different representations of environmental problems. This research is also based on the Norm Activation theory (Schwartz, 1977 1992) the Stern et al. studies (1995 1985) and on our own studies (Garcia-Mira et al, 2000; Duran et al, 2000) and analyzes the recursion attitude-behavior-attitude as well as the constraints structural or subjective that try to account for the role of the situational context

creating easy or difficult concrete behaviors.

Measuring Abstract Concepts: Developing A 'Publicness' Scale.

Tsepas, Sharon (Georgia Institute of Technology, GA), Pati, Debajyoti (Georgia Institute of Technology, GA), and Zimring, Craig (Georgia Institute of Technology, GA).

"Openness in Federal architecture is a symbol of inestimable value. Our government is not distant. It is a government of the people. And our public building must say they are about people and our democratic values" (Supreme Court Justice Stephen Breyer, 1999). Radically deviating from traditional models of court buildings, new US Federal courthouses have incorporated 'publicness' as a key design goal. This has taken on additional significance as a counterweight to the heightened security measures after the Oklahoma City and World Trade Center bombings in the mid-nineties. Our goal in this study is to understand the construct of publicness and to operationalize it as a tool for design research and design review. In particular, we are asking several questions: Can we identify design qualities, such as setback, glazing, massing, entrance design, access system and pedestrian and vehicular circulation, that predict the extent to which the public and staff will perceive a building to be a public building? Can we identify historic patterns for public buildings that can be measured from plans or photographs? The first step in this research program, presented in this paper, is to define publicness and to develop a multidimensional scale that operationalizes it in terms of the symbolic, contextual and formal qualities.

Composite Quality Indices For The Evaluation Of Built Environments.

Paciuk, Monica (National Building Research Institute, Technion, Israel).

Methodologies used in the evaluation of built environments have traditionally relied on either one of two different sets of indicators: i) objective statements of measured or predicted levels of performance required to meet user needs or expectations in terms of health, safety and general welfare, ii) subjective appraisals of levels of satisfaction resulting from the fulfillment of these needs for the addressed items. Comparative analyses of both sets of responses for a given situation have yielded, more often than not, substantial divergence between objective indicators and the corresponding levels of subjective evaluation. While theoretical assumptions that attempt to explain these phenomena

still need to be empirically corroborated, of more practical importance seems to be the need to develop composite quality indices, capable of efficiently capturing the information provided by alternate sets of indicators - both objective and subjective. A methodological framework for the development of such a composite measure is proposed and illustrated by means of a case study where satisfaction/behavioral data was collected from residents of 22 multifamily residential buildings, for which previous expert knowledge existed in the domain of indoor-climate-related performance aspects. Results are discussed in terms of their implications for the development of improved environmental evaluation methodology.

The Use Of Qualitative Data To Support Behavioral Mapping Results.

Horne, Sandra (Research consultant, UK).

Qualitative interview data enables us to examine more closely the meaning behind results from analysis of quantitative data. This paper examines how behavioral mapping data can be enriched with the use of interviews using a research project in the classroom environment as an example. This example uses the qualitative analysis tool Nud*Ist. The analysis categories framework that is illustrated was previously developed in order to validate definitions and constructs resulting from the behavioral mapping analysis. The interviews were first coded according to their basic descriptive features. Following the descriptive coding, definitions and constructs (developed from the behavior mapping data) were used in the clustering of the interviews. These clusters were used in order to question whether groups of teachers responded differently in the interviews. The analysis framework also permitted different levels of questioning enabling cross referencing. The results of this study will be reported here through the use of examples drawn from research undertaken in the classroom environment.

Theme 5 Posters

Temporal And Space Dimensions In The Perception Of Environmental Problems: An Approach To The Concept Of Environmental Hyperopia.

Guerrero, Jorge (University of Corunna, Galicia, Spain), Garcia-Mira, Ricardo (University of Corunna, Galicia, Spain), Duran, Mar (University of Corunna, Galicia, Spain), and Real, Eulogio (University of Santiago de Compostela, Galicia, Spain).

The perception of the seriousness of environmental problems as more serious when they occur at a distance has been denominated 'environmental hyperopia' (Uzzell et al., 1994). In this study a sample of 789 individuals was considered. This sample put together three sub-samples: one a group of high school students, another a group of university students, and the third a group of workers in a petrol company. The study starts from our previous research (Garcia-Mira et al., 2000). It analyzes the perceived evaluation of diverse environmental problems, and discusses the underlying dimensionality to the perception of the importance of each one of them in connection with the preoccupation shown by these subjects. Results were analyzed with multidimensional methods that allow us to establish different subjective categorizations of the diverse problems as they were conceptualized by the subjects. Results were compared in order to observe group differences, both in time (now and in the future), and in space (global and local).

Metaphors as a method for elucidating values and perceptions.

Robertson, Iain (University of Washington, Seattle, Washington).

Metaphors can serve as brief but cogent expressions of a thought or viewpoint and may thus be a valuable method for elucidating deeply held values and perceptions. Participants in a 1998 study of the University of Washington community's attitudes toward their campus were asked to give "positive metaphors for the future of the UW campus". This paper will compare 'metaphorical thinking' with more conventional ways that planners and designers use to understand the values and perceptions of user groups. The paper will compare the results of this method of eliciting community values and perceptions with results obtained from paper and web surveys, cognitive mapping exercise, workshop discussions, and participant photography exercises. This mode of thinking will also be compared with designer's use of 'concepts' to generate ideas and give form to designs. To emphasize the ways in which we use metaphors, old world examples, drawn from the city and University of Edinburgh, will be compared with new world examples from the city of Seattle and University of Washington.

The Impact Of Room Colors On Arousal And Performance.

Kuller, Rikard (Lund Institute of Technology, Sweden), Janssens, Jan (Lund Institute of Technology, Sweden) and Mikellides, Byron (School of Architecture, Oxford Brookes University, England).

Previous research at our laboratory indicates that the colors of an interior will affect not only the perception of the architectural space, but also the brain activity of persons staying or working in that space. A consistent finding has been that alpha and delta rhythms of the EEG become attenuated in rooms with warm coloration (reds and yellow) as compared to rooms with cold, blue-green colors. Such attenuation can be interpreted in terms of increased cortical arousal. Based on these findings it was predicted that warm colors in a room would increase productivity and cool colors increase creativity in office work. An experiment was set up where 40 subjects either performed a proof-reading task or wrote an essay. Measurements included self-reported mood, work task evaluation and tests of personality. No simple relationship between color and performance could be established. Instead the mood of the subject at the beginning of the session had a mediating influence. Subjects with a negative mood became strongly affected in the red surroundings and this impact may be interpreted in terms of increased stress or arousal.

An Analytical Study Of The Significance Of Multisensory Modalities In Identifying The Perceptible Character.

Fernando, Nisha (University of Wisconsin - Milwaukee, WI).

Proposals for improving the urban environments in developing countries often include dramatic land use changes. Some such schemes may overlook or completely ignore the existing character of an environment even when such character is a direct result of ongoing activities and settings chosen by the people inhabiting that environment. Perceptible character an environment is often described as a visual quality. But many non-visual aspects contribute to the overall environmental character as well. The present study first assesses the importance of such multi-sensory elements in perceiving the environmental character and empirically examines the changing patterns of the existing character in a key urban street in Colombo, Sri Lanka. Next, the study analytically compares those patterns of the perceptible character with the changes proposed in a recent development scheme for the same urban street. The conceptual framework is based on the role of culture-specificity in activity systems and systems of settings, and on the importance of multi-sensory modalities in elucidating the perceptible character. The research methodology includes place-centered behavior maps, photographic documentation, systematic participant observations, and field notes, while a GIS is used to analyze the spatial data and make comparisons. The

findings show that multi-sensory attributes are indeed critical attributes of the perceptible character, and that the proposed land use zones do not match with those with the existing activities zones identified by the changing patterns of the character.

How Is Knowledge Of Environmental Configuration Derived From Route Knowledge?
Heft, Harry, Denison University, OH

Researchers have long investigated two types of knowledge that support navigation and way-finding: 'route-knowledge' which consists of familiarity with a structured path between two places: and 'configurational-knowledge', which consists of an awareness of the overall layout of a setting. Typically, it is assumed that the latter knowledge of abstract structure is derived from perceptual-action experiences that accompany route knowledge: but the processes underlying this transformation are not well understood. Beginning with prior research findings grounded in the conceptual framework of ecological psychology, this paper offers a hypothesis for conceptualizing the transformation from route knowledge to configurational knowledge. It is hypothesized that individuals' detect the invariant, relational structure among landscape features when traveling along paths through the setting. Data from two recent exploratory studies are presented in support of this hypothesis.

Space Use Forms: A New, Trans-Disciplinary Concept For Process Oriented, Comprehensive (Sub)Regional Analysis And Management?
De Waard, Rob (Eindhoven University of Technology, The Netherlands).

Planning concepts and methods are designed to manage the spatial organization and qualities of the real world. They are derived from implicit or explicit perceptions of 'space', often limited to a specific aspect or quality. During their existence, institutionalization and application however, their users tend to forget that their concept is only a limited model of the real world. Then the concept starts to replace the real world and its complexities and multiple qualities. This is a widespread phenomenon that explains much of the clashes between disciplines and the environmental and other quality problems that are related to spatial planning and management. The 'space-use-form' is a new, Dutch concept that is the subject of a research project with a theoretical level and an applied level. It has the ambition to improve the connection and transition between space or landscape as an independent social, cultural and ecological phenomenon and as an object of public management and public and private development. This

238

paper deals with the different aspects and faculties of the 'space use form' and illustrates how it can be integrated in the research and planning practice. First I will enter on some Dutch planning concepts and paradigm characteristics. Secondly I will explain how we have analyzed space/ landscape as a phenomenon and as a planning object and how this has led to the new concept. Then I will enter on the 'space use form', describe and illustrate its application in research, planning and communication. Last, but not least, I will discuss the relevance of a transdisciplinary, hybrid concept or tool to bridge the gap between research, planning and environmental quality.

Extending Geographic Information Systems (GIS) To Meet Neighborhood Planning Needs: Recent Developments In The Work Of The University Of Illinois At Chicago.
Kheir, Al-Kodmany, University of Illinois at Chicago

While community-based organizations (CBOs) increasingly seek to utilize GIS for neighborhood planning and development, many have serious misconceptions about what GIS can and cannot do and what is needed to make effective use of it. This article describes the problems and opportunities in utilizing GIS as a tool for enhancing participatory planning in three neighborhoods in Chicago. It illustrates the complex process of creating a useful community GIS database and ways to augment GIS with other tools to foster public participation. Through three years of extensive experience in implementing a community GIS, a planning team at the University of Illinois at Chicago found that GIS has significant limitations that could be addressed by integrating other high-tech and traditional tools. Following Shiffer's work, the team incorporated innovative multimedia and 3D modeling, and inspired by Hopkins' work, the team augmented GIS with electronic sketch boards. The UIC team also utilized the Internet to extend the reach of the community GIS. This combination of tools empowered residents to visualize, evaluate, and participate in revitalizing their neighborhoods. We hope that the experiences described in this paper will assist others who want to utilize GIS in community planning.

The Frequency-Validity-Effect On Annoyance.
Brauchle, Gernot, Institute of Hygiene and Social Medicine, Austria, TIROL

Research proceeds on the assumption that the estimation of annoyance is mainly determined by perceived environmental load. But annoyance is often distorted due to memory. This is one reason why decrease in

environmental stressors may not lead to impairments in perceived annoyance. In this study the effects of frequent validity - the tendency to believe information if it is often repeated - on annoyance of residents (odor, dust) who live nearby an industrial plant were examined. In a first step with the help of a questionnaire the level of annoyance of a randomized sample of 140 residents was measured. Afterwards they were instructed at least 3 times a day to carry out measurements of perceived odor load (frequency, duration, intensity) and to record these in a diary. The results show that after 6 months the estimation of annoyance has changed. This happened solely by residents who live more than 500 m from the plant. Residents close to the plant, with increased objectively determined pollutants, caused by an increased production, remain at similar high levels of annoyance.

GIS and Neighbourhoods: The Saga Cities Project

Adolphe, Luc; Chatelet, Alain; Ait, Ameur K; Boussoualim, Aicha (EAT, Toulouse) Barlet, Aline (EAPB, Bordeaux), Izard, Jean-Louis; Lehtihet, Khrofa (EAM, Marseille) and Casal, Aimee (Paris)

The SAGACities project aims at putting in perspective the results given both by simulations of the urban environmental quality of outdoor spaces, and by campaigns of measurement on these spaces, with subjective indicators linked to the perception of the user's in a global approach meeting technical, social and environmental approaches. This model is been embedded in decision making tool for local authorities, based on a Geographical Information System (GIS). The generic space scale chosen is the neighborhood. Two specific themes have been explored, energy and microclimate and their linkage in a global approach of the urban system. This computer tool allows ensuing existing urban patterns, comparing different neighborhoods or cities, or to simulate the environmental effects of future amenities. Various urban case studies in France have been analyzed with this system.

The Strength To In-Dwell: Covenants, Codes, Community, & Conservation.

Zukowski, Suzanne (University of Wisconsin - Milwaukee, WI).

This paper is concerned with the development of dwelling areas and the influence of socio-cultural norms on the development process. Dwelling areas are ultimately the consequence of a range of socio-cultural factors in their broadest sense. These factors may include normative traditions of spatial layouts, density, building form, material selection, or spatial use. Through examples of immigrant housing in 19c America, bridging to contemporary dwelling design, control mechanisms derived from socio-cultural norms are reviewed. Restrictive covenants embedded within property deed transfers in the mid-1800's segregated by ethnicity, race, and economic strata in order to protect property values. Today 'New Urbanism' codes, Neighborhood Associations, and Design Review Boards, bespeak the regulated milieu in which we design, build, and dwell. This paper traces a schematic development of formal and informal building controls across a century of time, outlining the strengths and short-comings of various mechanisms. With an eye towards environmental consciousness, the opportunity to employ socio-cultural controls in tandem with formal regulatory devices such as building codes and zoning for increased preservation of our natural environments is then discussed.