CMHC nursing home and hostels
design guidelines study

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WORKING PAPER # 1

CONCEPTUAL FRAMEWORK

CMHC NURSING HOME AND HOSTELS
DESIGN GUIDELINES STUDY

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CMHC NURSING HOME AND HOSTELS DESIGN GUIDELINE STUDY

Working Papers

1. Conceptual Framework

2. Profile of Users

3. Programmes and Services

4. History of Long-Term Care Facilities in Canada

5. Definitions (Levels of Care, Nursing Homes and Hostels)

6. Aspects of Designing Nursing Homes and Hostels with Care Services for the Elderly.

7. Research Methodology: Literature and Legislative Review

"I am an island, barren, surrounded by the waters of my life, my own shores drouth-pounded, desiccated. Only echoes skim the waters to my island-world - whispers and words, songs and laughter, carried by satellite of memory into my solitude.

Hands lie heavy on my lap - vein-ridged, spotted. Once they were like white birds in graceful flight over keys of a piano, stirring savory pots of food, gentling a crying child. Agile, useful, they were never still. Now they too are done with reaching out. They are folded inward.

Memory teases me, evanescent, transforms me in a breath of time into a bride holding fear and hope inside my white voile wedding dress. I am young and breathless with excitement... No, I am old and breathless with fatigue.

'I know; I know,' they say. 'There are problems with being old.' But they do not know. Everyone has been a child. All can understand through muffled memory how childhood was. But none has been old except those who are that now."

Bert Kruger Smith
Aging in America
Boston: Beacon Press, 1973
p. 2.

"But thank heaven, not all of us are willing to become just wrinkled babies."

Maggie Kuhn, founder, Grey Panthers

"In this Home of refinement, Christian influence and comfort, relieved from toil and anxiety, older persons pleasantly spend the evening twilight of time and serenely wait the coming of the Lord."

from New York and Its Institutions (1872)
cited in:

- Carol Lucas, Recreation in Gerontology, 1964, p. 6.

Introduction :

As explained in Working Paper # 7, the methodology used in this study is to prepare a series of working papers which present a state of the art review with regard to current thinking in areas pertinent to the formulation of design guidelines for nursing homes and hostels with care services for elderly people. These papers, based on an extensive literature review, are written to inform, as well as to stimulate discussion and debate.

This paper presents the conceptual framework, or basic philosophy, of the nursing home and hostel design guideline study. That is, here we will present background material necessary both for understanding the other working papers and for understanding and implementing the design guidelines themselves.

By nature of physiological and mental conditions, social and economic losses and lack of shelter and service options, many elderly people have had no alternative but to enter a long-term care institution. These have traditionally been anything but the "homes" they are called and residents have had to give up their previous lifestyle autonomy, independence, privacy, choice, and social contacts in return for institutional care.

Our belief is that although it is not the only factor in providing care, the physical environment is very important and works with other components of a service delivery system (such as staff, administration, and philosophy of care) to provide a certain type of care. If sensitively designed, the physical environment can greatly contribute to the satisfaction of nursing home and hostel residents, and thus help compensate for at least some of the negative aspects of institutionalization.

We also feel strongly that sensitively designed environments must be based on information about the needs and desires of the people who will use those environments. These working papers provide background material based on a review of relevant literature. Another kind of study, called post-occupancy evaluation, will also be needed to learn how well nursing homes and hostels are actually meeting the needs of their users.

It is our hope that the design guidelines which result from this study inspire creative humane approaches to the design of Canadian nursing homes and hostels with care services; design which enables residents to retain their dignity and autonomy while receiving the care they need.

Note: References to sources listed in the bibliography will be made in the following way: (Author, date) e.g. (Lawton, 1974).

Environment Needs of Elderly People:

Elderly people (65 and over) are one of the groups living in housing financed by Central Mortgage and Housing Corporation. All age groups have particular needs with regard to their physical environment, but due to serious losses* in every aspect of their lives: social, economic, and physiological, environmental needs of elderly people seem particularly great, since they usually lack the resources with which to compensate for a poor environment. Environments for elderly people need to provide more than mere shelter.

Continuum of Care:

Elderly people cannot all be categorized together since, as in any group of individuals, capabilities, backgrounds, needs and desires differ. A variety of housing and service options have arisen to serve seniors with varying requirements. Often called a "continuum of care," these housing and service combinations are appropriate for elderly people having specific characteristics.

Older people who are in good health and whose social and economic situation warrants it often live independently or with their families in their own homes or in age-integrated or age-segregated apartments. These seniors usually receive few, if any, services (such as a visiting homemaker or nurse). Those older people whose physiological, social and economic needs are greater may live in an age-segregated semi-independent setting where they have their own room or apartment, but where some services (such as meals) are supplied, and some facilities are shared. These are often called "hostels" or "congregate housing." Elderly people whose health needs are particularly great and whose personal or family resources are not sufficient to respond to these needs, may enter a home for the aged or a nursing home. In these settings residents usually share a room with

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* See Working Paper # 2, User Profile.

one or more people and all services from nursing care, to meals, to activities are provided. These facilities vary tremendously in their sponsorship, size, management, staffing, accreditation, type and quality of care, cost and the like. Some facilities provide a great deal of medical care, while others provide minimal medical services. Those elderly people whose physiological needs are greatest are usually cared for in chronic care hospitals. There are a number of other options* along this continuum, but these are the major types.

It is important to remember that elderly people are individuals whose tastes and preferences vary. Therefore, it is not only necessary to provide options for all points along the continuum of care, but to provide a range of options at each point in the continuum:

> "The point is crucial here because the first principle must be that there is no one best life style for the elderly but instead a rich variety; consequently, the goal is not to discover the ideal housing and living situation for old people, but rather to design and create the wide range of environments necessary to support the rich variety of life styles that are appropriate among older people."
>
> (p. 19) Carp (1976)

Lack of quantity and/or quality of options may force an older person into an inappropriate place on the continuum of care. It is widely known that "inadequate housing is frequently the leading factor in premature institutionalization" (Schwenger, n.d.), and that there are many elderly people remaining in their own homes or apartments without the necessary support services.** The human and economic costs are enormous of this mismatch between needs and services.

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* These include: Day care, day hospitals, senior centres, retirement hotels, foster homes, meals on wheels, etc..

** This may result either from an absence or lack of coordination of services (Schwenger, n.d.).

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CMHC STUDY TO DEVELOP GUIDELINES FOR NURSING HOMES AND HOSTELS WITH CARE SERVICES

This study is being carried out by A.W.Cluff and P.J.Cluff, Architects, as consultants to Central Mortgage and Housing Corporation, to establish new National guidelines for nursing homes and hostels with care services. Basically these facilities are intended to serve elderly residents and are those facilities which would be considered for funding primarily under Section 15.1 of the National Housing Act.

The study has been underway since June 1977, and is comprised of the following tasks.

Phase I

1. Establishing basic procedures and goals for the study in conjunction with head office CMHC and its review committee for the study.

2. To carry out a State of the Art review, including a literature search, a cross-Canada review to identify regional issues regarding the elderly, establish historical background, identify levels of care and compare existing provincial nursing home acts, etc.

3. Review funding issues, sources, capital expenditures, operating costs, etc., covering facilities, operation and care costs.

4. Identify potential users and their basic needs for shelter. Report on need, demographic information, etc.

5. Establish basic design criteria for site selection, related to community, transportation issues, environmental issues and service (care) availability.

6. Develop policy statement in collaboration with the Corporation outlining the basic issues under consideration, potential solutions in philosophical and sociological terms, related to funding implications.

Phase II

7. Develop detailed design criteria which will include:

   a) Circulation (externally). Site Planning.

   b) Circulation (internally). Building Entrance, Public Areas, Stairs, Ramps, Elevators.

c) Social and Recreational Facilities. Lounges, Activity Areas, Dining.

d) Residents' facilities, bedrooms and living spaces, bathrooms, kitchens, balconies, etc.

e) Service Areas. Kitchens, Laundry, Storage, etc.

f) Systems. Heating, cooling, lighting, ventilation, etc.

g) Administrative Areas. Offices, storage, service (care) areas.

h) Detail design considerations. Materials and finishes, walls and floors, etc. Fabricated items - windows, doors, etc. Special finishes, Hardware, Signage, Safety Features.

The above information and criteria will be summarized in the final report.

8. Supplementary material will be developed as appendices to the body of the report, including:

a) Summary of Care Facilities - Comparison.

b) Summary of Legislative Analysis.

c) Guideline on Staffing Issues.

d) Bibliography.

At this point in time the majority of work under Phase I has been completed. This has been presented in a series of working papers to the review committee in Ottawa, under the following headings:

1. Conceptual Framework.
2. Profile of Users.
3. Programs and Services
4. History of Long-Term Care Facilities in Canada.
5. Definitions (Levels of Care, Nursing Homes and Hostels)
6. Aspects of Designing Nursing Homes and Hostels with Care Services for the Edlerly.
7. Research Methodology: Literature and Legislative Review.
8. Legislative Review.
9. Literature Review, ~~Summary~~ of Socio-Psychological Considerations.
10. Cross-Canada Survey (Outline)

The above material has been generally reviewed and will form the basis of the policy statement which will be prepared during February. The outstanding work has been reduced at this stage to the Cross-Canada survey to identify regional issues and differences. It is hoped that these trips will identify background data, through the questionnaire being distributed to Regional Directors of CMHC, plus responses to questionnaires by administrators of typical facilities identified as typical of this type of funding program.

NOTE: It appears that nothing more than outline was published for #10. Therefore I put this information in the CONTENTS list.

The consultant also expects to visit many of the facilities within the five major regions:

1. The Maritimes
2. Quebec
3. Ontario
4. The Prairies
5. The West Coast and Territories

On these visits, some photographs will be taken and a general overview of facilities by type, size and operation will be made.

The sum of these visits to facilities and with CMHC personnel plus the responses to questionnaires should provide sufficient information to allow a final working paper to be completed on regional issues including variations in needs and solutions. Together these working papers will provide the background for the development of the policy statement and the final design guidelines.

The final guideline document will not be addressed solely to architects, but will provide background information on the philosophy of care for the elderly, comments on the social setting, programming and indicators regarding trends affecting the aged population of Canada. We anticipate that the document will be broadly distributed and will be used by CMHC personnel, at many levels, including Regional Directors, Branch Managers, Co-ordinators of Planning and Research, Programme co-ordinators, as well as branch architects, etc. In addition it is anticipated that potential client groups and their architects or administrators will seek to use the document. CMHC anticipate that initial publication could run in the order of 20,000 copies, and would be available in the summer of 1978.

Kahn, Hines et al. (1977) came up with some interesting results in this area. From their study of 236 residents in 20 long-term care facilities for the elderly in Denver, Colorado, they found that:

> "45% required long-term care placement with traditional professional physician and nurse supportive services, 11% required a more specialized facility that could adequately handle the psychologically disturbed, developmentally disabled or traumatically disabled. Interestingly, 28% could probably function well in a congregate living institution (residential) and 16% might function at home with home health supportive services."
>
> (p. 64).

Relocation:

Relocation* is another major problem involved in matching the individual elderly person with the most appropriate housing and services package. Studies such as that by Bourestomand Tars (1974) have demonstrated that there is a strong relationship between the relocation of elderly nursing home residents and a high mortality rate. Bourestom and Tars found that total relocation and readjustment to a new physical environment, new staff, new patient-resident population and new programme resulted in a 43% mortality rate (within the six months preceding and a year following the move), as compared with a 21% mortality rate in a matched control group. This group who had experienced a radical change also showed a distinct decline in behavioral patterns, relationships with staff and other residents, health and self-image of their own health. Many gerontologists (including Bourestom and Tars, 1974; Schwenger, n.d.; Novick, 1967; and Locker and Rubiin, 1974), call for vigorous case work and health counselling, as well as keeping as many familiar social and environmental contacts as possible, when relocation is necessary.

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* "...whether it is from one house to another, from home to institution or vice versa, from institution to institution, or even from one room to another in the same institution."

(Schwenger, n.d.)

Novick (1967) reports on an extraordinarily effective relocation program at Maimonides Hospital and Home for the Aged, in Montreal, in which the mortality rate (15.2%) one year after the move was not only far below that experienced elsewhere, but also 9.8% below the normal annual mortality rate of 25% experienced by Maimonides in its old building. Novick and his colleagues hypothesized that the following factors might effect the mortality rate: 1) fear of the unknown; 2) preservation of satisfying relationships; 3) retention of emotionally meaningful belongings, and 4) arrangement of space in the building with due regard for the emotional needs of patients. Action was taken to reduce patient-resident anxiety in each of these areas. One of the most important factors was the "patient-residents' knowledge that they were playing an active and direct role" in the decision-making process. They had input into the design of the new facility, watched it being built, and helped test potential furnishings and equipment. Continuity of staff members and activity programs, and a move carried out in an atmosphere of sensitivity, efficiency and calm led to a positive, albeit unusual, relocation experience.

Design Guideline Study:

By commissioning this study, CMHC has expressed interest in two points on the continuum of care (nursing homes and hostels) which, to date, have not had many design guidelines associated with them. Although these two types of facilities serve different populations and provide different services (or degrees thereof), there should be a common "theme" or philosophy behind them. Sections which follow review positive and negative characteristics which have been and which continue to be associated with long-term care facilities for elderly people. Following this, a set of goals for future facilities will be presented. A discussion of design guideline issues and of the need for ongoing design research will conclude the paper.

Institutionalization:

Negative Ramifications:

The concept of institutionalization brings to mind few pleasant thoughts. This section will examine some of the negative ramifications of being an institutionalized elderly person, and will provide background for the following section on goals for humanized institutional care.

In his classic work Asylums, Erving Goffman (1961) describes characteristics of "total institutions." * These institutions are segregated from the wider society; they are formally administered; there is a distinction between "inmate" (or patient-resident) and staff; sleep, work, and play are all done in the same setting; there is loss of individuality ("assault upon the self") and violation of personal space, territory, dignity, privacy and autonomy. Adults lose their adult status and are accorded a status of child,** instead. Sometimes, "inmates" or patient-residents are treated as "non-persons" as in this description of a nursing home by Curtin (1972):

> "Because the attendants had to physically care for, handle the aging bodies of these old people, they began to treat them as if they were infants, unhearing, uncaring, unable to speak or communicate in any way. The patients were uniformly called honey or dearie or sweetie - or sometimes naughty girl if they soiled their beds - just as one tends to call children by pet names. At that level, the attendants expected gratitude or at least silent acquiescence from the old people and their families. The bodies were kept clean, fed, powdered, combed, and clothed. They were as infants, without modesty or sex or privacy."

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* Nursing homes and hostels vary with regard to the degree to which they demonstrate these characteristics.

**However, even if children are accorded little status, the parent-child relationship is usually characterized by caring, listening, and sharing. Thus, staff-patient relationships may be more like keeping pets.

> "The next level involved treating the patients as inanimate objects rather than as any kind of human being, adult or infant. This attitude was most frequent in older staff members and is understandably defensive. 'Ahhh, she's just an old lady,' they would say. ' She's just an old lady.' And that seemed to justify all manner of things, including the way blind patients were fed or not fed, according to whim; or how soon an old man was cleaned and his linen changed after he soiled his bed."
>
> (pp. 146-147)

In another institutional study, Jacobs (1969) observed a "battle to maintain autonomy," as residents of a nursing home tried to protest depersonalization and other regimentation. Loss of independence, loss of personal history (evidenced by having to leave behind personal possessions), senses of abandonment, uselessness and rejection at entering the home, adjustment to enforced intimacy (roommates), enforced socializing and rules led to ambivalent feelings on the part of the patient-residents. Jacobs reports that one of the most harmful effects of institutional life on these women was the "suppression of (their) accustomed competition and conflict patterns," that is, they were afraid that if they complained, they would be forced to leave.*

Similar negative impacts of being an institutionalized elderly person have been reported by other researchers, (Dudley and Hillery, 1977; Graver, 1971; Harel, 1971). However, there have also been a number of scathing indictments of nursing homes and reports of associated abuses, (Mendelson, 1974; Townsend, 1971). In its investigation of nursing homes, the U.S. Senate Subcommitte on Long-Term Care of the Special Committee on Aging reported what they called a "litany of nursing home abuses ." Their transcripts are full of:

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* The home had a very long waiting list.

> "...examples of cruelty, negligence, danger from fires, food poisoning, virulent infections, lack of human dignity, callousness and unnecessary regimentation and kickbacks to nursing home operators from suppliers."
>
> (p. 7)

It is not surprising that, given their nefarious history, nursing homes continue to be thought of by potential residents and their families as a "last resort" :

> "Of all the moves to other housing the one most dreaded is that to an institution. The older person who needs institutional care often resists leaving his home in order to postpone the time when he is admitted to a 'place within four walls.' Sometimes it seems he hopes to be able to live with a son or daughter instead. Aging men and women may refer to the time when they themselves took care of their own parents. They dread the prospect of institutional care because some see it as the end of what little independence they have. Certainly what remained of freedom is likely to vanish once a person is inside institutional walls." *

> "Almost all older people view the move to a home for the aged or to a nursing home with fear and hostility... All old people - without exception - believe that the move to an institution is the prelude to death... [The old person] sees the move to an institution as a decisive change in living arrangements, the last change he will experience before he dies... Finally, no matter what the extenuating circumstances, the older person who has children interprets the move to an institution as rejection by his family." **

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* Twente (1970), pp. 61-62 as cited by Tobin and Lieberman (1976), p.49.

**Shanas (1962), pp. 102-103 as cited in Tobin and Lieberman (1976), p. 50.

Analytic Framework:

Pincus (1968, 1970) has devised a useful framework for analyzing institutional environments. He defines these environments as:

> "...the psychosocial milieu in which the residents live, as expressed through and/or generated by (a) physical aspects of the setting, including design, location, furnishing, and equipment; (b) rules, regulations, and program which govern daily life; and (c) staff behavior with residents."
>
> 1968 (p. 207)

The four related dimensions of these environments which he considers relevant are: public-private, structured-unstructered, resource sparse-resource rich, and isolated-integrated. These are defined in the following way:

"1. Public-private - This dimension refers to the degree to which the environment allows the resident to establish and maintain a personal domain which is not open to public view or use and into which the institution will not transgress. A personal domain may encompass a personal life space (body and personal hygiene activities), a physical living space, and a social life space.

2. Structured-unstructured - This dimension refers to the degree to which the resident must adjust his life to imposed rules and discipline and the extent to which he is permitted, encouraged, or required to exercise any choice, decision making or initiative.

3. Resources sparse-resource rich - This dimension refers to the degree to which the environment provides opportunities for the resident to engage in a variety of work and leisure activities and to participate in social interaction with staff and other residents in a variety of social roles and statuses other than the patient role (e.g., sheltered workshop worker, club leader, tour guide).

4. Isolated-integrated - This dimension refers to the degree to which the environment affords opportunities for communication and interaction with the larger heterogeneous community (people and places) in which the institution is located."

1968 (p.207)

Pincus creates a matrix for studying long-term care facilities for the elderly by combining physical plant; rules, regulation and program; and staff behavior with the four dimensions defined above. Table 1 gives his examples of characteristics which might contribute to shaping a particular dimension:

"The necessity for taking all three aspects of the institutional setting into account in exploring a particular dimension should be emphasized. For example, a home might be conveniently located near the central part of town and easily accessible to public transportation. But restrictions on visiting hours and a staff who do not encourage the residents to go out can nullify the effects of the institution's location and cause it to become isolated from the community."

1968 (p. 208)

Table 1. Some Examples of Aspects of the Institutional Setting Related to the Four Environmental Dimensions.

Aspects of the Institutional Setting	Dimensions of the Institutional Environment			
	Public—Private	Structured—Unstructured	Resource Sparse—Resource Rich	Integrated—Isolated
Physical Plant	Proportion of single and double rooms Number of day rooms	Existence of signs displayed around the home reminding residents of rules and regulations	Availability of facilities where residents can cook a meal or prepare a snack Existence of a library	Distance from public transportation Distance from shopping area
Rules regulations, and program	Existence of rules requiring residents to keep the doors to their rooms open at all times	Existence of rules regulating residents' bedtime Provisions for residents to help in planning activities	Existence of regular jobs around the home performed by residents	Extent of restrictions placed on visiting hours Frequency with which residents are taken on trips outside the home
Staff behavior	Extent to which staff knock on doors before entering resident's rooms	Extent to which staff decide what programs are to be watched on T.V. Extent to which staff expect strict obedience from residents	Extent to which staff encourage residents to participate in activities	Extent to which staff assist residents who need help in making phone calls or writing letters

Source: Pincus (1968), p. 208.

Reluctant Necessity:

As detrimental as are many long-term care facilities to the elderly, this type of institution is one necessary component of the continuum of care. As noted gerontologist Powell Lawton (1974) states:

> "...let us not forget, however, that institutions do have a purpose and that we cannot afford to throw out their legitimate purposes with their faults."

Experts usually agree that it is a more constructive approach to upgrade the institutional model, rather than eliminating it altogether, (Lawton, 1974; Lawton and Eisdorfer, 1971; Shore, 1974), as Brody (1970) explains:

> "Undeniably, in some facilities, the provision of care and treatment is at a level which should not be tolerated. The adverse effects of such institutions have been thoroughly documented but have been generalized without justification to include all institutions...the relevant questions are: For whom are congregate care facilities appropriate? What should be the nature of these facilities?"
>
> (p. 281)

Desirable Qualities of Institutions for Elderly People:

Importance of the Physical Environment:

Although this design guideline study will ultimately concentrate on physical design criteria for nursing homes and hostels, the importance of other components of the service delivery system (including residents, administration, staff, and programs) have been discussed in these working papers, as well. Our opinion is that the physical environment works with the other components to provide an optimum service delivery system. The environment cannot be designed without these components in mind, since it will be used as part of a total system.

The physical environment is an important element for the elderly people who live in nursing homes and hostels with care services. As Lawton and Eisdorfer (1971) explain:

> "Many of the psychological difficulties of the older person appear to result from a lack of environmental supports, rather than from the aging process per se."
>
> (p. 28)

An improved physical environment may positively effect not only the residents, but also the staff and volunteers who work in the facility.

Schooler (1970) also feels strongly about the effects of the physical environment on morale. Although his original hypothesis stated that:

> "Environmental characteristics affect successful adaptation to aging as reflected in the older person's morale, but the effect is mediated through the formation and maintenance of social relationships to some extent determined by various environmental characteristics."
>
> (p. 194)

He is unable to support this theory and concludes:

> "Morale is directly dependent on physical aspects of the environment and is not significantly affected by improving social relationships or contacts."
>
> (p. 194) *

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* This conclusion is based on a study of 4,000 persons aged 65 or over, quantifiably considered to be representative of the non-institutionalized elderly in America. The results were based on questionnaire responses weighed in terms of the recurring incidence of factors considered to represent the three entities of environment, social relations, and morale. Environmental factors included such things as distance to facilities, condition of dwelling unit, availability of social and supportive services; and social relations factors were considered to include such factors as the existence of social organizations, frequence of neighbor contact, and family size. There were seven morale factors and these included the incidence of worries and fears, and subjective factors like self-image. The author concludes that of all three factors, environment was decisive, but stresses that individual perceptions of a suitable environment varied greatly.

He argues that a concentrated effort be made to understand the differing environmental needs and tastes of the elderly and suggests a form of marketing research, in which the residential environment would be treated like any other product seeking to capture a consumer market. The author anticipates that such research would demonstrate the need for a variety of co-existing design solutions, and that the concept of one answer to the accomodation of the elderly would become obsolete.

The Inappropriateness of Universal Solutions:

Schooler's point about universal solutions is worthy of discussion, since the physiological and social/psychological needs of elderly people are complex and diverse, and there are enormous provincial, regional and local differences with regard to culture, standards and economics, the concept of one "ideal" design solution for nursing homes or hostels seems absurd. In fact, this is one of the problems involved with traditional institutions: that one approach, philosphy or design is thought to serve the needs of many individuals. In fact, this philosophy has not worked well (to the benefit of residents) in the past, and there seems no need to perpetuate it. What is needed is a range of design, management, staff and program solutions (given basic design criteria) and careful evaluation of the relative appropriateness of each. In this way, real progress can be made when new buildings are designed, since much can be learned from existing buildings. *

Goals for Nursing Homes and Hostels:

From an extensive review of the relevant literature, we have come up with some major psycho-social goals for the design and management of nursing homes and hostels. These take into consideration the physiological and social/psychological losses experience by the patient-residents and attempt to mitigate the negative effects typically associated with long-term care institutions.

* This is called "post-occupancy evaluation" and is discussed in the Appendix.

Residential Emphasis:

It is the consensus of most gerontologists that enormous benefits can be gained by nursing home residents if the image is changed from that of a "second class" hospital to a residential facility with optional medical attention, (Baldwin, 1977). Institutional aspects of nursing homes and hostels can be played down and residential features emphasized in a number of ways. Administration, staff and the physical environment all reflect a basic philosophy of care. If this philosophy emphasizes the independence/autonomy of the residents and allows them to have control, privacy and choice, a more residential atmosphere will prevail. In addition, support for continuity of previous lifestyle, personalization of space, social integration and interaction, stimulation and growth, as well as provision for satisfying uses of time will encourage a more positive nursing home or hostel experience than those typically associated with long-term care facilities for elderly people. Brody (1970) emphasizes the notion of the institution as home:

> "The aging person's functioning, impaired though he may be, cannot be preserved or improved if he is assigned the role of full-time professional patient. His person and dress, the room in which he lives, the opportunity for privacy, the rhythm of his daily life, the range of program elements from which he can select (or ignore) should convey the fact that the institution is his home, and should permit expression of his personal life style." (p. 303)

Independence/Autonomy:

Becoming an institutionalized person has traditionally involved relinquishing independence in return for needed services. However, this major change in status from independence to dependence may have negative implications for the self-esteem of the patient-resident. In view of the physiological and socio-economic losses most elderly people experience, loss of autonomy is often perceived as the final insult. Gottesman and Barney (1975) explain how to balance dependence/independence needs:

> "Nursing homes which are desirable psycho-social environments recognize residents' dependency needs and provide for them in a way that recognizes the resident's integrity. Three specific elements in the above description contribute to these qualities: patients have private space, social roles and independent control over some aspects of their lives."
>
> (pp. IVA3, IVA4)

Other gerontological researchers (e.g., Lawton, n.d.; Ostrander, 1971; Snyder, 1973; Snyder and Ostrander, 1974; Manitoba Department of Health and Social Development, n.d.), have pointed out the importance of encouraging independence in nursing homes. Barney(1977) answers the question of how to secure more help without accepting more control by calling for:

> "...help that augments self-reliance and enables them (elderly patient-residents) to keep their own coping systems going."
>
> (p. 313)

Three concepts closely related to independence/autonomy and to each other are: control (by patient-residents),privacy, and choice.

Control:

Reid, Haas and Hawkings (1977) define locus of control as:

> "...the extent to which a person sees his outcomes (events he experiences and reinforcements he receives) as being contingent upon his own efforts and abilities (internal) or as being determined by chance, fate, and powerful others (external)."
>
> (p. 441)

They found a relationship between a low sense of control and a negative self-concept, in two separate studies of residents in the Baycrest Home for the Aged, in Toronto.

Control over aspects of the immediate environment (e.g., heat and light), (Snyder,and Ostrander, 1974), is one tangible way of giving the patient-resident control over his/her own life. Kapelje and Papp (1976) report findings which correlate life satisfaction of elderly residents of homes for the aged and nursing homes with the degree to which they could influence their environment:

> "In homes where the residents had less control over their environments, e.g., where the staff did more things for the resident, the resident was significantly less satisfied."
>
> (p. 28)

Brody (1970) cites Marcovitz's (1969) * finding that "a sense of autonomy and control over one's own destiny are over-riding factors conducive to mental health and that apathy results when they are lost or lacking." This desire for control has been expressed by residents themselves, as in this Ontario nursing home:

> "I would like to see democracy in the Home. As a matter of fact, I am insisting on democracy because we are still human beings and we want to be treated as such. We want to have a say in how our home is run, and that is exactly what it is - our home... I have got to agree that some of us as we get older become a little handicapped and our brains do not work so good, but we still want democracy." (Ontario Elderly Person's Centres Conference, 1971).

Control by patient-residents cannot be over-emphasized:

> "Most important, ways should be found to permit as much control as possible over his own life. The shape of the programs should serve him, rather than attempt to mold him into firmly frozen routines."
>
> (p. 303) (Brody, 1970)

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* Brody's reference.

Privacy:

Privacy can be thought of as control over social contact and has been consistently called for by gerontologists. Lawton (n.d.) explains:

> "...we also have equally strong needs for being alone, to have our own unique territory, to be able to do as we wish or express our individuality without the intrusion of others. The 'institution' concept negates such needs; the 'home' allows their fulfillment without frustrating the need for social togetherness."

The concept of privacy implies more than just the option of being alone. It refers to "control over social interaction" (Altman, 1975) since people have shifting desires for contact with others. The concept of territoriality is involved here as well. According to social psychologist Altman, the physical environment plays a critical role:

> "If privacy and its associated mechanisms are ignored or rigidly incorporated into designs, or if the meaning of different levels of personal space and territory is not recognized, then people will have to struggle <u>against the environment</u>* to achieve what they consider to be appropriate degrees of interaction and conflict, stress, and other (human) costs are likely to the extent that people have to struggle with inappropriately designed environments."
>
> (p. 211)

Novick (1967) and his colleagues at Maimonides Hospital and Home for the Aged in Montreal recognized this need for various levels of social interaction when planning a new facility. Among their criteria for spatial arrangement were:

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* Author's emphasis.

"1) The importance of privacy to an old person.

2.) The importance of small groups in encouraging intimate and warm relationships.

3) The importance to old people of participation in social activity. "

They strongly believe that a private room* is crucial to the residential atmosphere of a nursing home and is necessary for the resident's independence and control:

> "When an old person enters a long-term facility, he is compelled to give up one of his last remaining important social roles - that of maintaing his own household in which he alone decides what time he shall retire at night and rise in the morning; whether a window shall remain open or be closed; whether his radio shall play beyond a certain hour or not. Occupying a room with a strange person limits severely the range of independent action within the room and emphasizes sharply for the patient how small a role he plays in life. A private room therefore helps an aged person to feel a greater sense of self-respect."
>
> (Novick, 1967)

Personalization of Space:

The concept of control over one's physical environment leads to the concepts of personalization of space and personal continuity of lifestyle. Elderly people have accumulated a lifetime's worth of meaningful possessions** by the time they enter a long-term care facility. It is

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* There is as much danger in advocating only private rooms as there is in providing only shared rooms. There are definite advantages to each and it seems that both options should be available to the individual.

**Snyder and Ostrander (1974) suggest that as people age and lose contact with friends and relatives that they may substitute objects for people as their focus of attention.

in keeping with a residential focus, and philosophies of resident control and territory to enable residents to bring favorite possessions with them* and to facilitate the display of these. Having familiar objects within sight may ease somewhat the initial transition from community to institutional living.

Choice:

Choice is a concept implicit in the ideas discussed thus far, yet worthy of discussion in itself. For nursing home or hostel residents to take an active interest in what is going on around them, they must feel as if their opinion or participation makes a difference. So many status losses occur prior to entering a care facility, that elderly people may conclude that they are no longer capable of contributing to their (or others') lives and settle into a dependent, often depressed state. If they are presented with real choices during their daily lives, it is likely that they will take more of an interest in day-to-day events. Choices range in scope from food to religious activities, to spaces within the home or hostel, to choices concerning the most appropriate way of meeting their particular housing and service needs.

Social Integration and Interaction:

As we said in the section on privacy, a range of types of social interaction should be allowed for in the design and management of nursing homes and hostels, and people should be able to choose when and where they want to be social, as well as when and where they want to be private. Social interaction** has many benefits, not the least of which are love and caring, but in keeping with a residential rather than institutional focus, it should not be forced upon anyone.

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* The type and number of possessions will be determined by administrative policy and space limitations. However, it is strongly suggested that great benefits result from allowing residents to bring in what they wish.

**Between same sex and opposite sex residents, between residents and staff or volunteers, residents and friends or family.

As described in Working Paper # 2, some, such as Rosow (1974), believe that there are great benefits for elderly people to be living with other elderly people, rather than with mixed age groups. Thus, a nursing home or hostel setting may be socially advantageous for residents. However, maintaining associations with the wider community is also quite important. As Lawton (n.d.) states:

> "A sense of living is conveyed through access to family, friends, shopping resources and entertainment outside the retirement community."

Others think of the community and the nursing home or hostel as potentially mutually supportive resources (Koncelik, 1976; Snyder and Ostrander, 1974):

> "The community may be an important resource for residents of an institution for the aged. Conversely, members of the institution may have insights and skills to share with members of the community. Efforts should be made to promote the sharing of resources, space and services of an institution and of the community at large."
>
> (Snyder and Ostrander, 1974) (p. 6)

Communication mechanisms such as location near transportation, telephones, newspapers, bulletin boards, and the like are important in order to keep active ties with those outside the facility.

Satisfying Uses of Time:

No one likes to believe that their efforts are being wasted. Elderly residents of nursing homes and hostels are particularly sensitive to this, having experienced many losses and coming to grips with the fact that they may not have a great many more years to live. Therefore, feelings of accomplishment are particularly important in building up self-esteem. As discussed in Working Paper # 3, strictly recreational or "time passing" activities may not be satisfying to many residents.

Administration, staff, and the physical environment can work together to enable residents to pursue old interests or to develop new ones. (Lawton, n.d.; Gottesman and Bourestom, 1974).

Stimulation and Growth:

The physical environment,along with staff and administration, can challenge residents to produce their best. (Steele,1973; Mather et al, 1971). As Lawton (1975) explains:

> "We have a duty to take very seriously the idea that curiosity, exploration, and novelty may, under the proper conditions, excite the older person every bit as much as they do rats and younger people."
>
> (p. 57)

There is no reason to believe that because elderly people live in long-term care facilities, they are no longer capable of personal growth. Snyder and Ostrander (1974) suggest that personal growth is enhanced by exposure of the older person to current events in the world in his/her previous locality, in the present locality, and in the institution.

Security:

The nursing home or hostel should protect residents from harmful or unwanted stimuli (Steele, 1973). Avoiding accidents, protection from intruders, and knowledge that help will be available when needed, all help ensure the peace of mind of residents (Lawton, n.d.).

Pleasure:

Often neglected in lists of needs is the gratification associated with experiencing a place (Steele, 1973). There does not have to be a trade-off between aesthetic considerations and functional criteria. As Lawton (n.d.) puts it:

> "Beauty in both natural and man-made surroundings conveys to the resident a feeling of personal worth and social pride."

Prosthetic Environment:

Since elderly people are residing in nursing homes and hostels due to particular housing and service needs which these settings can satisfy,* it logically follows that these environments be designed to accomodate their particular needs. As explained in Working Paper # 2, there are specific physiological and social/psychological changes and characteristics which apply to many elderly people. The concept of a "prosthetic" environment involves the idea that the physical environment should be supportive of needs, yet not threaten independence (Lawton, 1975). It may be difficult to determine when a prosthetic feature caters to dependency and when it may encourage a higher level of functioning than otherwise possible. This concept is also complicated by the fact that physiological and social/pscyhological conditions of elderly people may change over time. Koncelik (1976) believes:

> "The environment must be so designed to accomodate whatever level of functioning the aging and infirm person is capable of."
>
> (p. 15)

Ostrander (1971) defines a prosthetic environment as one which "reaches out" to meet sensory deficiencies, limited mobility, reduced agility and lessened physical strength of elderly people. Examples of prosthetic features include: elevators, handrails, ramps and redundant cuing.

Design Guidelines:

The underlying concept of this study is that design guidelines for nursing homes and hostels with care services for elderly people must go beyond traditional fire and safety code requirements in order to truly meet the needs of their users (Canadian Council on Social Development, 1976; Ostrander, 1971). This paper and the other working papers in

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* Ideally.

the series point out relevant characteristics and needs of users and suggest some performance standards by which designs may be evaluated. Guideline format is discussed in Discussion Paper # 1.

Guideline enforceability, monitoring and evaluation are worthy of serious consideration and discussion since there must be a realistic incentive structure operating if the concepts implicit in the guidelines are to be implemented.

Nursing home abuses are widely known and must be faced.

Need for Future Research:

A final word is in order regarding research in this area. In order to learn from existing nursing homes and hostels and apply what is learned to the design of future facilities, it is necessary to observe and evaluate these environments in use. As explained in the Appendix, if more "post-occupancy evaluations" were conducted, nursing home and hostel design would be advanced by the application of their findings to new facilities, and physical and management environments would come closer to meeting the various needs of their users. This type of research, along with creative thinking and policy making, may lead to entirely new approaches to the provision of housing and services for elderly people in the future.

"As I spoke with old people, I became more and more aware of the fact that our culture does not have a concept of the whole of life. Instead, life is divided into childhood, adulthood, and old age. Instead of a cycle, a vision of unity, we have a vision of stages, in which only one - adulthood - has the possibility of being lived productively, independently, and vigorously. Old age is viewed as a childlike state, but without the charm and promise. It is as if we wanted to finally view our lives as totally devoid of meaning, where the dependency and childishness of old age wipe out the accomplishments of adulthood. The experiences of a lifetime disappear in the feeling of being useless and passed by.

There is a pettiness in this vision of life. It totally ignores the fact that death is a part of life, that facing death is one of the noblest things about old age. Strength and dignity, maintained in the face of declining abilities, should be part of the total life experience. Avoiding looking at the entire life cycle, pretending that death doesn't exist, or is somehow in bad taste, robs the old of the chance to complete their life. It denies that death has any meaning, that there is any knowledge or experience to be gained in dying as well as in living, and leaves only a sense of despair.

That is the final robbery, the last indignity we impose on our aged. They are not allowed to be conscious of the last experience, not permitted to view death as part of a completely integrated life. They must die in despair, feeling only that there is nothingness, they are nothing, death is nothing.

Somehow we have to change that. The anguish of a life without meaning, and a death without wisdom, should haunt us all. If the aged could 'rise up angry' and refuse to be victims of either debilitating poverty or passive consumerism, and refuse to be treated as children, they will gain materially and spiritually. They could also pass on to the new generations a gift of life, an example of dignity in the face of death itself."

from: S. Curtin
Nobody Ever Died of Old Age.
Little, Brown & Co., 1972
pp. 226-228.

APPENDIX

AN OUTLINE ON

POST-OCCUPANCY EVALUATION

Introduction:

This paper introduces one tool for environmental problem-solving: Post-Occupancy Evaluation, in it we discuss what this type of evaluation is, why it is important, who can benefit from it, when it is done, who does it and the techniques used.

What is Post-Occupancy Evaluation?:

Post-Occupancy Evaluation involves analyzing a physical environment in use, in a systematic way, in order to learn something about how that environment is working. Post-Occupancy Evaluations can be conducted in order to check on the mechanical, electrical, structural, or other technical systems of a building, but these evaluations are used more frequently to analyze how appropriate various aspects of the physical environment are in relation to the needs and desires* of the people using that environment.

What is the importance of Post-Occupancy Evaluation?:

Common sense would appear to dictate that components of the physical environment be designed with their human users in mind. That this seemingly simple, logical idea has provoked controversy among its proponents as well as among its adversaries, and has been the cornerstone of a small but growing interdisciplinary field, attests to its importance and complex ramifications.

Architect Louis Sullivan's alliterative phrase "form follows function" aptly demonstrates the controversy surrounding evaluation of the physical environment. The key word is "function". That is, who should decide what function or functions a chair, a room, a house, a building or a city will have? And, furthermore, who should decided if the form does in fact follow the defined function? In design terminology: why are certain environments said to "work" when others are said to fail?

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*"Needs and desires" can be interpreted in a number of ways, including those which users identify themselves, and those which experts identify. Defining these needs is one of the tasks of the evaluation team.

Traditional criteria for judging architecture have been primarily aesthetic. Judgingenvironmental design (at larger and smaller scales as well as at the building scale) on the basis of its contribution to the "needs" or "competence" of its users is a relatively new and seemingly revolutionary concept. Christopher Alexander calls this relationship the "fit" between human behavior and aspects of the physical environment.

Aesthetic architectural criticism may be based on personal preference and therefore disagreed with. For example, one person may think that the "Place des Arts" in Ottawa is fantastic, whereas another may regard it as an eyesore. Neither evaluation is right or wrong, since criteria for each judgment are unclear. One difference between this sort of architectural evaluation and the type based on user needs is that criteria for the latter can be measured and findings replicated. Thus, architectural criticism can move out of the realm of the purely artistic and be brought into the realm of the scientific.

This difference in approach is evidenced by the architectural use of the term "solution" with regard to a design response to a "problem." The social scientist would tend to call a design response an "hypothesis" since it is really only a best guess. The term "hypothesis" implies needing a "test" or evaluation to verify it, whereas the term "solution" does not.

In addition to being more scientific than aesthetic criticism, architectural evaluation based on user requirements is also more humanistic. That is, human ramifications of design are thought to be of major importance. However, the concepts of humanistic or "considerate" design and aesthetic design are not mutually exclusive.

If all buildings, rooms, and furnishings were appropriate to the needs of the people using them, there would not be a need for an analytic tool such as Post-Occupancy Evaluation. Unfortunately this environment-behavior fit is rare. Examples of inappropriate physical environment characteristics in long-term care facilities for elderly people include:

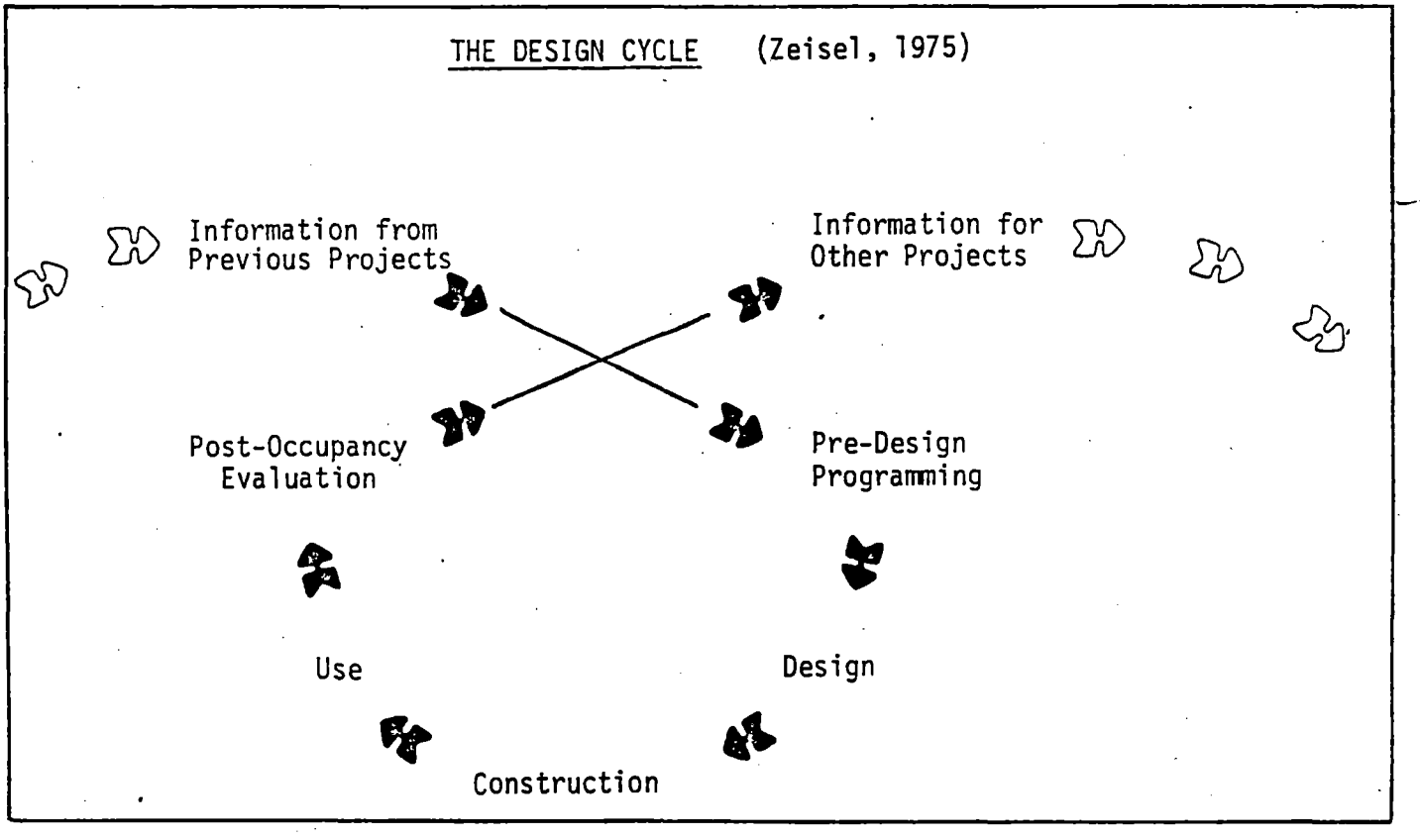
- Lighting which is either too low or which bounces off highly polished tile floors producing glare. (Diminished sight and sensitivity to glare are well-known characteristics of elderly people).
- Steps used for negotiating level changes. (Most elderly people in long-term care facilities have mobility difficulties and may use walkers, wheel-chairs, or other ambulatory aids).
- A double-occupancy room without separating curtains, where one bed is next to the window and the other bed is closer to the door. (Privacy and territory or place to "claim" as one's own are needs of these patient/residents).

Thus, Post-Occupancy Evaluation is one means by which information can be gathered about environment-behavior fit. This information can aid Architects and others who plan setting for human behavior in their responsibility to make these settings as user-appropriate as possible.

A close environment-behavior fit is particularly important in facilities for the elderly for three reasons: people live there for long periods of time, their physiological and/or emotional/mental needs are great, thus they are less able to compensate for a poor physical environment (Lawton's Environmental Docility Hypothesis), these facilities are also expensive to build and long lasting. Thus, the environment can have an important, long-term effect on patient/residents and should be designed with care and concern. Post-Occupancy Evaluation could ensure both on-going modification of design as well as providing useful information for the design of future facilities.

Post-Occupancy Evaluation is the means by which the design process can be made cyclical rather than linear. This means that instead of beginning every design project from scratch, information learned from evaluating one facility can be used in designing others.

John Zeisel, a design sociologist, outlines what he sees as the design cycle (see below). Its five major stages are: Pre-design programming, where design objectives, constraints, and criteria are identified, Design, when decisions are made satisfying the above criteria, Construction, building the project and modifying plans under changing constraints, Use, moving into and adapting to the environment, and Post-Occupancy Evaluation, monitoring the final product in terms of objectives and use. Information about user needs can be supplied by behavioral scientists all through the design cycle.



Who can make use of Post-Occupancy Evaluation?:

Post-Occupancy Evaluation can be used by any individual or group concerned about the user-appropriateness of a physical environment. Information gathered by Post-Occupancy Evaluation can be used in three major ways: to improve or "fine tune" the environment which was evaluated, to plan new facilities, or rehabilitate old ones.

A Post-Occupancy Evaluation conducted on an existing nursing home could yield a series of suggestions for improvements to the facility:

- Putting up partitions between sinks in communal washrooms to increase privacy. (Denture wearers may be sensitive about "public" exposure).
- Carpeting the dining area to add residential character and decrease noise.
- Using graphics by elevator doors to aid in orientation.

The same evaluation could provide information useful in designing new nursing homes. Recommendations might include:

- Provide mostly single bedrooms with private sink and toilet.
- Avoid horizontal level changes; where they are necessary, use ramps with handrails.
- Provide two-way call systems in all bedrooms and bathrooms.

Architects and others involved in the planning and design of buildings can use Post-Occupancy Evaluation for feedback on their concepts. For example, the architect may have thoughtthat it was important to have lounge areas in which patient/residents could socialize. The evaluation

might point out that although this type of area is important, that in the building under study, lounges were not used. Reasons may be: location (away from activity), lack of interesting view from windows, and furnishings (not enough space for wheelchairs).

When are Post-Occupancy Evaluations Conducted?:

Post-Occupancy Evaluations are still rarely conducted. There is a need not only to conduct and use information from Post-Occupancy Evaluations, but to do this periodically. Frequency of evaluations will depend on characteristics of the facility and its users, and the nature of change within the facility.

Who Conducts Post-Occupancy Evaluations?:

Evaluations to date have been generally carried out by people trained in one of the behavioral sciences (Sociology, Pscyhology, Anthropology) and involved in the field of Environment-Behavior Research.*

Post-Occupancy Evaluation may be undertaken by an individual or by a research team. Non-behavioral scientists (e.g., environmental designers, experts in the field being studied, students) may be members of this team. However, familiarity with the techniques employed is essential.

Some environmental analysts specialize in certain areas (e.g., gerontology), while others prefer to work with different settings and user groups.

How are Post-Occupancy Evaluations Conducted?:

Post-Occupancy Evaluation can be thought of as a six-stage process. Various stages may be expanded or contracted depending on the needs of the client, the expertise of the environmental analyst, the skills of the research team, time and economic considerations.

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* This field is also known as: Environmental Psychology, Environmental Design Research, Man-Environment Relations, Architectural Psychology, and others.

Stage 1. Defining the Problem

This is when the client hires the research team to find out specific information, (e.g., "Why are lounge spaces unused?") or more general feedback on environment-behavior fit may be desired ("How well is the building working for patient/residents?").

Stage 2. Planning the Research

The environmental analyst or research team then develop a strategy. They first determine exactly which user groups are to be considered, (e.g., in the case of a nursing home, user groups include: patient/residents, administrators, nurses, LPN's maintenance staff, housekeeping staff, occupational therapists, physical therapists, social workers, volunteers, family members and others). The next step involves deciding what activities are to be examined (e.g., eating, conversation, or medical care), where these take place (e.g., patient/resident room, dining room, treatment room, corridor), and with what environmental "props" (e.g., furnishings, hardware, appliances, windows). The research team also decides what environmental characteristics are going to be noted (e.g., size, color, texture, temperature, light, sound). The may decide to look for particular environment/behavior issues (e.g., privacy, orientation, territory), or may wait to see which issues appear to be important, after their data is collected. There is an advantage in collecting data without preconceived ideas, in that there is less chance of bias and greater likelihood of coming up with issues meaningful to users. Another area of investigation is the design process: philosophies, goals, and assumptions and how these were translated into a design program, how the design reflected the program, and what has been altered in the construction stage. Management issues are important in understanding how the physical environment is actually used.

Frequently used methods of data collection for Post-Occupancy Evaluation include:

- Systematic observation
- Participant observation
- Interviewing
- Questionnaires
- Photography
- Simulation and gaming
- Observation of physical cues
- Semantic differential or other "paper and pencil" tests
- Behavior mapping
- User diaries

Other data collection methods are also being developed and used. In addition to choosing and developing data collection instruments, consideration must be given at this time to how collected information will be analyzed.

Contact with users of the facility must be made and permission for the study granted. It is useful to present the administrator with a schedule of research team activities and to introduce the team, before data collection begins.

Stage 3. Collecting the Data

This is when data collection techniques are employed and information is recorded (e.g., observation is done at specific times of the day for a specified number of days or interviews are conducted with selected users).

Stage 4. Processing the Data

This is when information collected is organized into forms usable for analysis. For example, interview transcripts are typed and major issues outlined, photographs are printed and labeled or questionnarie responses can be keypunched and fed into the computer.

Stage 5. Analyzing the Data

This is when "answers" to original questions should emerge or when support for original hypotheses arise or fall short. For example, a nursing home administrator may have wanted a Post-Occupancy Evaluation to tell him/her how to keep lobby furniture arranged. From observation of lobby behavior (recorded by notes and photographs), interviews with patient/residents, nursing staff and maintenance people, and behavior mapping of other sections of the building (particularly corridors and lounges), the research team may conclude that patient/residents like to watch activity and since other potential gathering places in the building (e.g., lounges) do not have good views of "action" they gravitate to the entrance lobby where a view of people coming into and going out of the building is guaranteed. If many of these people are in wheelchairs, and if the lobby is filled with furnishings for ambulatory people, furniture may be moved to allow wheelchairs placement with a good "view".

Another example would be a nursing home owner commissioning a Post-Occupancy Evaluation of one nursing home in order to know what design principles are important in planning a new facility. They could suggest design guidelines, either of the "prescriptive" or of a "performance" nature. Prescriptive guidelines specify the means by which a desired end may occur (e.g., provide four-person tables in the dining area), whereas performance guidelines specify the end result and leave the means up to the designer (e.g., allow for small table groups in the dining area).

Stage 6. Presenting Post-Occupancy Evaluation

There are two important considerations at this stage: acceptability and format. The objective of Post-Occupancy Evaluation is not just to identify less than perfect environments but to learn. It is also important to recognize environments, or aspects of them, which work well, and which concepts might be used in future similar environments.

The format in which findings are presented is crucial. Social scientists tend to be wordy and enjoy using jargon. Their reports must, therefore, be intelligible to designers and others trying to understand the findings.

Conclusion:

Post-Occupancy Evaluation is a useful method of analyzing the appropriateness of a physical environment for various user groups. It is an important tool for improving the fit between the physical environment and human behavior.

Basic References on Environment-Behavior Research and Post-Occupancy Evaluation

- Cooper, Clare. Easter Hill Village: Some Social Implications of Design, New York; Free Press, 1975.
- Gutman, Robert. People and Buildings, New York: Basic Books, 1972.
- Hall, Edward. The Hidden Dimension, Garden City, N.Y.: Anchor Books Doubleday & Co., 1969.
- Lang, J. Burnette, C., Moleski, W. and Vachon, D. (eds.) Designing for Human Behavior, Stroudsburg, Pa.: Dowden, Hutchinson & Ross, Inc., 1974.
- Ostrander, E. and Reizenstein, J. Creative Living: Housing for the Severely Disabled in the Context of a Service Delivery System, Washington, D.C.: American Institute of Architects Research Corporation, 1976.
- Proshansky, H., Ittelson, W., and Rivlin, L. (eds) Environmental Psychology: Man and His Physical Setting, New York: Holt, Rinehart & Winston, 1970.
- Sommer, R. Personal Space: The Behavioral Basis of Design, Englewood Cliffs, N.J.: Prentice Hall, Inc. 1969.
- Zeisel, John. Sociology and Architectural Design, New York: Russell Sage Foundation, 1975.
- Zeisel, J. and Griffin, M. Charlesview Housing: A Diagnostic Evaluation, Cambridge, Mass: Harvard Graduate School of Design, Architecture Research Office, 1974.

BIBLIOGRAPHY

CONCEPTUAL FRAMEWORK (CMHC NURSING HOME AND HOSTELS DESIGN GUIDELINE STUDY)

Alberta Hospital Services Commission. Senior Citizens' Homes. n.p.: n.d.

Altman, Irwin. The Environment and Social Behavior. Monterey, California: Brooks/Cole, 1975.

Altman, Irwin. "Territorial Behavior in Humans - An Analysis of the Concept." in Spatial Behavior of Older People. Edited by L. Pastalan and D. Carson. Ann Arbor, Mich.: University of Michigan, 1970.

American Health Care Association. Long-Term Care Facts. Washington, D.C.: American Health Care Association, 1975.

Atchley, R.C. Social Forces in Later Life: An Introduction to Social Gerontology. Belmont, California: Wadsworth, 1972.

Barney, Jane L. "The Prerogative of Choice in Long-Term Care," The Gerontologist, Vol. 17, No. 4, 1977.

Baum, Daniel Jay. The Final Plateau. Toronto: Burns and McEachren, 1974.

Beattie, Walter M. "The Design of Supportive Environments for the Life-Span." The Gerontologist. Vol. 10, No. 1, 1970.

Bell, W.G. "Community Care for the Elderly: An Alternative to Institutionalization." The Gerontologist. Vol. 13, No. 3, Part 1, Autumn, 1973.

Bennett, Ruth. "The Meaning of Institutional Life." The Gerontologist. Vol. 3, No. 2, Part 1, September, 1963.

Bennett, R. and Nahemow, L. "Institutional Totality and Criteria of Social Adjustment in Residences for the Aged." Journal of Social Issues. Vol. 21, October, 1965.

Bourestom, N. and Tars, S. "Alterations in Life Patterns Following Nursing Home Relocation." The Gerontologist. Vol. 14, No. 5, Part 1, October, 1974.

Brody, E.M. "Congregate Care Facilities and Mental Health of the Elderly." Aging and Human Development. Vol. 1, November, 1970.

Brody, E.M. The Human Treatment System of the Weiss Institute. Unpublished paper presented at the Annual Meeting of the Gerontological Society. New York, 1976.

Brody, E.M. and Gottesman, L. "Issues of Institutional Care" in A Social Work Guide for Long-Term Care Facilities. Edited by Elaine M. Brody. Rockville, Maryland: National Institute of Mental Health, 1974.

Brody, S.J. and Cohen, E. "Broad Social Issues" in A Social Work Guide for Long-Term Care Facilities. Edited by Elaine M. Brody. Rockville, Maryland: National Institute of Mental Health, 1974.

Bruck, C. "Designs for Aging." Human Behavior. Vol. 4, No. 4, April, 1975.

Byerts, T., ed. Housing Policy Issues and the Aged. Washington: Gerontological Society, 1976.

Calhoun, John B. "Space and Scale: Insights from Animal Studies Relating to the Architecture and Contents of Housing for the Aged" in Spatial Behavior of Older People. Edited by L. Pastalan and D. Carson. Ann Arbor: University of Michigan, 1970.

Canada. Department of National Health and Welfare. Programs for the Aged in Europe - Selected Countries. n.p.: 1971.

Canada. Department of National Health and Welfare. Provincial Health Services by Program, Health Series No. 23 Research and Statistics Directorate. Ottawa: Research and Statistics Directorate, n.d.

Canada. Department of National Health and Welfare. Hospital Care Statistics Section. Medico-Social Statistics Office. Statistical Information on Homes for Special Care. Ottawa: Department of National Health and Welfare, 1972.

Canadian Council for Social Development. Housing the Elderly. Ottawa: Canadian Council for Social Development, 1976.

Canadian Council for Social Development. National Study of Senior Citizen Housing in Canada. n.p.: 1972, on-going.

Canadian Federal-Provincial Advisory Committee on Health Insurance. "Classification of Patient Care." n.p.: November, 1973.

Carp, F.M. "Impact of Improved Housing on Morale and Life Satisfaction." The Gerontologist. Vol. 15, No. 6, Part 1, December, 1975.

Cassano, R. Changing Trends in the Institutional Care of the Aged: A Study of Institutional Care in Metro with Special Emphasis on Social Policy Development. (M.S.W. Thesis, University of Toronto, 1965.)

Cluff, Pamela J. and Lawton, M. Powell. "Physical Facilities for the Aged and Chronically Ill." Presented at the 18th International Hospital Congress. Montreal, June 17-20, 1973.

Coe, Rodney M. "Self-Conception and Institutionalization" in Older People and Their Social World. Edited by A. Rose and W. Peterson. Philadelphia: F.A. Davis, 1965.

Collier, Barnard. "Interview with Grey Panther Maggie Kuhn." People Magazine. Summer, 1976.

Cummings, Elaine and Henry, W.E. Growing Old: The Process of Disengagement. New York: Basic Books, 1961.

Cummings, T.A.J. "Before the Curtain Falls: The Social Problems of Aging." Manitoba Medical Review. January, 1969.

Curtin, S. Nobody Ever Died of Old Age. Boston: Little, Brown and Company, 1972.

Donahue, Wilma T., Thompson, Marie McGuire and Curren, C.J., eds. Congregate Housing for the Older People. An Urgent Needs, a Growing Demand. Washington, D.C.: Department of Health, Education and Welfare, 1977.

Douglas, J. "Homes for Aged Said Last Resort." The Montreal Star. June 1, 1968.

Dudley, C.J. and Hillery, G.A., Jr. "Freedom and Alienation in Homes for the Aged." The Gerontoligist. Vol. 14, No. 2, April, 1977.

Eisdorfer, Carl. "Resources for the Aged Reflect Strongly Held Social Myths." The Centre Magazine. Vol. 8, No. 2, March-April, 1975.

Environics Research Group. The Seventh Age: A Bibliography of Canadian Sources in Gerontology and Geriatrics, 1964-1972. Toronto: Environics Research Group, 1972.

Etzioni, Amitai. "Nursing Homes: New Rules Are Not Enough." Washington Post. May 25, 1975.

Gelwicks, L.E. "Home Range and Use of Space by an Aging Population" in Spatial Behavior of Older People. Edited by L. Pastalan and D. Carson. Ann Arbor: University of Michigan Press, 1970.

Gelwicks, L.E. and Newcomer, R.J. Planning Housing Environments for the Elderly. Washington: National Council on Aging, 1974.

Gerontological Society. Environments and Aging: Concepts and Issues. Washington, D.C.: The Gerontological Society, 1975.

Gerontology Project Group. Research in Environmental Analysis and Design for the Aging: An Environment for the Aging - Report No. 1. Ithaca, N.Y.: College of Human Ecology, Cornell University, 1971.

Goffman, E. Asylums. New York: Anchor Books, 1961.

Goffman, E. The Presentation of Self in Everyday Life. Garden City, N.Y.: Doubleday, 1959.

Gottesman, L.E. and Barney, J. "Innovation in Institutional Settings: Some Suggested Approaches" in Environments and Aging: Concepts and Issues. Washington, D.C.: The Gerontological Society, 1975.

Gottesman, L.E. and Bourestom, N.C. "Why Nursing Homes Do What They Do." The Gerontologist. Vol. 14, No. 6, December, 1974.

Grant, Ronald P. "An Architect Discovers the Aged." The Gerontologist. Vol. 10, No. 3, Autumn, 1970.

Graver, H. "Institutions for the Aged - Therapeutic Communities." Journal of the American Geriatrics Society. Vol. 19, 1971.

Gubrium, Jaber F. "Environmental Effects on Morale in Old Age and the Resources of Health and Solvency." The Gerontologist. Vol. 10, No. 3, Part 2, Autumn, 1970.

Hall, E.T. The Hidden Dimension. Garden City, N.Y.: Doubleday, 1966.

Harel, Zev. Organizational Factors in Residential Care Settings for the Aged. (Ph. D. dissertation, Washington University, St. Louis, June, 1971.)

Hart, G. Non-Profit Housing for the Aged and other Special Care Groups: A Policy Study for Central Mortgage and Housing Corporation. n.p.: 1976.

Hay, Donald G. "Profiles of 3 Nursing Homes and a Long-Term Hospital in Scandinavia." The Gerontologist. Vol. 15, No. 4, August, 1975.

Henry, Jules. Culture Against Man. New York: Alfred A. Knopf, 1965.

Hicks, A. "Are Nursing Homes 'Dead End Streets'?" Nursing Homes. January/February, 1977.

Howarth, J. "A Contrast in Care for Senior Citizens." Globe and Mail. March 5, 1971.

Ittelson, W.H., Rivlin, L.G. and Proshansky, H. Environmental Psychology. New York: Holt, Rinehart and Winston, Inc., 1970.

Jacobs, Ruth H. "One-way Street - An Intimate View of Adjustment to a Home for the Aged." The Gerontologist. Vol. 9, No. 4, Winter, 1969.

Kahana, Eva. "Emerging Issues in Institutional Services for the Aging." The Gerontologist. Vol. 11, No. 1, Part 1, Spring, 1971.

Kahana, Eva. "The Humane Treatment of Old People in Institutions." The Gerontologist. Vol. 13, No. 3, Part 1, Autumn, 1973.

Kahn, K.A., Hines, W., Woodson, A.S., and Burkham-Armstrong, G. "A Multi-Disciplinary Approach to Assessing the Quality of Care in Long-Term Care Facilities." The Gerontologist. Vol. 17, No. 1, 1977.

Kahn, Robert A. "The Mental Health System and the Future Aged." The Gerontologist. Vol. 15, No. 1, February, 1975.

Kaplan, Jerome. "An Editorial: Alternatives to Nursing Home Care: Fact or Fiction." The Gerontologist. Vol. 14, No. 1, February, 1974.

Kaplan, Jerome. "The Institution as a Corner-Stone for Alternatives to Institutionalization." The Gerontologist. Vol. 14, No. 1, February, 1974.

Karcher, Charles J. and Linden, Leonard L. "Family Rejection of the Aged and Nursing Home Utilization." International Journal of Aging and Human Development. Vol. 5, No. 3, 1974.

Kastenbaum, Robert, ed. New Thoughts on Old Age. New York: Springer, 1964.

Ketcham, William, Sack, Ann and Shore, Herbert. "Annotated Bibliography on Alternatives to Institutional Care." The Gerontologist. Vol. 14, No. 1, February, 1974.

Kistin, H. and Morris, R. "Alternatives to Institutional Care for the Elderly and Disabled." The Gerontologist. Vol. 12, No. 2, Part 1, Summer, 1972.

Koff, Theodore H. "Rationale for Services: Day Care, Allied Care and Coordination." The Gerontologist. Vol. 14, No. 1, February, 1974.

Koncelik, J. Designing the Open Nursing Home. Stroudsburg, Pa.: Dowden, Hutchinson and Ross, 1976.

Kubler-Ross, Elizabeth. On Death and Dying. New York: Macmillan Publishing Co., Inc., 1969.

Laging, Barbara. "Furniture Design for the Elderly." Rehabilitation Literature. Vol. 27, No. 5, May, 1966.

Larson, Calvin J. "Alienation and Public Housing for the Elderly." International Journal of Aging and Human Development. Vol. 5, No. 3, 1974.

Lawton, M. Powell. "Ecology and Aging" in Spatial Behavior of Older People. Edited by L. Pastalan and D. Carson. Ann Arbor: University of Michigan Press, 1970.

Lawton, M. Powell. "The Human Being and the Institutional Building" in Designing for Human Behavior. Edited by J. Lang, W. Burnett, W. Moleski, and D. Vachon. Stroudsburg, Pa.: Dowden, Hutchinson and Ross, 1974.

Lawton, M. Powell. "Planning a Building for the Mentally Impaired Aged." Unpublished paper, Philadelphia Geriatric Centre, n.d.

Lawton, M. Powell. Planning and Managing Housing for the Elderly. New York: John Wiley & Sons, 1975.

Lawton, M. Powell. "Supportive Services in the Context of the Housing Environment." The Gerontologist. Vol. 9, No. 1, Spring, 1969.

Lawton, M. Powell and Bader, J. "Wish for Privacy by Young and Old." Journal of Gerontology. Vol. 25, No. 1, 1970.

Lawton, M. Powell and Eisdorfer, C., eds. The Psychology of Adult Development and Aging. Washington, D.C.: The American Psychological Association, 1971.

Lawton, M. Powell and Nahemow, L. "Ecology and the Aging Process" in The Psychology of Adult Development and Aging. Edited by M.P. Lawton and C. Eisdorfer. Washington, D.C.: American Psychological Association, 1971.

Lipman, A. and Slater, R. "Homes for Old People - Toward A Positive Environment." The Gerontologist. Vol. 17, No. 2, April, 1977.

Locker, Rose and Rublin, Ann. "Clinical Aspects of Facilitating Relocation." The Gerontologist. Vol. 14, No. 4, August, 1974.

Lucas, C. Recreation in Gerontology. Springfield, Illinois: Charles C. Thomas, 1964.

Manitoba. Cabinet Committee on Health, Education and Social Policy. White Paper on Health Policy. Winnipeg: 1972.

Manitoba. Department of Health and Social Development. A Guide to Care Home Planning - Hostels and Personal Care Homes. Winnipeg: Department of Health and Social Development, n.d.

Marshall, Mary A. (Member of Virginia House of Delegates) Letter to the Editor. "Nursing Home Needs." Washington Post, n.d.

Mather, J., Stare, C., and Breinin, S. "Colour Preferences in a Geriatric Population." The Gerontologist. Vol. 2, No. 11, Spring, 1971.

Mendelson, Mary A. Tender Loving Greed. New York: Random House, 1974.

Nahemow, L. and Lawton, M.P. "Toward an Ecological Theory of Adaptation and Aging" in Environmental Design Research. Vol. 1. Edited by W. Preiser. Stroudsburg, Pa.: Dowden, Hutchinson and Ross, 1973.

Natenshon, L.J. "The Architectural Dilemma: Design, Individual Needs and Social Living." The Gerontologist. Vol. 9, No. 1, Spring, 1969.

Neugarten, Bernice L., ed. "Aging in the Year 2000: A Look at the Future." The Gerontologist. Vol. 15, No. 1, February, 1975.

Newfoundland and Labrador Association for the Aging. "Congregate Living for Older People." Paper presented at 1970 Annual Meeting, n.p.: 1970.

Niagara, Regional Ministry of Niagara. Resident Council Conferences, Welland, November 1971. Welland: Regional Ministry of Niagara, 1971.

Nova Scotia. Department of Public Welfare. Study Document for the Nova Scotia Conference on Aging. Halifax: Department of Public Welfare, 1967.

Nova Scotia Council of Health. Health Care in Nova Scotia - A New Direction for the Seventies. Halifax: Nova Scotia Council of Health, 1972.

Novick, Louis J. "Easing the Stress of Moving Day." Hospitals. Vol. 40, August, 1967.

Novick, Louis J. "Floor Meetings: A Way to Satisfy Basic Emotional Needs of Patients and Staff." Hospitals. Vol. 44, March, 1970.

Novick, L. "Hospital-based Program provides Activities and Services for Patients who otherwise might have to Reside in an Institution." Hospitals. Vol. 47, November, 1973.

"Nursing Home Construction to Halt." Globe and Mail. April 21, 1977.

"Nursing Homes in Canada." Hospital Administration in Canada. December, 1972.

Ontario. Ministry of Community and Social Services. Consider Yourself at Home. Toronto: Ministry of Community and Social Services, 1971.

Ontario Elderly Persons' Centres Conference. Proceedings: 2nd Ontario E.P.C.C. n.p.: 1971.

Ontario Medical Association. Rehabilitation Committee. Report of Task Force to Study the Assurance of Quality Care in Residential Institutions. n.p.: n.d.

"Ontario Policy for Extended Care Facilities and Home Care Programs." Canadian Hospital. August, 1971.

Ontario Psychogeriatric Association. Dilemmas in Psycholgeriatrics: The Alternatives. Ottawa: The Association, 1976.

Ontario United Senior Citizens, Inc. Proceedings of the Annual Convention. (copy of typescript: 1971).

Ontario Welfare Council. Housing the Elderly in Ontario: A Brief Based on Proceedings of a Workshop on "Beyond Shelter." Toronto: Ontario Welfare Council, 1975.

Ostrander, E.R. Creating Interior Environments for Older Adults: Physical, Social Psychological and Psychological Considerations. Paper presented to International Symposium on Housing and Environmental Design for Older Adults. Washington, D.C., 1971.

Ostrander, E.R. "Research Based Nursing Home Design: An Approach for Planning Environments for the Aging." International Journal of Aging and Development. Vol. 4, No. 4, 1973.

Pastalan, Leon A. "How the Elderly Negotiate Their Environment" in Environment for the Aged: A Working Conference on Behavioral Research, Utilization and Environmental Policy. San Juan, Puerto Rico: The Gerontological Society, 1971.

Pastalan, Leon A. "Privacy as an Expression of Human Territoriality" in Spatial Behavior of Older People. Edited by L. Pastalan and D. Carson. Ann Arbor: University of Michigan, 1970.

Pastalan, Leon A. "Privacy Preferences Among Relocated Institutionalized Elderly" in Man-Environment Interactions: Evaluations and Applications, Part II. Edited by D.H. Carson. Stroudsburg, Pa.: Dowden, Hutchinson and Ross, 1974.

Perin, C. With Man in Mind: An Inter-Disciplinary Prospectus for Environmental Design. Cambridge, Mass.: M.I.T. Press, 1970.

Personal Communication, Leo E. Baldwin, Housing Consultant, National Retired Teachers' Association, American Association of Retired Persons, to Jan Reizenstein. April 15, 1977.

Pincus, Allen. "The Definition and Measurement of the Institutional Environment in Homes for the Aged." The Gerontologist. Vol. 8, No. 3, Part 1, Autumn, 1968.

Pincus, Allen and Wood, V. "Methodological Issues in Measuring the Environment in Institutions for the Aged and its Impact on Residences." Aging and Human Development. Vol. 1, 1970.

Quebec. Report of the Commission of Inquiry on Health and Social Welfare. Vol. 3, Part 1. Quebec: n.p., 1971.

"Quebec Announces Nursing Home Scheme to End Abuses." Dimensions in Health Service. June, 1976.

Rapelje, D. "A Home for the Aged Where People Live." Canadian Nurse. November, 1968.

Rapelje, D. and Papp, P. "This is My Life - This is My Home" in Dilemmas in Psychogeriatrics: The Alternatives. Ottawa: The Ontario Psychogeriatric Association, 1976.

Reid, David W., Haas, Gwen and Hawkings, Douglas, "Locus of Desired Control and Positive Self-Concept of the Elderly," The Gerontologist, Vol. 32, No. 4, pp. 441-450.

Reid, D. and Ziegler, M. "Perceived Control and Psychological Adjustment of Elderly Persons" in Dilemmas in Psychogeriatrics: The Alternatives. Ottawa: The Ontario Psychogeriatric Association, 1976.

Rose, Arnold M. and Peterson, W.A. Older People and Their Social World. Philadelphia: F.A. Davis, 1965.

Rosow, Irving. Social Integration of the Aged. Glencoe, Illinois: Free Press, 1967.

Saskatchewan, Aged and Long-Term Illness Survey Committee. Information and Opinion Survey. Regina: Aged and Long-Term Illness Survey Committee, 1962.

Schwenger, C.W. Health Care for Aging Canadians. n.p.: n.d.

Schneider, Frank W. and Coppinger, Neil W. "Staff - Resident Perceptions of the Needs and Adjustment of Nursing Home Residents." Aging and Human Development. Vol. 2, 1971.

Schooler, Kermit K. "Effects of Environment on Morale." The Gerontologist. Vol. 10, No. 3, Part 1, Autumn, 1970.

Schooler, Kermit K. "The Relationship Between Social Interaction and Morale of the Elderly as a Function of Environmental Characteristics." The Gerontologist. Vol. 9, No. 1, Spring, 1969.

Shore, Herbert. "What's New About Alternatives." The Gerontologist. Vol. 14, No. 1, February, 1974.

Silverstone, B. and Wynter, L. "The Effects of Introducing a Heterosexual Living Space." The Gerontologist. Vol. 15, No. 1, Part 1, February, 1975.

Slayton, Tom. "Vermont Nursing Homes Call Critical Study 'Hog Wash'." Boston Sunday Globe. August 29, 1976.

Smith, Bert Kruger. "An Old Woman Speaks" in Aging in America. Boston: Beacon Press, 1973.

Snyder, Lorraine H. "A Case in Point: The Geriatric Wheelchair." Human Ecology Forum. Vol. 3, No. 2, 1972.

Snyder, Lorraine H. "An Exploratory Study of Patterns of Social Interaction, Organization and Facility Design in Three Nursing Homes." International Journal of Aging and Human Development. Vol. 4, No. 4, 1973.

Snyder, Lorraine H. and Ostrander, E. Research Basis for Behavioural Program. n.p.: New York States Veterans' Home, 1974.

Snyder, Lorraine H., Ostrander, E., and Koncelik, J. The New Nursing Home: Conference Proceedings, a Response to the Behavior and Life Style of the Aging. Ithaca, N.Y.: Cornell University Press, 1973.

Sommer, R. Design Awareness. New York: Holt, Rinehart and Winston, 1972.

Sommer, R. Personal Space - the Behavioural Basis of Design. Englewood Cliffs, N.J.: Prentice-Hall Inc., 1969.

Sommer, R. "Small Group Ecology in Institutions for the Elderly" in Spatial Behavior of Older People. Edited by L. Pastalan and D. Carson. Ann Arbor: University of Michigan, 1970.

Spivack, M. "Archetypal Place" in Environmental Design Research, Vol. 1: Selected Papers. Edited by W. Preiser. Stroudsburg, Pa.: Dowden, Hutchinson and Ross, 1973.

Spivack, M. "Psychological Implications of Mental Health Centre Architecture." Hospitals. No. 43, 1969.

Steele, F.I. Physical Settings and Organization Development. Reading, Mass.: Addison-Wesley, 1973.

Strauss, D. "The Relationship between Perception of the Environment and the Retrenchment Syndrome in a Geriatric Population." (Unpublished Ph.D. dissertation, New York University, 1963.)

Swedish Institute. New Lives for Old. Stockholm: Swedish Institute, 1969.

Tobin, S.S. and Lieberman, M.A. Last Home for the Aged. San Francisco, California: Jossey-Bass, 1976.

Townsend, C. Old Age: the Last Segregation. New York: Grossman, 1971.

Townsend, Peter. The Last Refuge. New York: Rutledge, 1964.

United States. Department of Health, Education and Welfare. "Time and Recreation" in Working with Older People: Vol. III: The Aging Person, Needs and Services. Washington, D.C.: H.E.W., 1974.

United States. Department of Health, Education and Welfare. Working with Older People. Vols. 1-3. Washington, D.C.: H.E.W., 1974.

United States. Department of Health, Education and Welfare. National Institute of Mental Health. Public Health Service. Aged Patients in Long-Term Care Facilities. Washington, D.C.: H.E.W., 1973.

United States. Senate. Subcommittee on Long-Term Care of the Special Committee on Aging. Nursing Home Care in the United States: Failure in Public Policy - Introductory Report. Washington, D.C.: Government Printing Office, 1974.

United States. Senate. Subcommittee on Long-Term Care of the Special Committee on Aging. Nursing Home Care in the United States: Failure in Public Policy - What can be done in Nursing Homes: Positive Aspects in Long-Term Care. Washington, D.C.: Government Printing Office, 1975.

Vigorda, Debbie. The Longitudinal Study of Aging: A Review. n.p.: n.d. (typescript)

Wax, Murray. "Changing Role of Homes for the Aged." The Gerontologist. Vol. 2, No. 3, September, 1962.

Weber, J. and Larsson, N. Nursing Home Guidelines, Working Paper 2. Ottawa: Architectural and Planning Division, Central Mortgage and Housing Corporation, 1972.

Weinstock, Camilda and Bennett, Ruth. "From 'Waiting on the List' to becoming a 'Newcomer' and an 'Old Timer' in a Home for the Aged: Two Studies of Socialization and its Impact upon Cognitive Functioning." International Journal of Aging and Human Development. Vol. 2, 1971.

Whitaker, Marilyn. Senior Citizen Hostels: An Evaluation of Existing Projects and Suggestions for Future Projects. Toronto: Toronto Branch, Central Mortgage and Housing Corporation, 1975.

White House Conference on Aging, 1971. Toward a National Policy on Aging. Final Report, Vol. II. Washington, D.C.: Government Printing Office, 1973.

Yaffe, B. "Administrative Turnover at Scarborough Lodge has Timbrell Studying Nursing Home Standards." Globe and Mail. March 21, 1977.