



Theme 6: New Ideas in Architectural Theory and Education

Environment-Behaviour Studies in the Changing University

Working Group Chair: Rivlin, Leanne G. (City University of New York),

What Is A Contemporary University?

Rivlin, Leanne G. (City University of New York), Chapin, David (City University of New York), and Steinmayer, Karen M. (City University of New York).

In light of many changes in contemporary higher education, including widespread use of computers and other technology, the growing move towards distance learning, and differences in the physical appearances of university buildings, there are many questions regarding the nature of the contemporary university. As researchers on an urban university that recently moved to a renovated building, we are led to these concerns by responses to a survey and interview study concerning the impacts of the relocation and the new spaces. This work left us with questions concerning higher education and its context, an institution that stretches back in time. Since the EDRA 2001 conference is based in a university with a long history, this is an appropriate time and venue to discuss these concerns. We invite a broad audience of people to come to a roundtable on these issues and to draw on their own experiences and images in developing conceptions of the university today and in the future. This discussion can be useful to designers and researchers who are involved in work on universities as well as academic professionals and students who are embedded in this environment.

Teaching Environment Behavior Concepts Using Problem Based Learning.

Day, Kristen (University of California, Irvine, CA), and Mitchell, Shari (University of California, Irvine, CA)

Problem Based Learning (PBL) is a teaching methodology that operates by encouraging students to take greater responsibility for their learning. In PBL, students learn in the context of specific cases, which are complex, real-world problems that require students to determine the kind of knowledge and information needed for solutions. Students learn to frame problems and to determine the features of “good” solutions. PBL

is characterized by group activities. Instructors assume facilitator - rather than “lecturer” - roles. Because of its interdisciplinary focus and its emphasis on application to real-world problems, PBL has potential utility for teaching Environment Behavior concepts and content. In this session, the presenters discuss and evaluate the use of PBL in an undergraduate course in diversity and environments. We examine benefits and detriments of the PBL approach for teaching Environment-Behavior material and offer recommendations for the use of this methodology in typical EB classes. problem based learning, teaching strategies.

A Study of Difference: Financial Resources and Educational Experiences of Middle-Class Design Studio Students.

Keddy, Karen M. (University of Wisconsin, Milwaukee).

This research challenges two assertions made recently in critical pedagogy discourse. The first assertion is that the majority of architecture students have an upper-class background and the students without financial means will not pursue a university education. I argue that this is not the case for architecture students in the United States. The second assertion is that a distinction between upper-class, middle-class and lower-class students is sufficient for a discussion of heterogeneity among students. I propose that there are differences in both financial resources and the student’s educational experience in the design studio within one class itself. Semi-structured interviews of 15 design studio students in a Mid-Western state in the United States were examined to determine the heterogeneity between middle-class students. The perceived relationship between the students’ financial resources and expenses was used to measure the difference between students’ educational experiences in the design studio. The findings revealed significant differences between students. The combinations of resources that students have available to them vary and render educational experiences that are not equitable. Furthermore, the students’ perceptions of the relationship between their resources and their educational experiences differ and is not necessarily dependent on the financial resources that the student possesses.

Architectural Education: Building The Bridge.

Pereira, Marcia, Swiss Federal Institute of Technology

With the consolidation of the so-called information revolution in the last decade, the whole of society has been affected with changes in the way we live, work and communicate. As a result of changes in environment preservation, technology, building construction methods and materials, and life styles, architecture has been undergoing considerable debate and pressure has been put on architectural education to form professionals who will be able to deal with this changing society. Architectural education has been especially criticized for: a disassociation from reality, emphasizing uncritical creativity; a lack of consideration of the social dynamics of architectural production, notably clients, users and other members of the building team; and an unsatisfactory teaching of technical subjects such as environmental design and architectural technology. Simultaneously, a paradigm shift in education is taking place. It emphasizes the importance of a constructivist approach, building upon issues of collaboration and critical reflection. Considering all these issues, the paper discusses a way of building the bridge between architectural education and society, preparing critical professionals via the use of information technology. It proposes a conceptual framework that encompasses a holistic view of architecture combined with the new paradigms in education and resulting on the proposal of a conceptual model for the design of virtual learning environments.

Design Education: People and Environment in the Design Studio.

Incorporating The Concepts Of Universal Design And Barrier-Free Environment Into Design Pedagogy In Egyptian Schools Of Architecture.

Soliman, Mona Hassan, Misr International University

In Egypt, the built environment does not fulfill functional and human needs of different populations. It is found to be creating many physical and psychological barriers that are negatively influencing different segments of the society especially people with special needs. This situation is a product of immature social and architectural values and concepts, which are adopted by architects through Architectural Education process in design studios. This paper focuses on the applicability of needs of disabled people as well as healthy ones in Egyptian design studio teaching practices. It outlines an undergraduate design studio based

on the 'universal design' and 'barrier-free environment' principles.

Serving Communities: Learning in the Real World.

Vlahos, Ekaterini (University of Colorado at Denver).

With the next century approaching it is time to reflect on architecture education. The standard practice of teaching studio is through the development of theoretical projects disconnected from the needs of people and places and the understanding of different cultures. The outcomes of the theoretical studio projects are strongly developed, controlled, formal solutions with little understanding of the architectural intervention in communities. Considering the impact of the built environment on society, as educators we have the opportunity to develop studio education by connecting our students to communities, cultures, people and places within our cities, and to define the social responsibility and role of the architect and architecture education in the future.

Service Learning As An Effective Design Education Strategy.

Burcher, Lise (California Polytechnic State University, CA), and Nelischer, Maurice (University of Guelph, Ontario, Canada).

Several case studies utilizing service learning as the framework for delivering design education to future design professionals of the built and natural environments are explored to determine the benefits of this method as a strategy to sensitize design students to the needs of both general and specialized populations. The case studies were carried out in the context of both undergraduate and graduate community design studios within a Landscape Architectural program. Specifically, the objective was to utilize a service learning strategy to develop a holistic learning process that integrates behavioral research with applied design. The assumption was that inherently linking behavioral research relevant to the challenge at hand with physical community design criteria within the context of an authentic community setting would result in sensitizing future design professionals to the importance of a multidisciplinary approach integrating the environment with behavior. A range of community and small group techniques were explored and utilized along with accepted behavioral theories and case study explorations. The paper documents the case study context, the specific approach to service learning utilized, the community facilitation process undertaken, the assessment techniques utilized and the assessment outcomes. The outcomes are based on assessments of goals and ob-

jectives identified prior to the initiation of the case studies as well as student and community participant response and observation.

Sustainability: Values And Knowledge Base For Educating Future Architects.

El-Nachar, Eman (Faculty of Fine Arts, Cairo, Egypt).

During the last decade conscience to the urgency of moving from isolation that governs traditional development of communities to the commonality, involved in environmental, sustainable development has increased. In this sense, several challenges are facing the design academic field since designing sustainable communities requires what can be called as 'Ecosystems Science'. This reveals the need to an interdisciplinary approach that allows design nature and culture to be able to put together. It also indicates shifts in attitudes and values are required in order to achieve co-operative work for designing sustainable communities. Responding to the previous challenges, this paper questions the qualities that are needed if schools of architecture aim at accommodating their programs to requirements of sustainable concepts. The argument raised in the paper asserts that designing ecosystem communities is based upon integrating cutting-edge knowledge in architecture education programs and on promoting values that present a new global ethics. The methodology involved reviewing the literature in the field and investigating educational programs in several architectural schools in terms of knowledge from different disciplines introduced to students and how this knowledge is obtained. Based upon the investigations, the paper addresses several educational goals for developing skills required to achieve sustainable development concepts in designing communities. The paper ends with a set of necessary steps for moving architecture education into the future.

Sustainability Into The Architectural Curriculum.

Wright, James (Southern Illinois University, IL).

The architectural education community has reached the point of recognizing that sustainable design is a mainstream core issue of architecture that must be fully integrated into the architectural curriculum. The question is now one of how to achieve integration. The nature of sustainable design may prove insight into this process. To understand the issues requires a sense of connection, the ability to understand social engagement and to communicate effectively. The community is the first place to learn of this connection. The curriculum must promote connection by providing the opportunity to seek elective, liberal subjects and to

participate in community life. The age of specialization has developed isolation. The need to interact with other disciplines is paramount in our teaching, research, and practice. Sustainable design is an activity of the collective, underlined with the need for cooperation and teamwork. Sustainable design must be placed in the core of the design studio. The nature of the studio and sustainable design is one of connection. The task of integrating sustainable design is one of reaching out, of engagement, of creating in our communities and graduates an awareness and ability to act.

Changes in Built Environment Education: From Design Studio to Practice

Buildability: The Role Of Professional Institutions And Universities.

Whyte, Andrew (University Malaysia Sabah (UMS), Sabah, Malaysia), Lee, Siong (The Robert Gordon University, Aberdeen, UK), Edge, Martin (The Robert Gordon University, Aberdeen, UK), and Pollock, Robert (The Robert Gordon University, Aberdeen, UK).

Many variables contribute to the success of a construction project; buildability is one such variable. Buildability and the harmonization of specialist knowledge in project development are examined in terms of the integration of the design team, the contractor and the client. Factors such as communication, training, accreditation of vocational courses by the Professional Institutions, and the Universities are examined in terms of their influence in encouraging buildability gains in design and construction. The results of a study that examines Lecturer opinion is presented in the context of previous work that explores the attitudes of design professionals, at their formative stages, towards innovation through cross-disciplinary empathy and integrated design team action. The need for buildability in education is reviewed and discussion is made of the need for a more integrated approach that does not erode the specialist bodies of knowledge required to realize today's technologically complex solutions.

Art Of The Long View: Architecture, Organizations, And Strategic Facility Planning. ***Schermer, Brian (University of Wisconsin-Milwaukee, WI).***

Strategic facility planning is essential for creating environments that can respond to an organization's future needs. Yet, how is it possible to plan for a future

that is anything but predictable? This paper explores this question by focusing attention on the relationship between architecture and organizations. At one extreme, we think of architecture as static, material containers of space. Organizations, on the other hand, are dynamic, unpredictable, and seemingly defined by networks rather than fixed boundaries. Neither one of these depictions serves us well, however, when considering the relationship between material buildings and the social organizations that use them. The problem is one of time and expectations. We never look long enough at buildings to appreciate how much they change to meet the needs of the occupants. Our experience with social organizations is often the opposite. We interact with them so extensively throughout our lives that we come to expect a degree of change and uncertainty. We don't count on them to be predictable or remain stable. This paper presents a case study from a graduate-level design studio assignment that attempts to reconcile this apparent disparity. The approach discussed is based on the scenario planning strategy articulated in the book, *The Art of the Long View*, by Peter Schwartz. Architectural imagery is used to depict alternative futures, and thus aid decision makers in preparing for the architectural implications of organizational change.

Training For And Use Of Architectural Research In The Profession.

Dearborn-Karan, Lynne (University of Wisconsin-Milwaukee, WI), and Betrabet, Gowri (University of Wisconsin-Milwaukee, WI).

The Initiative for Architectural Research (IAR) defines architectural research as the search for new knowledge and ideas about building/construction technology, environment-behavior studies, history of architecture and/or computer technology. Using three questionnaires with a cross-group sample of architectural educators (n=231), architectural firms (n=78), and individuals in affiliated industries (n=15), this pilot study explored the level of fit between the architectural research training provided in accredited architectural schools, and the need for, and use of architectural research in firms and industries affiliated with the profession of architecture. Questionnaire responses and architectural research course syllabi were analyzed both qualitatively and quantitatively. Sixty-three percent of the educators reported a good fit between their research training methods and existing professional needs, aligning their curricula along two main orientation; principles and practices. Although 87% of firms have used research in the past (mostly employing in-house staff; more than half with no formal research

training), and nearly 50% anticipate future research use, architectural firm responses suggest tenuous links between research and the process/act of design. This study indicates a dramatic need for extensive and well-calibrated architectural research training methods, not only to maintain the current level of research use but to encourage future focused application.

Design Psychology In The Furniture Design Studio: New Approaches To Concept-Based Design.

Robinson, Mary Beth (University of Oklahoma), and Forrest, Constance R. (Forrest Painter Design, CA).

The furniture design studio provides opportunities for exploring a variety of approaches to creativity and concept development. Design Psychology is the practice of architecture, interior and landscape design in which psychology is used as the principle design tool. This presentation explores the use of Design Psychology in the process of designing furniture. The field of Design Psychology was explored at the Environmental Design Research Association conference in June 1999 (EDRA 30, Orlando, Florida) in a symposium entitled "Design Psychology: Case Studies in an 'Inner Vision' Approach to Architecture and Design" (Forrest, Israel, Painter, 1999). The research indicated that formative childhood experiences of place create a powerful template carried throughout life, influencing personal perceptions and decisions regarding the physical environment (Painter, 2000). "The premise of Design Psychology is that satisfaction with the environment is based in the individual's psychology: their associations from past experience, their current psychological and emotional state, and their vision of themselves in the future" (Forrest, 2000).

"Other" Roles Design Reviewers Play.

Kim, Joongsob (Lawrence Technological University, MI).

This paper is about several significant roles that design reviewers often play in the design review process, but which the current design review literature has rarely focused on. These roles include "convenor", "facilitator", "therapist", and "educator". This research is based on interviews conducted with design reviewers in more than two-dozen U.S. cities in 1999. According to the interviews, these design reviewers often end up in situations in which they have to play the four roles mentioned above. These roles are central to the activities of design review; arguably, they are more effective and influential than the more limited roles of "reviewer" and "regulator" that scholars usually portray design reviewers as playing. The interviewees do acknowledge that they play the roles of regulator and

reviewer. Yet all of them strongly agree that the image of regulator or reviewer does not accurately and fully capture what they normally do in practice. The four roles often complement the roles of regulator and reviewer. Furthermore, playing these roles can have an effect on saving time and money in design review. Yet even though the four roles have potentially significant influence, they have been neglected in the contemporary design review literature. This paper is a rare attempt to explore the four roles. In this regard, this paper is explorative: some concepts do overlap among the four roles, as they are not rigorously defined at this stage. They should be investigated in depth with further research. Nevertheless, this study is an important first step in that direction.

Architectural Design Teaching Practice and Studio Layout. Two case studies: Suited and Open Plan layout in a Venezuelan Architecture Program.

Vivas, Fabiola Universidad del Tachira (UNET), Venezuela.

This paper presents the main findings and methodological reflections about a pilot study conducted at two different studio layouts (suited and open plan). The main research's objectives were to explore how physical layout relates with architectural design teaching practice. A qualitative approach was used and framed in Bernstein (1973) Theory of Pedagogical Transmission and Peatross & Peponis (1995) interpretation and extension of it. According to Bernstein, educational space is a mean of social control. Educational knowledge code, defined as the principles underlying curriculum, pedagogy and evaluation, could be of two types: integration and collection. It was found that space was modified as well as its social system code changed. The results of this study showed that, space not only reflects pedagogical principles, but also it generates its own pedagogical effects. Methodological aspects could be improved such as site selection, participants type, interviewees, and questionnaire.

Noise: Research, Design Causes and Solutions.

Workshop Chair: Rothschild, Joan (CUNY Graduate Center, New York).

This workshop will focus on the problem of noise, on its effects on human behavior, on design as both cause and solution in a variety of settings. A growing body of literature has revealed the high levels of stress and impaired performance caused by noise among school

children, workers, hospital patients, dwellers in air flight paths, and users of city transport, among others. Social science research has joined with architects and designers, with government agencies, with the corporate sector, as well as with activist groups to broaden and deepen the research and then apply it, to build awareness, and design creative solutions. A two-part workshop is planned. Presenters will show the ways research and action intersect across disciplines and professions, across private and public sectors, and how design is a critical linking factor. In the first workshop, using varied examples, the presentations will discuss different approaches to and theories for defining the problem, the development and significance of technologies, and theoretical constructs relating architectural design and acoustics. In the second workshop, presentations will focus on specific settings, to include office/workplace, classroom, and health care environments. The format aims to structure audience participations productively, encouraging response according to research interests, while at the same time retaining flexibility to "go with the flow" as further topics and emphases emerge. The intent of the workshops is to facilitate research exchange, to focus that research and to broaden it, and so develop new directions and ideas on noise as a problem in which environmental design, environmental quality, and user needs critically intersect. Presenters include:

***Sally Augustin (Haworth, Inc., MI),
Arline Bronzaft (League for the Hard of Hearing, NY),
Galen Cranz (University of California Berkeley, CA),
Terri Erwin (Wheeling Jesuit University, WV),
Gary Evans (Cornell University, Ithaca, NY),
Ellen Bruce Keable (BOSTI Associates, Buffalo, NY),
Lorraine Maxwell (Cornell University, Ithaca, NY),
Joan Rothschild (CUNY Graduate Center, NY),
Margaret Topf (University of Colorado, CO).***

How Should Human Space Be Represented?

Symposium Chair: Thompson, Bill (University of Salford and School of Architecture Edinburgh College of Art).

Since the 15th Century humanity in general has included those who question our place in the universe. Environmental psychology (EnvPsy) has emerged as a focus of questions regarding human space. Much of the work in EnvPsy has chosen to use linguistic representations of the relationships between people and space. However there is an increasing interest in other forms of representation, which are closer to the designer's heart and mind and are tractable on computing machines. Early work in spatial analysis in the

70's represented real and lived in environments and tried to demonstrate lawful relationships between space and people. This has led to the development of theoretical methodologies that are now the subject of debate and utilization amongst 'environmental disciplines' around the world. This symposium offers delegates a representation sample of analytical methods and approaches in spatial representation without words. Presenters include:

W.L. Forsyth (Heriot Watt University, Edinburgh, Scotland),

Jan Teklenburg (Eindhoven University of Technology),

T. Ramadier (Universite Louis Pasteur, Strasbourg, France),

Jesse Voss (University of Wisconsin, Milwaukee),

John Zacharias (Concordia University, Montreal, Canada).

Exploratory Behavior And Visual Stimulus.

Zacharias, John (Concordia University, Montreal, Canada).

First-time visitors to environments as well as those without specific goals for visits in familiar environments tend not to follow a pre-designed itinerary. Rather, path choices are made en route as new information becomes available. Studies have revealed that perceived path configuration, visual content and human activity are important in path choice. In the present experiments, we explore interpretations of configuration and the meanings attributed to signs, lighting and colors. In these studies, sets of path choices are made by isolating the target stimuli in real environments through additive or subtractive procedures. These alternate views of the same environments are then presented to participants as photographs, computer-generated pictures or real-time computer simulations. Participants choose a path and respond to questions with regard to their choices. In this way, we can probe how designs are perceived by visitors and how their perceptions relate to intended behavior.

Constitution Of Space - Constitution Of Behavior: A Preliminary To The Development Of Building Blocks For A Theory Of Spatial Analysis.

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

In spatial analysis it is not uncommon to search for or develop new ways of describing space and then try to find a relationship with types of behavior, the configuration of the urban grid and pedestrian and vehicular movement being a widely used example. One has to

question though whether this focus on space and a rather weak understanding of behavior does necessarily lead to a better understanding of spatial analysis. The argument in this paper is that spatial analysis can only move forward when the focus is on the interrelationship of people/behavior and space, that is on how space is constituted by behavior and behavior is constituted by space. A theory of spatial analysis cannot focus only on space, or only on behavior. It is from understanding their mutual constitution that the first building blocks for a theory of spatial analysis will emerge.

Spatial Analysis And Social Representation Of Urban Place.

Ramadier, T. (Universite Louis Pasteur, Strasbourg, France).

Since the beginning of environmental psychology, cognitive mapping is an important topic in spatial analysis. However, traditionally, investigations carry on physical characteristics and cognitive processes rather than socio-cognitive processes and the concept of identity. Actually, we evaluate the incidence of the social representation of urban places and knowledge about physical elements of cities on spatial accuracy, the spatial structure of cognitive map, and spatial behaviors of dwellers. Early studies (Ramadier & Moser, 1998) show that cultural difference in accuracy of cognitive mapping comes from the cultural distance between individual and urban space rather than a cognitive style. When this distance is important (for example African students in Paris), urban elements are meaningless and cognitive map is less accurate than when distance is low (for example European student in Paris). However, two years later, urban elements are equally meaningful between these two groups, especially regarding physical characteristics. This suggests a social legibility of urban place. From two studies, one on Paris, the other of Quebec, we show the relation between social representation of urban environment and cognitive mapping.

Aesthetics and Meaning: Approaches to Assessing Quality in the Built Environment

Time, Space And History.

Thompson, Bill (Center for Virtual Environments University of Stanford and Edinburgh College of Art School of Architecture).

Several conflicting ideas emerge out of trying to link

environment and behavior. The point of trying is to improve the environmental quality of building. The central elements in the ideas are individuals, some aspect of environment and links between the two. The links are inevitably represented as mechanical, but when time is added the links acquire a history. The history of an individual is often different to that of other individuals. Thus a representation of links between individuals and space seems unlikely to ever be universal in every respect. So is quality an individual, an environmental or a historic experience? If historic, can quality ever be scientific? Can we ever get to represent ourselves in advance of our own history?

Toward a Perceptual Approach to the Evaluation of Structures Aesthetics

Abu-Obeid, Natheer, Hassan, Reem (Jordan University of Science and Technology, Jordan).

An aesthetic framework towards the evaluation of classified structures was initiated in this paper. A perceptual base was built upon six transaction: force resolution, nature and intuition, experience and knowledge, emotions and associations, formal attributes and materials aesthetics in order to establish the essence of global aesthetic responses to structures. The suggested classification of structures aimed to cover the formal/structural variables stimulating different dimensions of responses. The investigation in the field of aesthetics covered the psychological related variables. The subject of structures aesthetics was formulated within a perceptual framework based on the previous six variables. This framework could be used by researchers to develop perceptual tools for aesthetically evaluating structures.

Architectural Categorization Through Pattern Recognition: A Psychophysical Study Of Architectural Form.

Abu-Obeid Ph.D., Natheer N. (Department of Architecture, Jordan University of Science and Technology).

The proposed study is based on the premise that people represent architectural forms in the form of organized categories, which conceptualize the visual physical properties of their architectural objects. The primary hypothesis is that naïve perceivers use specific quantitative cognitive models to recognize and classify architectural forms within their derived categories. The study integrates methods from cognitive psychology and models from mathematical psychology to investigate the mechanisms involved in the recognition and categorization of architectural forms. A major experi-

ment was conducted to compare between two classes of models for how categorization occurs. The feature models focus on the detection and storage of the subset of features most predictive of category membership. The distance models focus on the tolerance of a certain amount of variability in the way features are expressed. The feature models proved to be more accurate as explanatory accounts of the categorization of architectural forms.

Symbology In Planning Communication: A Student Project Using Symbols And Cognitive Maps.

Crawford, Pat (Arizona State University, AZ).

Graphic Communications is an introductory class at ASU in the disciplines of planning, landscape architecture, and housing and urban development. A cognitive mapping exercise was introduced to achieve three objectives. First, to demonstrate that we commonly use various forms of mapping in our day-to-day travels; second, to learn how symbols and color can be used to communicate physical information as well as emotional information; and lastly, to promote a visual awareness of the environment in everyday life. The project began with sketching a cognitive map, which represented each student's travel route from home to class. Students then redrew their maps using symbols and colors to communicate their travel experiences. They were encouraged to use techniques from previous exercises, which included: use of line weights to create meaning, and techniques with graphic symbols to communicate an idea. Eighty students participated and a selection of their maps will be displayed. Responses ranged as to the definition of where "home" is to the use of color gradations to communicate changing emotional states along the travel route.

Locating Questions/Questioning Locations.

Feuerstein, Marcia (Virginia Tech, VA).

Language goes beyond literature and the written word, beyond spoken words, which, once excitedly uttered (following Judith Butler), might move some to action; to 'perform'. As undergraduate 'thesis' students pose their own questions on specific and, often, invented or ambiguous topics of architectural work, they create a body of inventions that reveal critical, speculative and investigative research addressing these posed questions. For many of these students, creative and scholarly discourse defies the spoken and written language that is the assumed mode of expression of theoreticians, historians, and researchers within experimental models of architectural research. "We die. That may be the meaning of life. But we do language. That may

be the measure of our lives.” Toni Morrison, '93 Nobel Lecture in Literature. For the architecture thesis students whose projects are discussed in this presentation, attempts to clarify or reveal their work; through written and spoken language were almost futile, even though their work and studies clearly reveal sources and questions that haunt the students' creative inquiries. For architecture students in their second year of design, attempts to navigate a newly discovered studies of the three dimensional constructed world, they often wished that these studies could be spoken. This shift between a tendency, by beginning students, to take refuge in the written and spoken word and a later phenomenon, by undergraduate (5th year) thesis students - becoming speechless in the face of possibilities that opened into thesis design research and thesis design became the basis for a unique year of design research. The year of architectural design created a play and dialogue between the two groups - where work was handed back and forth, between the second and fifth year students. The students year began with a literal and conceptual study of 'site'. The literal site was located in the hills of the Blue Ridge of southwestern Virginia. 5th year students were presented with a map, location, and description of a place, noting that she repeatedly became lost while trying to find the place. Thus, a record of her repeated attempts to find the 'junked car lot - cow pasture' became their introduction. Slides, stories, restaurants, conversations, and fears became the 'program' for their beginning of 'finding the site by constructing a situation'. These then expanded into their own experiences of getting lost, finding different sites, and finally becoming engrossed with the site itself as not only a 'picturesque' and strange event within a landscape of mountains, valleys, greenery but also one filled with the potential for imagined and actual dangers. The second year students were directed to an innocuous local place and invited to find specific plots within that area, which revealed additional situations that were ten conjoined with the site studies and research carried out by the thesis students. They also carried out their own independent research which was to find a place on these sites. This began the thesis year and it continued to embrace the second year students. While the questions that the older students posed often had begun earlier - during their fourth year of design and travel - the importance of 'finding' and 'posing' questions was in integral component of the work. The works presented will reveal both sides of the research and play - both by beginning and advanced undergraduate architecture students. Neighborhood/community, architecture, phenomenology, professional practice, spatial behavior, theory.

Pentad City Neighborhoods!

Pearlman, Wolf (Technion - Architecture, Israel).

Old world housing experience generates ideas for new forms of urban structure. Architecture and urban design rise to the creative challenges posed by innovative developments in science. The discovery and verification of the existence of new forms of matter (based on pentagonally arranged clusters of atoms, which fit together to form perfect quasicrystals) poses a real challenge to the hitherto 'supremacy' of orthogonal and hexagonal (circular) settlement organization. Urban configurations with five-fold symmetry guarantee substantial increase in spatial density with reciprocal decrease in infrastructure investment without abandoning the attributes of quadrangular topologies, as appertaining to human orientation, movement and spatial patterns and domestic typologies. The proposed urban structure resolved the ancient dichotomy between quantity and quality, inclining creativity towards economy! Indeed as we move into the twenty first century, architecture will be forced by virtue of economic realities, if not aesthetic tastes, to be more rigorous and disciplined in order to content with the exigencies of escalating world population indices. The design exemplar offers a non-convex spatial pattern for town tomorrow disposed on (an initial) twenty five hectares - housing an infrastructure of two thousand medium-rise dwellings with ancillary functions (maximum axial distance from center equals three hundred and thirty meters). Neighborhood, city planning, case/study/experiment, aesthetics, ecological issues.

Changing Dialogues: The Relationships Among Furniture, Interiors, And Architecture.

Vohs, Elizabeth (Arizona State University, AZ).

It is well known that successful design solutions must focus on clients' changing needs. However, as designers we do not implement design solutions that evolve with the client; rather, we are restricted by the preconceived notions of the boundaries among disciplines. Methods used in this project were literary research, interviews with professionals, and three-dimensional experiments. The experiments involved manipulations of a large piece of canvas, which tested people's reactions to design complexities. Research, interview, and experimental methods resulted in a design solution that consisted of a weeklong installation that conceptually explored the boundaries between furniture, interiors, and architecture. The results of this project indicated that it is possible for a design element or solution to have different meanings for different people. The findings of this project suggest that flexibility, adaptability, and user-defined spaces are issues that must take

precedent over the safe continuum that is practiced today. Accordingly, the definitions of furniture, interiors, and architecture are changing to accommodate complex user needs. This project highlights the role of the designer as navigator among architectural, interior, and furniture elements within the workplace environment. Interior/graphics design, architecture, theory, aesthetics/meaning/assessment.

The constructed Building: Using Virtual Reality Models to Build Awareness of Construction

Principles

Temko, Leonard (University of Michigan)

One of the core curricula items at the University of Michigan's Taubman College of Architecture and Urban Planning is the Construction Studio. Students are introduced to the fundamentals of building construction through a series of case studies, typically small residential structures by notable architects, that focus on different aspects of construction in architecture. Unfortunately, traditional modes of representation (photography, drawing, and small scale models) tend to obscure relevant physical and spatial characteristics of the buildings and systems under study. While the student may gain an appreciation of the graphic characteristics of the buildings with traditional representational media, whether the students grasp the more relevant and important spatial implications of the design is arguable.