

**Special Issue: National Consortium of Housing Research Centers**

Guest Editors: Joseph Laquatra and Anne L. Sweaney

The National Consortium of Housing Research Centers, founded in 1988, is a group of university members, associate members, and the National Association of Home Builders (NAHB) Research Center. The Consortium has a mission to advance housing research in the U.S., and a vision to be recognized as a leading source of information on this research. The Consortium recognizes that housing is a product and a process that produces a bundle of attributes for individuals, families, and communities. As such, housing influences and is affected by public policy decisions. The physical form of housing and the forces that determine it are major topics of study for Consortium members.

**BUILDING THE DISCIPLINE: DEVELOPING PROGRAMS FOR HOUSING SCIENCE RESEARCH**

Carlos E. Martin

This article made the case for supporting research in the field of housing technology and science by reviewing national attempts to advance housing science, its strategies and barriers, and the underlying needs for improving upon these. First, one historical and three contemporary programs established in the U.S. during the last century were reviewed that deal specifically with housing science to trace the varying strategies for developing a research agenda. Second, the contemporary status of resources and research for the discipline were discussed. In short, this article mapped out some of the critical issues and opportunities involved in developing housing science agendas to begin defining and advancing them.

**RURAL WORKFORCE HOUSING: PERCEIVED BARRIERS AND INCENTIVES FOR DEVELOPMENT**

Anne L. Sweaney, Kelly S. Manley, Jorge H. Atilas, Douglas C. Bachtel, Brenda J. Cude, Mick G. Ragsdale, Thomas F. Rodgers, Karen L. Tinsley, Janet S. Valente, and Gladys G. Shelton

The lack of affordable housing has been perceived as a barrier for economic development in rural areas where there is a shortage of housing for the workforce. This article reported the results of a series of Town Hall meetings where workforce housing issues were discussed and the results of an e-mail survey of members of the Georgia Economic Developers Association (GEDA). The GEDA provided a statewide framework linking both public and private organizations with shared interests in economic development. Participants in the Town Hall meetings as well as the economic developers who responded to the survey were not convinced that housing is a key to economic development. Many of the respondents in both groups agreed that there was an inadequate supply of housing types. However, a substantial proportion in both groups thought that there was too much of certain housing types. Relatively high percentages in both groups were unaware of housing finance programs and other incentives to create workforce housing. Both groups identified several important challenges to developing rural workforce housing and felt that funds available to assist with the development of single-family and multi-family housing were insufficient to meet current and future demand.

**WEAKNESSES IN CURRENT MEASURES OF HOUSING NEEDS**

William O'Dell, Marc T. Smith, and Douglas White

Defining housing affordability presents issues in measurement that have implications for housing policy. Measures of housing affordability are generally based on assumptions on what should be paid for housing. In establishing standards in this way, as in the 30% of income standard used with HUD programs, a single measure is imposed on an entire population and the most severe needs requiring intervention may be missed. Differences

may exist across age groups, family types and sizes, income levels, and location which may lead households to choose to pay more than 30% of their income for housing rather than living in units costing less. They may decide to buy or rent homes out of their price or rent ranges as defined by the affordability standard. As such, existing measures may provide housing policymakers with insufficient data for program targeting. Similarly, there are not adequate measures for housing condition. Housing condition problems tend to be more localized than cost burden problems, so that measures are needed at neighborhood level geographies. Further, Census measures do not adequately account for structural condition. Use of local data sources, such as property appraiser data sets, may allow developing local estimates of housing condition. The purpose of this study was to examine the current weaknesses in measuring housing needs and to propose modifications to those measures.

### **LEAN HOMEBUILDING USING MODULAR TECHNOLOGY**

Michael A. Mullens and Mark E. Kelley, III

This study focused on the application of lean production principles to modular homebuilding. To organize the effort, a kaizen blitz was used in a brief but intense attack on construction waste and inefficiency. Two factors made this effort unique. First, the home builder used factory-built modules, which dictated that the kaizen blitz improvement team must be extended up the supply chain to include both the modular manufacturer and builder and down the supply chain to include subcontractors. Second, conventional concepts of continuous flow and batch production were extended to a project-oriented construction environment. This article described how these issues were resolved and presented results that included substantial reductions in construction cycle time and significant improvements in safety, quality, productivity, and energy efficiency.

### **BUILDING A BALANCE: HOUSING AFFORDABILITY AND SMART LAND USE DECISIONS**

Joseph Laquatra and Judy Boggess

New York consists of highly diverse regions that feature urban, suburban, and rural areas. Some regions of the state are experiencing strong development pressures while others are characterized by stagnant economies. For state policymakers, this has been referred to as a development dichotomy that is further complicated by varying capacities of local governments. Larger cities have planning departments and rural communities have volunteer planning boards. Furthermore, areas with strong economies are attempting to resist sprawl, while those with stagnant economies welcome any type of growth. These factors underscore the need for localized approaches to the development of growth-related policies in New York. The goal of this study was to examine policies that focus on land use patterns, as well as mechanisms for preserving open space and achieving goals related to environmental protection and housing affordability. This goal was achieved by conducting a series of focus groups in communities throughout New York in which development-related concerns were expressed by town supervisors, county planning commissioners, mayors, school district officials, developers, farmers, environmental advocates, housing affordability advocates, and others. The focus groups demonstrated that common ground existed among groups that are often perceived to be in conflict with each other.

### **THE BUILT ENVIRONMENT FACTOR BASED ON BUILDING REHABILITATION: A CRITICAL ASPECT OF URBAN REVITALIZATION**

Logan Anjaneyulu, Matt Syal, and Faron Supanich-Goldner

This study demonstrated the potential of promoting urban revitalization in old cities by rehabilitating a vital entity of the built environment—the old, vacant, and underutilized building stock—by implementing the new “building rehabilitation code.” This article also presented an expanded urban revitalization model developed by incorporating a new component called the built environment, along with the existing social, economic, political, and cultural factors. For this purpose, a case study building was identified in Detroit and a comprehensive code-based rehabilitation cost analysis was performed to identify the potential savings by using the new building rehabilitation code. Based on the identified impacts, an expanded urban revitalization model was developed by incorporating this new built environment factor.

## **AN OPEN BUILDING STRATEGY FOR ACHIEVING DWELLING UNIT AUTONOMY IN MULTI-UNIT HOUSING**

Stephen Kendall

In the next 20 years, increasing numbers of American families will choose to live in urban areas for reasons such as proximity to work and cultural amenities. In light of that trend, this article reported on a model of a service-oriented building industry to help produce housing suited to individual household preferences in environments where the detached house is not possible. It specifically addressed the critical need to achieve autonomy of the individual dwelling in multi-unit buildings to reduce social and technical conflict under conditions of change and distributed control.

**Volume 31 No 2, 2004**

## **COMMENTARY: INCREASING SCHOLARLY PUBLICATION OPTIONS FOR HOUSING AND DESIGN PROFESSIONALS**

Craig Birdsong

The concept of scholarship includes five stages: discovery, integration, application, teaching, and outcome. This commentary outlined emerging opportunities for scholarship by housing and design professionals. One possibility consists of publishing brief notes reporting research on exploratory issues, innovative teaching ideas, and program development and implementation. A second possibility lies in publishing the results of displays and exhibits, including posters presented at professional meetings. Expanding the interpretation of scholarship can provide additional dissemination tools for the benefit of housing and design professionals who are under greater pressure to publish as well as our constituents

## **PERSPECTIVES OF RECYCLING AND IN-HOME RECYCLING CENTERS**

Tracy Parker Lewis, Cheryl A. Farr, Donna Branson, and Carol Bormann

The purpose of this study was to identify the beliefs, attitudes, and behavioral intentions of architects, interior designers, and home builders in two states toward environmental factors regarding recycling, recycling behavior, and in-home recycling centers; as well as to compare the willingness of these groups to promote and incorporate in-home recycling centers into their designs. Architects, interior designers, and home builders were selected from the membership lists of the American Institute of Architects, American Society of Interior Designers, and National Association of Home Builders. Respondents completed a self-administered questionnaire in 2001. Descriptive statistics and chi-square analysis were used to analyze the responses. Findings revealed that Minnesota architects, interior designers, and home builders each had positive measures on the behavior of incorporating in-home recycling centers into their designs as well as positive measures on behavioral intentions and attitudes regarding the promotion of in-home recycling centers. Although the attitude measures were relatively high regarding environmental concern and in-home recycling centers, Oklahoma architects, interior designers, and home builders did not have positive measures regarding the behavior of incorporating in-home recycling centers into their designs or the preceding behavioral intentions of incorporating such centers into their designs.

## **PERCEPTIONS OF SENSE OF SELF THROUGH INTERIORS OF HOMES**

Stephanie A. Clemons, Erin E. Searing, and Kenneth R. Tremblay, Jr.

The focus of this qualitative phenomenological study was to assess client perceptions concerning the roles their professional residential interior designers played in achieving a sense of self in their homes. This exploratory study of 10 families was undertaken to assess whether one person (a designer) could assist in expressing another person's (the client) sense of self in one of the most intimate of sanctuaries—the home. Participants were selected using purposeful sampling and were studied in 1999. The study included personal interviews and observations of homes. Five themes emerged from data analysis: home as a sense of place, home as a sense of self, symbolism of domestic objects, designer/client relationship, and designer's role in helping establish sense of self. Findings

revealed that study participants used personal objects within the home, as well as the overall design of the interior, to describe their personal characters. Additionally, participants perceived interior designers to be effective in helping develop a sense of self in their homes. Housing and design educators might use the research results in teaching students the importance of sense of self and the symbols intrinsic to the creation of a personal interior environment.

## **CULTURAL BACKGROUND AND HOUSING SATISFACTION**

Hyun-Jeong Lee and Kathleen Parrott

Diversity of culture is a major issue in many societies; however, it has been neglected in housing research. Few studies have been conducted to explore relationships between cultural differences and housing satisfaction, preferences, or needs. This research was an exploratory study to examine the relationship between residents' cultural background and housing satisfaction. National origin was assumed to be an indicator of cultural background. An on-line survey was administered to Virginia Tech graduate students living in apartment communities. Respondents were grouped according to their national origin. There were 169 useable questionnaires from students who were originally from the U.S., Korea, India, China, and Europe. Respondents were asked to rate their satisfaction with 22 housing features related to size, layout, interior, and other features as well as overall housing satisfaction. Findings were as follows: (a) national origin was significantly correlated with satisfaction with 11 different housing features and overall housing satisfaction, (b) differences were found among the satisfaction of respondents of the various national groups with 16 of the features and overall housing satisfaction, and (c) Koreans were significantly less satisfied with most housing features.

## **SERVICE LEARNING FOR HOUSING AND THE AGING**

Christine C. Cook and Nancy Meredith

Service-learning experiences abound on college campuses across the nation. Students enrolled in the course Housing and the Aging at Iowa State University could choose from a variety of service-learning opportunities ranging from friendly visits with residents in assisted living, conducting surveys, and developing programs and activities for senior day care centers. Maintaining a journal during the 10-week, 30-hour undertaking and presenting a poster at the end of the semester were required. Involvement in service learning proved to be both popular and successful. Students knew more about diversity among the aging population and the meaning of home and community at the conclusion of the course. Perhaps more importantly, students learned more about themselves and became advocates for the aging after having completed a service-learning experience.

## **SUBPRIME LENDING AND REVERSE REDLINING**

Thessalenuere Hinnant-Bernard and Sue R. Crull

This research related broadly to discrimination in mortgage lending and more specifically to subprime lending and reverse redlining. The article discussed subprime lending in the city of Des Moines, Iowa, using the Home Mortgage Disclosure Act data. The data identified areas of subprime lending and the probability of reverse redlining based on census tracts of the city. Demographic characteristics of the tracts that would indicate reverse redlining were studied in relation to the lending patterns. African-Americans, low-income applicants, and applicants receiving loans for home refinance had a greater probability of becoming victims of reverse redlining than others.

## **WHEN PLACE MOVES: CASE STUDY OF A HOMELESS SHELTER**

Shirley M. Niemeyer

Few investigations have focused on the homeless person's understanding of what home and place mean. Most of the research has considered home as a residence and the meaning of home or place to homeowners. The goal of this case study was to explore the meaning of home, house, and place among homeless persons frequenting a daytime shelter before and after a move of the shelter to another location. Most clients and staff appeared to quickly adjust to the new space and location, although acceptance of the new homeless shelter as a home varied among clients.

## **DEVELOPING AN INCENTIVE PROGRAM FOR UNIVERSAL DESIGN IN NEW, SINGLE-FAMILY HOUSING**

Sandra C. Hartje

The purpose of this study was to review the development of universal design and to make an initial recommendation for developing an incentive program for universal design in new, single-family housing. Current federal, state, and local initiatives with language for inclusion of visitable, accessible, and/or universal design features, as well as the LEED™ (Leadership in Energy and Environmental Design) program, were examined to determine adaptability to an incentive program in universal design. The recommendation was to develop an incentive program that is (a) aimed at new, single-family housing, (b) voluntary, consensus based, and market driven, and (c) comprehensive in scope. Five steps were presented to guide the process of developing the incentive program, each requiring additional research: (a) determining the design features, products, and materials required at various levels of attainment of universal design, (b) creating the criteria by which the universal design features would be evaluated, (c) identifying a coalition of supporters to implement the program, (d) designing a positive marketing campaign, and (e) evaluating the effectiveness of the incentive program. An incentive program would accelerate the adoption of universal design in housing, supporting the goal of transforming the housing market into one in which universal design features and products are the standard for design and construction.