



Seniors' Housing Update

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MANAGING BLURRING OF BOUNDARIES: *A conceptual framework for social, spatial and temporal analysis of live-work settings*

by Atiya Mahmood

THROUGHOUT THE LATE 19TH AND 20TH CENTURIES, AS INDUSTRIAL, COMMERCIAL AND RESIDENTIAL DISTRICTS IN THE UNITED STATES AND CANADA BECAME GEOGRAPHICALLY SEPARATED, THE CONCEPTS OF *HOME* AND *WORK* BECAME INCREASINGLY DISTINCT, BOTH MENTALLY AND PHYSICALLY. AT PRESENT, THE CONCEPT *WORK* IS PRIMARILY ASSOCIATED WITH THE PUBLIC REALM, AND IT IS ASSUMED TO TAKE PLACE AWAY FROM THE RESIDENCE DURING A SPECIFIC PERIOD OF TIME DURING THE DAY. THE CONCEPT *HOME* IS USUALLY LINKED TO THE PRIVATE REALM, AND IT IS ASSUMED TO BE A PLACE OF REST AND REJUVENATION AWAY FROM THE PLACE OF WORK.

These conceptualizations portray *home* and *work* as two separate realms, the activities of which are not expected to overlap either spatially or temporally. Nippert-Eng (1996) argues that people conceptualize and juxtapose *home* and *work* on a continuum of integration and segmentation. In a total integration scenario, *home* and *work* have no conceptual boundaries separating their content or meaning. All spaces and times are multipurpose. The activities of one realm spill over into the other realm, or the two are intentionally combined or performed in the same time and/or space. On the other end of the continuum, they are experienced as completely separate 'segmented' worlds. Here the boundaries are clear and mutually exclusive. In reality, most conceptualization of *home* and *work* falls somewhere in-between. These concepts are dynamic in nature and may hold different meanings for different people, these meanings may

change with different types of work, and they may also change over time for the same person due to changes in life course events. For instance, people who perform paid work in residential settings (e.g., home-based workers, home health care workers) may conceptualize these realms differently than those who work in other settings, because the degrees of spatial and temporal overlap between roles and activities of *work* and *home* in these situations are different from work in other locations.

My research "Home and work boundaries: Socio-spatial analysis of women's live-work environments" examined how home settings get transformed when paid work is introduced into the home, especially as to how much *home* and *work* are integrated/segmented through home-based workers' boundary management practices. This research exploring boundary management of home-based

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workers, helps us to understand how (*public*) work is accommodated into the (*private*) home. The theoretical framework of this research was based on Giddens' (1984, 1985) concepts of *agency*, *structure* and *practice*, Rapoport's (1990) concepts of *activity systems* and *system of settings* and Felstead and Jewson's (2000) concepts of *technologies of self*. One of the major strengths of this theoretical framework is that it brings to focus the importance of everyday practices in understanding the ideology embedded in people's actions and the centrality of 'space' and 'time' in understanding these practices. Findings from the study revealed that home-based workers — as active agents — perceive and interpret rules and resources of their social, spatial, economic and political contexts on a regular basis and interact with the existing structures (rules and resources) of their live-work environments and activate *technologies of self* and *technologies of environmental adaptation* to accommodate their paid work activities within their residences. These boundary management practices have spatial, temporal or behavioral manifestations. Participants use segmentation strategies of *defending* and *intrusion reduction* to place boundaries between work and home and integration strategies of *switching* to remove boundaries between these two realms. Presence of client in the residence, expectations or requirements of clients, household composition and household members' needs and practices, nature and motive of home-based work and spatial *affordances* of work settings influenced how and when these boundaries between *public/work* and *private/home* are placed or removed.

Although this study examined a different population group and type of work, the findings have implications for community based older adults receiving home health care. The underlying assumption is that this type of health care is less disruptive for the care receiver as it allows him/her to remain at home rather than move to an institutional setting. However, we have sparse knowledge of how the introduction of this type of care into the home affects the spatial characteristics of residences or the activities, routines and social interactions of the household and the *meaning of home*. Most private residences are neither designed for nor equipped for any type of paid work including work related to long-term or chronic health care provision.

Currently, there is limited research concerning social and spatial aspects of home health care settings (e.g., Dill, 1990; Rubinstein, 1990; McKeever et al., 2001-ongoing). The *meaning of home* and the domestic order changes when the family home becomes a site for long-term care (Rubinstein, 1990). When health care gets introduced into the home settings there is potential dichotomy between public/(health care) work and private/home. In the home health care situation, boundaries between health care work and household functioning may become blurred or accentuated depending on the perceptions, household situation, or needs of the home care worker, home care recipient and/or other household members. Home care research can draw from the conceptual framework and categories of the research on boundary negotiation for home-based workers and extend the findings on boundaries management between public and private spheres by examining how homes are transformed into health care work settings. Additionally, home health care work provides a unique context in which to explore the fluidity and use of boundaries in home settings from both the perspectives of the residents (care receiver and household members), as well as the outside worker (home health care professional) who comes into the residence to perform health care work.

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DEFINITION OF TERMS

Residence or home setting: The term *residence or home setting* is used to indicate market rate (rental and owned) and social housing, including single family detached houses, town homes, condominiums and apartments.

Home-based work: The term *home-based work* specifies paid work (both full-time and part-time) that individuals engage in at their places of residences, to provide services or goods for exchange in the market. The workers who perform home-based work may be self-employed or wage and salary workers and they may be engaged in this type of work in the informal or formal sector.

Agency: The concept *agency* is based on the idea that the individual is a generator of events and that she or he could have acted differently (within the parameters of the rules and resources of the culture and the society) Giddens' (1984).

Structures: According to Giddens (1979, 1984), *structures* are rules and resources of social institutions that help generate daily practices (through their interaction with agency). These recurrent practices, in turn, help to perpetuate or modify the social institutions whose rules and resources (structural properties) helped generate them.

Activity systems and system of settings: People engage in a wide range of activities during their day-to-day life. Several of these individual activities can be grouped together to form an *activity system*. The system of settings is a chain of settings linked through time and space to a corresponding chain of activities that individual or groups engage in (Rapoport, 1990).

Technologies of self and technologies of environmental adjustment:

Technologies of self "refers to ways in which people, more or less consciously and reflexively, mobilize and organize their attitudes, practices and feelings in the course of their everyday lives" (Felstead and Jewson, 2000, p.116).

This definition does not explicitly

address spatial and temporal aspects of daily practices. Thus, this concept is broadened to *technologies of self* (behavioural strategies) and *technologies of environmental adjustment* (temporal and spatial strategies). *Technologies of environmental adjustment* refers to ways in which people mobilize and organize spatial and temporal practices in their everyday lives.

Defending: Practices of boundary placement that reduce or manage invasion of household work into paid work's time and space are known as *defending*.

Intrusion reduction: Segmentation practices (temporal, spatial and behavioral) that help place boundaries between the home life (household and nurturing activities/roles) and paid work, as well as practices that limit paid work-related people's access to household space are all categorized as *intrusion reduction*.

Switching: Practices that allow or facilitate movement between household and nurturing work's time and space and paid work's time and space are known as *switching*.

Temporal, spatial and behavioral boundaries: *Temporal boundary enactment* involves identifying divisions between paid working and household working times, for example, setting times for uninterrupted paid work. *Spatial boundary enactment* involves decisions regarding paid work locations within the dwelling, and the degree of permanency and exclusivity of these spaces. Spatial boundaries can be placed through the use of fixed (e.g., walls, doors, etc.) and semi-fixed or movable items (e.g., partitions, furniture, etc.). Behavioral boundary enactment involves doing or not doing certain activities in areas allocated for paid work and/or household work.

Affordances: The configuration and material (with which it is fabricated) of a setting allows it to display or offer certain properties and these properties are known as *affordances* of that setting. This term was coined by Gibson (1979).

An interview with Dr. Ellen Gee on intergenerational living arrangements and their implications for housing ethnic populations

by Atiya Mahmood, PhD

In 1994 the NHRDP awarded Drs. Ellen Gee, Neena Chappell and Daniel Lai, a grant¹ to conduct a three-year study on living arrangements of Chinese older adults in British Columbia. Eight hundred participants from Vancouver and Victoria were interviewed. According to Dr. Gee, half of the respondents lived with their children and often grandchildren in multigenerational households. She stated that this is a much higher percentage than the national average. (60% of respondents in this study were widows; 70% were living with their children.) There was a difference in level of satisfaction with living arrangements between married couples and widows. Married older couples' level of satisfaction was the same whether or not they lived with their children. Among unattached older women the level of satisfaction was lower when they were living alone than when they were living with their children. These multigenerational households often lived in relatively large houses. Dr. Gee mentioned that the high percentage of older Chinese adults (the largest ethnic minority group in Canada) living with their children highlights the need to explore the housing design and space requirements of ethnic minority multigenerational households.

In 1998, Drs. Gee, Barbara Mitchell and Andrew Wister were awarded a grant by SSHRC² to conduct a study on living arrangements of four ethnocultural groups in Vancouver. A sub-study involved in-depth qualitative interviews with 15 intergenerational households. These included six Indo-Canadian households, five Chinese households, one West-European

household and three Greek/Italian households. According to Dr. Gee, this study provided additional insight into how and why multigenerational living arrangements occurred.

The literature on multi-generational living arrangements (mainly from the United States) states that elderly parents tend to live with their children mainly for cost efficiency and sometimes because they require care. According to Dr. Gee, their study demonstrated a different pattern. Rather than economic efficiency, filial bonds and social norms were the predominant factor influencing intergenerational living arrangements. The 65+ generation in their study were not contributing financially to the household, rather, they were contributing through sharing in the housework, child care and gardening responsibilities. Life-course transitions, for example, widowhood, retirement, loneliness and illness precipitated the move of the older adults to their children's residence. In most of the Indo-Canadian multigenerational households, patrilocal norms were dominant; that is, the older adult parents tended to live with their sons rather than daughters. In the Chinese multigenerational households, though the cultural norm was to live with sons rather than daughters, half of the parents lived with their daughters and the other half lived with their sons.

A striking finding mentioned by Dr Gee was that the older adults preferred to live on a rotational schedule if they had multiple children and they made the decision about when to move from one child's residence to another and determined the length of each stay. Another interesting finding was that only the Western European household

had a separate suite in the residence. In this particular household the parent lived with her unmarried son and a granddaughter and the granddaughter lived in the separate suite. The remaining households had designated rooms within their residence for the parent(s). Anecdotal information about ethnic older adults living arrangements demonstrates that they tend to live within the main dwelling in separate rooms and often they have assigned rooms in each of their children's residences. Only on rare occasions do they live in separate suites.

The above findings have implications for housing development for ethnic minority groups that should be taken into consideration when designing for this population.

¹ Gee, E.M, Chappell, N., & Lai, D. (1994). *Ethnic group membership and old age: The elderly Chinese in BC*. National Health Research and Development Program grant (\$160,000 over three years).

² Gee, E.M., Mitchell, B.A., & Wister, A.V. (1998). *Culture and co-residence: A comparative analysis of ethnicity, living arrangements, intergenerational relations and support in Canadian families*. Social Sciences and Humanities Research Council grant (\$150,000 over three years).

With deep sorrow we wish to inform readers that Dr. Ellen Gee, Chair, Department of Sociology and Anthropology and noted scholar in the area of gerontology, ethnic studies and demography passed away shortly after this interview was conducted.

A BOOK FOR HOME BUILDERS INTERESTED IN THE 55+ MARKET

Wylde, M. (2002). *Boomers on the Horizon: Housing Preferences of the 55+ Market*. Washington, DC: BuilderBooks (National Association of Home Builders). ISBN 0-86718-527-9

Reviewed by Atiya Mahmood, PhD

This book is based on a National Home Builders Association survey in the United States of 890 older adult households. Though this book is targeted towards builders and housing developers, housing and gerontology practitioners and researchers interested in housing preference and trends of the boomer generation will also find it useful.

The survey respondents, described in chapter 2, represent three age categories (55-64, 65-74 and 75+); five geographic regions of the United States (Northeast, Midwest, South Central, South Atlantic and West); four types of households (husband and wife, male only, female only and other); a range of annual household incomes; and three types of community (traditional, gated or golf course). Selected housing characteristics (e.g., floor plans, types of housing, additional rooms desired in the home) are compared across locations and housing values (ranging from less than US\$100,000 to US\$ 250,000+).

The top six amenities that would influence the 55+ homebuyer to move to a specific community are walking and jogging trails, outdoor spaces, public transportation, open spaces, a lake, and an outdoor pool.

Chapter 3 highlights respondents' preferences for location, home price, type of dwelling, home and lot size. According to this survey, people over the age of 55 prefer living in rural areas, outlying suburbs or close-in suburbs rather than within the city. However, the proportion of people preferring to live in rural areas decreased with increasing age. The author also discovered that people who preferred to live in gated or golf-course communities were more likely to prefer the suburbs. She compared the price respondents expected to pay for new homes to the average value of their current homes and found that the two were highly correlated. Women living alone (51% of respondents) were significantly more likely than either men living alone (38%) or married couples (24%) to pay less than US\$100,000 for a new home. More people in the Western region expected to pay over US\$200,000 for a new home than any other region of the country. A majority of the 55+ population (68%) preferred single-family detached homes. Their current type of housing influenced their preference (most of the respondents lived in a single-family detached house). Eighty percent of the respondents between the ages of 55 and 64 preferred single-family detached homes compared to 49 percent in the 75+ category. Additionally, people in the youngest age group were almost twice as likely to build a custom home on their lot compared to the 75+ category. The author does not provide any reasons for the difference in preference across age categories, but one may speculate that with increasing frailty/age-related health issues there may be a preference for housing with support services. The majority of homebuyers wanted a home between 1,000-2,500 sq. ft. Most people preferred their new homes to be around the same size as their present home except people who had homes smaller than 1,000 sq. ft who preferred a larger home. A majority (91% of those

aged 75+ and 85% of females living alone) preferred a single-story home.

Chapter 4 focuses on individual room types such as bedrooms, family rooms, kitchens, bathrooms, laundry rooms and special rooms (which include home offices, dens, dining rooms, sun rooms, media and exercise rooms). Approximately half (48%) of the respondents wanted three bedroom homes and 42 percent wanted two bedroom homes. People in the Northeast and those in the 75+ age category were more likely to want two bedroom homes than people in the other regions and in other age categories. People with higher incomes tended to want more bedrooms than people with lower incomes. Two-thirds of the respondents wanted a completely open kitchen or kitchen separated by a half wall adjacent to the family room. Overall, 71 percent of the respondents wanted a dining room. More people (49%) in the 55-64 age group wanted home offices than in the 75+ age group (29%).

Chapter 5 details preferences related to approximately 90 different interior and exterior design features of the residence. These include exterior siding, openings (doors and windows), kitchen and bath features, flooring materials, home systems, storage and ceiling height. Respondents were asked whether certain design features were essential, desirable, of no consequence or not needed in their residence.

In chapter 6, the author presents data on respondents' sources of information for new homes or renovations and acceptable trade-offs in size, location, types of rooms and quality for affordability. Data are also presented on respondents' concern about the impact of the residence on the environment.

The typical 55+ homebuyer shops for eight months and views seven new homes and seven existing homes. Younger and wealthier homebuyers shop longer and visit more homes. To make their homes more affordable, 37 percent of the respondents were willing to buy a smaller house, 36 percent were willing to buy a smaller lot, 32 percent would leave part of the house unfinished, and approximately 20 percent would either live farther from conveniences like shopping centers or select fewer amenities. As well, three-quarters of the respondents preferred a smaller house with high quality products and amenities.

Chapter 7 is concerned with community characteristics, focusing on amenities including availability of public transportation, outdoor recreational options, security options (e.g., traditional neighborhood or gated community) and preservation of open spaces. The top six amenities that would influence the 55+ homebuyer to move to a specific community are walking and jogging trails, outdoor spaces, public transportation, open spaces, a lake, and an outdoor pool.

Boomers on the Horizon presents respondents' preferences across different geographic regions and age groups in the main section of the book and relegates the rest of the comparative analysis to tables in the Appendix. It would have been useful to discuss some of these data in the main body of the book. Another shortcoming of this book is that the author does not provide any reasons for variations in preferences and one is left wondering why some prefer one type of housing, community or interior/exterior finish over others. For example, why do more male-only households prefer to buy single-family detached houses than female-only households? Why do more people in the Northeast prefer two-story residences? Why do people in the highest income bracket prefer two-story houses? Additionally, it would be informative to know how ethnicity affects housing choice and preferences as minority homeownership lags behind non-minority homeownership in the US. Although similarities exist in the lifestyle and habits of Canadians and Americans, readers from Canada should use caution while interpreting the data as the demographics of the two countries are different and regional variations across Canada may be different from regional variations in the US.

RECENTLY COMPLETED M.A. PROJECT



McWhirter, Margot (2002). *Resident-centred care and the quality of life of long-term care facility residents*. M.A. Project, SFU Gerontology Program (Supervisory Committee: G. Gutman, H. Chaudhury).

Quality of life (QOL) is a multifaceted concept that is recognised as being influenced by various intrinsic and extrinsic factors. Resident-centred care (RCC) is an innovative health care approach that contends that the residents and staff of long-term care (LTC) facilities can work together to maximise residents' QOL. Under this approach, social and physical environments are designed to create a homelike setting where residents are empowered to build strong interpersonal relationships, make informed decisions about every aspect of their life, and to participate in a variety of meaningful and familiar activities — all while receiving appropriate levels of personal assistance and medical care.

In a two-part study, quantitative and qualitative research methods were combined to assess the degree to which 11 LTC facilities in Kelowna, British Columbia had implemented a series of RCC strategies, and to measure the perceived QOL of 103 facility residents aged 65 and over. The relationship between the implementation of an RCC approach and perceived QOL was then examined via logistic regression analysis.

The use of a newly developed RCC scale permitted the detection of differences between LTC facilities on the degree to which they had implemented an RCC approach. It also provided a detailed account of the use of individual RCC strategies within one community. The most commonly used strategies may reveal which ones were easiest to implement or which ones the facilities considered most important. While the results did not support a direct relationship between the degree of RCC being implemented and residents' perceived QOL, other significant relationships were found. Having a positive sense of involvement — interpreted as having good personal relationships and a sense of belonging — was the strongest predictor of QOL. In addition, compared to Intermediate Care-level residents, Extended Care-level residents were more likely to rate their QOL positively. These findings suggest that having 24-hour access to professional care was a stronger determinant of perceived QOL for Extended Care-level residents than for Intermediate Care-level residents. Regardless of the level of care required, having a sense of belonging was of ultimate importance to residents' QOL.

The importance of human factors and design principles in the development of assistive devices, environments, and tools for older adults: An introduction to GERO830

By Alex Mihailidis, PhD P.Eng.

We have started to see a significant increase in the development of technology-based devices and environments to assist and care for older adults. New innovations such as advanced mobility aids, automatic reminding systems, and smart homes have started to emerge with the goals of helping people perform more activities independently, and remaining in their own homes for as long as possible. However, as more and more devices are developed and tested, we are starting to realize that the typical approach in developing assistive technology may not be appropriate when developing devices for this special population.

To maximize the benefits of technology for older adults, we need to ensure that products are designed so that they are usable by this population. The needs of these individuals are extraordinarily diverse. The specific effects of aging and age-related disorders often result in special criteria that require particular attention when designing and selecting an assistive device. These include the capabilities and context of the user, including their mobility and cognitive status, hearing and visual abilities, and personal preferences.

It is imperative to find an appropriate match between the needs and the abilities of the older adults and the design and capabilities of the technologies. More often than not, these factors have not been taken into account when developing and selecting devices for an older adult user. We have seen instances where a new device is unusable by the person because the buttons are too small, or because the look of the device is not appealing to the user. As a result, the device is abandoned (as is the case with approximately one-third of assistive devices).

Future developers and suppliers of assistive devices need to understand all of the factors that could affect the performance of this population when interacting with technology. Human factors and design focuses on system usability and designing system interfaces to optimize the user's ability to accomplish a task. The discipline is rooted in understanding how people use tools, products, and systems to accomplish desired tasks, and it seeks to eliminate or, at least, manage the human errors that sometimes do occur. It is an applied science that takes research about human abilities, limitations, behaviours, preferences and processes and uses this knowledge as a basis for the design of tools, products, and systems. Applying human factors and design principles leads to designs that are safer, more acceptable, more comfortable, and more effective for accomplishing their tasks.

It has been a long held notion that the use of human factors and design principles are only needed by engineers and those who are intimately involved in the design and development stages of a product – this is untrue. These applied fields and techniques also need to be embraced by all those who, although not directly involved in the technical aspects of design, are involved in helping older adults to live safer and more independently. This includes gerontologists, social scientists, caregivers, and anyone else with a keen interest in assistive devices and the safety and care of older adults. With the advancement of new smart home technologies an intimate understanding of these techniques has especially become very important for those who are interested in the area of aging and the built environment (i.e. the planning, design, development and evaluation of hous-

ing, care facilities, community environments and enabling technology).

The application of human factors and design theory in the development of devices, tools, and environments that are functional and safe for the older adult is the focus of a new course offered by the Gerontology Program. This course, GERO830—Human Factors, Technology and Safety, will offer students of varying backgrounds and levels of expertise the opportunity to learn about human factors and design as applied to the older adult. Students will gain a better understanding of the basic concepts of human factors and the design process, and will look at the use of technology in achieving safety and proper care of older adults. Students will also learn how these perspectives can be applied in the design of computer software and hardware, including user interfaces, internet accessibility, and input/output devices. This course will provide students with a unique and multi-disciplinary environment to learn about these important principles, and the opportunity to apply these skills to real-world problems through the completion of hands-on projects.

The area of human factors and design as applied to older adults is a relatively new field, and has started to gain recognition as being critical in the fields of assistive devices, rehabilitation engineering, and now, in gerontology. This new course will give everyone involved the opportunity to learn, share, and express their ideas on this new exciting field, and to begin to understand the issues that are involved in using technology to help older adults. For more information on GERO830 please contact Dr. Alex Mihailidis at the Gerontology Research Centre (604-291-5180, amihaili@sfu.ca).

BOOK REVIEW:

Design for Assisted Living: Guidelines for Housing the Physically and Mentally Frail. Victor Regnier, Architect, FAIA, Los Angeles. ISBN 0471-35182-2, hard cover, 344 pages. 2002. John Wiley Publishers.

Reviewed by Habib Chaudhury, PhD

Assisted living is considered to be a major residential option for older adults in the United States and increasingly in Canada. This housing form has been defined as "...[A] special combination of housing, support services, personalized assistance and healthcare designed to respond to the individual needs of those who require help with activities of daily living (ADL) and instrumental activities of daily living (IADL). Supportive services are available, 24 hours a day, to meet scheduled and unscheduled needs, in a way that promotes maximum dignity and independence for each resident and involves the resident's family, neighbors and friends..." (ALFA, 2000). The model is based on congregate living with added health and social services. Principles of autonomy, privacy, social interaction and choice are the major issues that drive the foundation of assisted living.

Victor Regnier's book *Design for Assisted Living: Guidelines for Housing the Physically and Mentally Frail* is an excellent resource for planners, architects, interior designers, landscape architects, housing providers, housing managers and health care providers.

The book is based on 95 buildings visited by Regnier in 1999. It presents an array of 100 design concepts and 15 case studies of assisted living projects from Northern Europe and the United States. The 100 "critical design considerations" section is presented through ten broad design issues ranging from "neighborhood and site" through "designing for dementia." The latter issues include: social wandering, facilitating orientation, home within a home, "snoezelen" (see below) and, one of the most appealing design considerations, "life skills activities" which are designed to create the feeling of a single family house. In contrast to design considerations that attempt to compensate for the cognitive decline or impairment of the residents, this concept takes a positive approach in creating an environment that capitalizes on long-term memory. As Regnier points out, many northern European countries have used kitchen and laundry as two important spaces that link people to normalized activities.

"Home within a home," presents the benefits of a secured dementia care unit within the larger assisted living building. One advantage is that residents with mild cognitive impairment may be placed in the main assisted living area, and later moved into the secured dementia unit when cognitive functions decline. Regnier suggests that the dementia unit should not have more than 20-25 residents or no more than 25-35

percent of the total population. This proportion is difficult to maintain over time unless residents with dementia are relocated to another facility as their numbers increase.

The "snoezelen" bathing space which includes aromatherapy, music and comforting visuals, contrasts with the usual institutional tub room which is unfamiliar to a person with dementia and has the potential of inducing agitation at bathing time.

The book has ample visual materials illustrating positive design scenarios from numerous facilities in Europe and United States. The case studies have photographs and floor plans illustrating specific design solutions. One of the issues that comes across in many of the case studies is the effort given to create meaningful community connections in many European examples. For instance, it was particularly interesting to note the overlap of 14 housing units for seniors, a day center for 21 children, and a well-baby clinic in the project "Metsatahti" in Hankasalmi, Finland. The dining room serves both the seniors and the children and creates opportunities for both formal and informal interaction between the groups. The staff of the senior's units is shared with the children's center which has the potential of making them "social bridges" between the two groups. Also, 7-10 community residents take their meals in the building and additional meals are delivered to older people in the community. Activities of daily living, such as cooking, eating, reading, exercising, etc., by virtue of their relevance to different age groups, have the potential for creating inter-generational connections that do not rely on formal activity programs.

The volume's last section is particularly useful in summarizing "20 most important design issues" and proposing "30 future trends" that provide a forum for enriching and deepening the ongoing discussion among professionals, policy makers, advocacy groups and researchers about the role of assisted living as a residential option for older adults. This section provides quick access to salient design guidelines without the necessity of going through the main section on design considerations. The future trends include: the increased diversity in residents' interest, more relevance of philosophy of caregiving with building design, and more regulatory concern.

Conceptually, assisted living is an answer for "aging in place." As observed in the book, with appropriate and flexible regulations, assisted living facilities have the potential of becoming residential care settings providing more support within a home-like environment. However, in reality, assisted living facilities are falling short in the United States in meeting health care needs resulting in relocation of residents to skilled nursing facilities. The issue of affordability remains to be addressed by the assisted living industry. The typical privately-owned assisted living facility remains out of reach for low to moderate income elderly. It will be instructive to observe how the two new seniors' assisted living projects, Dania Manor and Nikkei Home, operating in the non-profit sector in Greater Vancouver's Fraser Health Region, will evolve.

STAFF PROFILES



Dr. Habib Chaudhury

Dr. Habib Chaudhury is an Assistant Professor in the Gerontology Program. Dr. Chaudhury has a PhD in Architecture/Environment-Behavior studies from the University of Wisconsin-Milwaukee. Prior to coming to SFU in September 2001, he taught in the Department of Environmental Design and in Department of Art at the University of Missouri-Columbia. Dr. Chaudhury was the project coordinator of the Center for Interdisciplinary Geriatric Assessment at the University of Missouri-Columbia. He is a past Fellow of the Institute on Aging and Environment at the University of Wisconsin-Milwaukee and has served as the project manager for the National Alzheimers Design Assistance Project.

Dr. Chaudhury is currently Associate Editor of the *Journal of Housing for the Elderly*. He is a member of Gerontological Society of America and Environmental Design Research Association.

Recent Publications

- Chaudhury, H. (in press). Quality of life and place-therapy. *The Journal of Housing for the Elderly*.
- Chaudhury, H. (2002). Journey back home: Recollecting past places by people with dementia. *Journal of Housing for the Elderly*, 16(1/2), 85-106.
- Chaudhury, H. (2002). Place-biosketch as a tool in caring for residents with dementia. *Alzheimer's Care Quarterly* 3(1), 42-45.
- Weisman, G.D., Chaudhury, H., & Moore, K.D. (2000). Theory and practice of place: Toward an integrative model. In R. Rubinstein, M. Moss, & M. Kleban (Eds.), *The many dimensions of aging: Essays in honor of M. Powell Lawton*. Springer Publishing Company.
- Chaudhury, H. (1999). Self and reminiscence of place: A conceptual study. *The Journal of Aging & Identity* 4(4), 231-254.
- Kovach, C., Weisman, G., Chaudhury, H., & Calkins, M. (1997). The impact of therapeutic environments for dementia care. *American Journal of Alzheimer's Disease* 12(3), 99-110.
- Chaudhury, H. (1997). *Self and reminiscence of place: Toward a theory in (re) discovering selfhood for people with dementia in long term care settings*. Environmental Design Research Association Annual Conference Proceedings. Montreal, Canada.



Dr. Atiya Mahmood

Research Areas:

- Environment-Behavior studies with focus on socio-cultural aspects and gender issues
- Health and Housing
- Aging in Place
- Aging, Ethnicity and Housing

Dr. Atiya Mahmood is the BC Real Estate Foundation Post-doctoral Fellow in Environmental Gerontology at the Gerontology Research Centre, SFU. She completed her Bachelor of Architecture at the Bangladesh University of Engineering and Technology and her MSc in Environmental Design at the University of Missouri. She received her PhD in Architecture from the University of Wisconsin-Milwaukee in 2002. Her PhD thesis examined *home* and *work* boundaries in live-work settings of home-based workers. At present, she is developing her research program in the area of aging, health and community living by expanding her doctoral work to explore boundary negotiations of home-health care settings from the triadic perspective of older adult health care receivers, informal and formal caregivers. Her other research interests include housing needs of older adults in ethnic minority groups, affordable housing for seniors and gender issues in the built environment.

Before starting her post-doctoral fellowship in 2002, Dr. Mahmood worked as the Housing and Environmental Design state extension specialist at the University of Missouri for four years. There, her work focused on affordable housing, homebuyer education, environmental health and housing through community partnership.

STAFF PROFILES (CONTD)



Dr. Alex Mihailidis

Dr. Mihailidis, PhD, P. Eng., completed his doctorate in Rehabilitation Engineering at the University of Strathclyde in Glasgow, Scotland, and at the Centre for Studies in Aging at Sunnybrook & Women's College Health Sciences Centre in Toronto.

At the Gerontology Research Centre, he is an Alzheimer Society of Canada/CIHR Research Fellow and is an Assistant Professor in the School of Engineering Science at Simon Fraser University.

For the past seven years, Dr. Mihailidis has been investigating the potential uses of technology and artificial intelligence in assisting older adults with cognitive disabilities. He has primarily been focusing on the development of a supportive environment for people with dementia. To date, he has developed and clinically tested two prototypes of devices that assist users during hand-washing. The latest device used a video camera and simple artificial intelligence to "watch" a person as they washed their hands, and to determine if an error occurred (such as missing a step or doing something in an improper sequence). If an error was made, a verbal prompt was provided to the user. Dr. Mihailidis will continue this line of research at SFU in addition to several other projects in the areas of cognitive devices, artificial intelligence, and context-aware design as they pertain to older adults. He has also been involved in projects which have looked at other problems of aging including mobility and environmental design. These included the design of a powered

wheelchair that had sideways capability, the development of a new patient lifting system, and the computer modeling of wheelchairs and slings.

Dr. Mihailidis has been active in RESNA—the Rehabilitation Engineering and Assistive Devices Society of North America, where he is the chair of the Special Interests Group on Cognitive Disability and Technology, as well as in RESNA Canada. He holds a Professional Engineering designation (P.Eng.) from the Society of Professional Engineers Ontario.

RECENT PUBLICATIONS

- Mihailidis, A., Fernie, G., & Barbenel, J.C. (2001). The use of artificial intelligence in the design of an intelligent cognitive orthosis for people with dementia, *Assistive Technology*, 13, 23-39.
- Mihailidis, A., Fernie, G., & Barbenel, J.C. (2001). The COACH: A computerized cueing device to help people with dementia to be more independent. *Gerontology*, 47(Suppl. 1), 526.
- Mihailidis, A., Fernie, G., & Cleghorn, W.L. (2000). The development of a

computerized cueing device to help people with dementia to be more independent, *Technology & Disability*, 13, 23-40.

CONFERENCE PRESENTATIONS

Holliday, P., Mihailidis, A., Rolfson, R., & Fernie, G. (2002, November). *Does sideways movement increase mobility and maneuverability in a powered wheelchair?* Gerontechnology 2002 – The International Society for Gerontechnology Conference, Miami Beach, FL.

Mihailidis, A. (2002, November). *Intelligent supportive home environments for older adults with dementia: Current and future research.* Gerontechnology 2002 – The International Society for Gerontechnology Conference, Miami Beach, FL.

Mihailidis, A. (2002, September). *The development of an intelligent supportive home environment for older adults with dementia.* TechMed Show, London, ON.

Mihailidis, A. (2002, July). *The importance of context-aware principles in the development of cognitive devices.* The Fifth International ACM SIGCAPH Conference on Assistive Technologies, Edinburgh, Scotland.

Mihailidis, A., & Fernie, G. (2002, June-July). *An intelligent cognitive orthosis for persons with moderate-to-severe dementia: Results and recommendations.* Rehabilitation Engineering and Assistive Technology Society of North America, Minneapolis, MN.

Now available on the Internet

"A Roof Over My Head: A Guide for Seniors Renting in British Columbia", produced by the B.C. Coalition to Eliminate Abuse for Seniors is now available on the Internet at www.canadianelderlaw.ca. This updated version includes the recent changes of B.C. tenancy laws.

CENTRE ACTIVITIES

CONFERENCE PRESENTATIONS

Brady-Mueller, L., Sudbury, F., & Doyle, V. (2002, October). *Falls prevention in supportive housing: A community development project*. Paper presented at the 31st Annual Scientific and Educational Meeting of the Canadian Association on Gerontology, Montreal, QC.

Brink, S., & Gutman, G.M. (2002, April). *Achieving barrier-free environments — the Canadian experience*. Paper presented at the Valencia Forum, Valencia, Spain.

Chaudhury, H. (2002, May). *Does design matter? Impact of environmental modification on residents with dementia and the staff in a dementia care unit*. Paper presented at the Conference "Designing for Diversity in Dementia Care" organized by the Alzheimer Society of Ontario and Murray Alzheimer Research and Education Program, Toronto, ON.

Gee, E.M., & Mitchell, B.A. (2002, April). *Under one roof: Intergenerational exchanges and interdependence in multi-generational families*. Paper presented at the 73rd Annual Meeting of the Pacific Sociological Association, Vancouver, BC.

Gnaedinger, N. (2002, October). *Canada Mortgage and Housing's senior seminars: "Crossing bridges"*. Paper presented at the 31st Annual Scientific and Educational Meeting of the Canadian Association on Gerontology, Montreal, QC.

Gutman, G.M. (2002, May). *Meeting seniors needs for housing and health*. Invited address presented at the Canada Forum Conference "Developing, Managing and Marketing Seniors Housing and Retirement Living — Meeting Seniors' Needs in a Changing Economy", Vancouver, BC.

Mitchell, B.A. (2002, June). *Home but not alone: Economic and socio-cultural aspects of Canadian young adults sharing parental households*. Paper presented at

the annual meetings of the Congress of the Social Sciences and Humanities, University of Toronto.

Spencer, C. (2002, November). *STEPS: Understanding victimization of seniors in rental housing*. Paper presented at the Ontario Elder Abuse Conference, Toronto, ON.

Ward Hall, C., & Spencer, C. (2002, October). *Steps to safety and security of seniors in rental housing: Issue identification and resource development*. Paper presented at the 31st Annual and Scientific meeting of the Canadian Association on Gerontology, Montreal, QC.

PUBLICATIONS

Chaudhury, H. (2002). Journey back home: Recollecting past places by people with dementia. *Journal of Housing for the Elderly*, 16(1/2), 85-106.

Chaudhury, H. (2002). Place-biosketch as a tool in caring for residents with dementia. *Alzheimer's Care Quarterly*, 3(1), 42-45.

Clarke Scott, M.A., Nowlan, S., & Gutman, G. (2001). Progressive housing design and home technologies in Canada (pp. 36.1-36.15). Chapter in W.F.E. Preiser (Ed.). *Universal design handbook*, New York: McGraw-Hill.

Cvitkovich, Y., & Wister, A.V. (2001). The importance of transportation prioritizing of environmental needs to sustain well-being among older adults. *Environment and Behavior*, 33(6), 809-829.

Cvitkovich, Y., & Wister, A.V. (2001). A comparison of four person-environment fit models applied to older adults. *Journal of Housing for the Elderly*, 14(1/2), 1-25.

Gutman, G.M. (2001, Dec. 22-28). Preparing your home for older relatives. *TV Week*, 26(51), p.15.

Mitchell, B.A. (2002). 'Mature' adult children living with parents: Patterns, predictors and issues for aging families. *GRC News*, 20(2), 3-4.

Mitchell, B.A., Wister, A.V., & Gee, E.M. (2002). There's no place like home: An analysis of young adults'

mature coresidency in Canada. *International Journal of Aging and Human Development*, 54(1), 1-28.

Schwarz, B., Chaudhury, H., Brent, R., Cooney, T., Dunne, K., & Bostic, J. (2001). *Impact of design interventions in nursing homes on residents with dementia, their families, and the staff*. Milwaukee, WI: Center for Architecture and Urban Planning Research. University of Wisconsin-Milwaukee.

Spencer, C. (2002, January). The legislative needs of British Columbia seniors in rental housing. *Brief to the B.C. Residential Tenancy Office*.

Spencer, C. (in press). *Tips of the trade series: Education materials for building managers housing seniors*. B.C. Coalition to Eliminate Abuse of Seniors, Burnaby, B.C.

Wister, A.V. (2002, January). *Population estimates of the demand for congregate living in Tsawwassen*. Barbican Properties Inc., Vancouver.

MASTERS THESES & PROJECTS

Grant, S.D. (2001). *The impact of relocation on adult day centre clients with dementia*. M.A. Thesis, Gerontology Program, Simon Fraser. (Supervisory Committee: G. Gutman, A. Wister, J. Perry).

Johnstone, W. (2001). *Key factors in the survival of non-profit homesharing programs serving seniors in Canada*. M.A. Project, Gerontology Program. (Supervisory Committee: G. Gutman, A. Wister, B. Lautsch).

Livadiotakis, G. (2001). *The impact of continuing care reforms to home support services: A regional impact assessment*. M.A. Thesis, Gerontology Program (Supervisory Committee: G. Gutman, Y. Carrière, E. Gee).

Murray, A. (2001). *Environmental characteristics and staff ratings of newer and older special care units for dementia in British Columbia*. M.A. Project, Gerontology Program. (Supervisory Committee: G. Gutman, K. Oakley).



*Her Majesty, The Queen & Ernie Eves,
Premier of Ontario*

ive environments for older adults with dementia (more affectionately known as the Talking Washroom) as part of the Ontario Rehabilitation Technology Consortium (ORTC) exhibit. Dr. Mihailidis spent seven years with the ORTC developing this new area of research before moving to Simon Fraser University.

Dr. Alex Mihailidis took part in a major exhibition — the “Festival of Ontario” — that helped celebrate the Golden Jubilee of Queen Elisabeth II .

For the festival which was hosted by the provincial government, the Ontario Hospital Association showcased the innovations of Ontario hospitals over the fifty-years of the Queen’s reign, featuring new advancements in assistive devices, including powered wheelchairs, prosthetics, vision and hearing technologies.

Dr. Mihailidis presented his research on the development of intelligent support-



*Dr. Alex Mihailidis at
Festival exhibit*

SPEAKING ENGAGEMENTS

Gutman, G.M. (2002, July 18). *Meeting seniors’ needs for housing and health*. Presentation hosted by NTUC ElderCare Cooperative, Singapore.

Spencer, C. (2002, November). *Promoting safe and stable seniors housing*. Workshop Organizer and Facilitator. 10th Annual Conference of B.C. Non-Profit Housing Association, Vancouver, BC.

RECENT ACQUISITIONS IN THE GRC LIBRARY

Housing and the Built Environment

British Columbia, BC Housing. *Homes BC, building homes for healthy communities providing choices and creating jobs: Non-profit housing, design and construction standards*. HO300 H767 2001.

Gerontechnology: International Journal on the Fundamental Aspects of Technology to Serve the Ageing Society. Valkenswaard, The Netherlands: Holapress.

Doyle, V., & Campbell, L. *St. Francis Manor by the Sea*, Victoria, BC. HO775 D754s 2002.

Regnier, V. *Design for assisted living: Guidelines for housing the physically and mentally frail*. HO780 R342d 2002.

Scheidt, R.J., & Windley, P.G., (Eds.). *Environment and aging theory: A focus on housing*. HO100 E61s 1998.

Brent Carmichael is assisting Dr. Alex Mihailidis with development of an intelligent cognitive orthosis to facilitate independent toileting in those suffering Alzheimer disease. Brent is a senior Co-op student in the UBC Mechanical Engineering program. He worked previously in the manufacturing and power sectors locally, for Ballard Power Systems, and abroad, for Alstom Power in Switzerland and the DLR Aerospace Institute in Germany. His current career goals are aimed towards rehabilitation engineering – specifically assistive devices – which is what brought him to SFU. Upon graduation, in May 2003, he hopes to continue working in this field solving the challenges imposed by able-body-centered environments by improving peoples’ independence and mobility in such situations.