Outdoor Space Surrounding Senior Citizen Housing
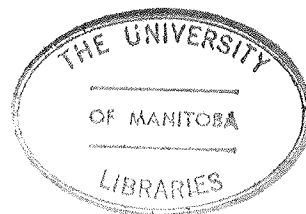Developments

by

Ingrid A. Thiessen

A practicum
presented to the University of Manitoba
in partial fulfillment of the
requirements for the degree of
Masters of Landscape Architecture
in
The Department of Landscape Architecture

Winnipeg, Manitoba, 1983

(c) Ingrid A. Thiessen, 1983

ACKNOWLEDGEMENTS

OUTDOOR SPACE SURROUNDING SENIOR CITIZEN HOUSING

DEVELOPMENTS

by

Ingrid A. Thiessen

A practicum submitted to the Faculty of Graduate Studies
of the University of Manitoba in partial fulfillment of the
requirements of the degree of

MASTER OF LANDSCAPE ARCHITECTURE

⊖   1983

ABSTRACT

This thesis focuses on the problem of providing meaningful
outdoor space for use by the elderly in the urban housing
context. Three aspects of the problem are investigated: the
elderly person, the ideological base, and the housing envi-
ronment.   An understanding of the elderly person was essen-
tial to this problem.   The literature review summarizes
age-related changes and how these changes may affect design.
Changes in the senses, the central nervous system, the skel-
etal system, the muscle system, the cardiovascular system,
and the respiratory system are explained. The four needs of
the elderly: security, independence, status, and neighbour-
ing are discussed.   Design principles are formulated which
shape outdoor spaces, to allow and encourage the fullfill-
ment of these needs.   The idealogical base discusses ideas
and objectives which influence design. These include socie-
ty's attitudes towards the elderly, the effect of building
form, the influence of the natural landscape and the design
process.

    The latter portion of the thesis focuses on a survey of
senior citizen housing developments conducted in Winnipeg.
The results address housing form, outdoor spaces, leisure
activities, parking, entrance design, and briefly mention
neighbourhood conditions.

    The three components: the elderly person, the ideological
base, and the survey results of the housing environment, are
synthesized to form a set of design guidelines.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

Chapter I

INTRODUCTION

1.1   THE SENIOR CITIZEN HOUSING DEVELOPMENT

Senior citizen housing developments are an accepted and de-
sireable vehicle for housing the elderly.   It is not only a
North American phenomenon,   but one that is being used
throughout Europe. There, the ratio of elderly to the total
population is much higher than in Canada. The 1981 Canadian
census shows that Canada's elderly made up 9.7% of the popu-
lation.   In comparison every European country has an elderly
population over 10% and many, such as France, Great Britian
and Austria are closer to 14%.   In some cities, such as Vi-
enna, 20% of the population is over 65; one in every five
persons.[1] It is interesting to discover that in all of these
countries some form of age homogeneous housing environment
is offered.   These housing developments take on different
forms, and the policies and philosophies differ, neverthe-
less, the basic concept of a tempered social and economic
living environment for the elderly is accepted in all North
American and European countries.

1.2   DEFINING THE PROBLEM

    The basic concept of a tempered senior citizen living en-
vironment is accepted.   However, the building form, the im-
mediate surroundings and the building location, which try to
fullfill this concept, have in many cases been critisized.
(Birren 1976, Darley 1982, Gelwicks and Newcomer 1974, Gol-
denberg 1981, Hartman et.al. 1976, McRae 1975, Gold 1977).
As information on elderly housing is gathered different is-
sues arise.   One of these issues which the designer must
deal with is the importance of private and semiprivate ex-
terior space (balconies and yards) surrounding the senior
citizen housing development.   It is one issue amongst many
and its role must be understood as an integrel part of the
senior citizen development.   This practicum focuses on one
specific problem; that of providing meaningful outdoor space

---

[1] Leon Goldenberg, Housing for the Elderly, (New York: Gar-
   land STPM Press, 1981).

for use by the elderly in their homogeneous housing environments.

In defining the problem of outdoor spaces surrounding housing developments for senior citizens two tasks were completed: first, the current literature was reviewed and second, an evaluation was undertaken of the outdoor spaces in 73 senior citizen housing developments in Winnipeg. Several issues were identified through these two means.

1.2.1 The Literature Review

It has been difficult to limit the scope of the review to specific landscape related material. The multitude of articles and books available on the elderly is overwhelming, yet few deal in a direct manner with landscape architectural issues. A conference paper entitled "Information Interpretation in Designing Environments for the Aging" by Louis E. Gelwicks (Thomas Byerts ed.,1973) confirms the problems that are associated with the amount and form of information that is available about the aged, and the difficulty in applying it to physical design.

The literature inadequately deals with the issue of outdoor space. Only one book (Green, et.al.,1975) was found which dealt with exterior spaces in senior citizen housing developments in any depth. Though few specific issues regarding outdoor space were found, many issues were addressed relating to the needs of the elderly. The following issues were identified through the literature:

1. The physical limitations of the elderly

2. The special needs of the elderly, including:

   a) independence

   b) security

   c) status

   d) neighbouring

3. The variety of lifestyles among the elderly

4. Attitudes and theories of aging

5. Recreation opportunities

6. Maintenance issues

7. The high rise housing form

8. The issue of territoriality

9. Reduced home range, making the home more important

This list of issues points out how complex the housing problem is when providing specialized housing environments for the elderly. A 1971 Manitoba study on the elderly identified that 61.9% of the elderly who live in the general community experience extreme or very extreme social isolation. This figure was slightly higher in senior citizen developments, 64.7%. (Aging in Manitoba, 1973) The issues are not only complex; they are serious issues which affect the well being of the residents living in these developments.

1.2.2   The Survey

The evaluation of the 73 housing developments undertaken as part of this study in October 1982 raised more specific design questions concerning the design and use of outdoor space. The following overview summarizes some of the issues which were identified through the survey. The actual process and results of the survey are discussed in Chapter V.

1. The high rise structure was the most common form of elderly housing (50.7%). Medium rise housing came second (20.1%). Together these housing forms represented over 70% of the housing choice when it came to specialized housing. Is this the type of housing form appropriate for the elderly?

2. Given that the majority of elderly housing environments are medium or high rise housing, how can the need for exterior private and semiprivate spaces best be met?

3. 75.3% of the developments provided no private yards or balconies. Why is private space not considered important and why should it be?

4. 91.8% of the developments provided no direct access to the street. An interior hallway had to be utilized in order to reach the street. Should the percentage of interior hallway exits have been so high?

5. 77.7% of the developments showed no signs of organized outside leisure opportunity such as shuffleboard. Is this reasonable considering the winter climatic conditions of Winnipeg? Does this not con-

flict with the increased emphasis on recreation in the literature?

6. What types of outdoor leisure activities are appropriate for the home environment as opposed to neighbourhood facilities?

7. Gardening was the most frequently identified leisure activity. This did not include the numerous balcony gardens. Should every development provide the opportunity for gardening? Does the garden have any therapeutic value in the elderly housing context and, if so, how can it be encouraged?

8. Are the parking ratio's suggested by C.M.H.C. adequate ? Only 27.4% of the developments identified visitor parking stalls. Should parking for visitors be given more consideration?

9. The architectural detailing of the outdoor environment was judged to be of poor quality. Does this influence the use of outdoor space?

10. To what extent does the surrounding neighbourhood influence the design and use of semiprivate outdoor space?

11. Should maintenance levels and responsibility be managed differently in communal yards than in private yards?

12. To what extent does the image of the senior citizen housing development affect society's attitudes toward the elderly?

The survey once again reinforced that the issue of housing for the elderly is a complex one. The function of outdoor space within this complexity will not address all the issues or solve all the problems associated with specialized housing for the elderly, but it should not be forgotten as one of the means of achieving a solution; a solution more responsive to the needs of the elderly.

The increasing number of elderly in the population, the importance of outdoor space for social interaction and leisure activities, and the lack of specific guidelines in outdoor residential design for the elderly, all indicate that this is a worthy area for research within the design disciplines. Without question, the outdoor residential environment becomes more important with old age and immobility. If outdoor space is important and worthy of our special attention, then its design and management is particularly important, for this determines whether it is a successful place which contributes to the quality of living for the elderly.

1.3 GOALS AND OBJECTIVES

There are two goals which this study sets out to achieve. The first goal is to examine the role of outdoor space in urban senior citizen housing developments in Winnipeg. The second is to form guidelines for these outdoor spaces which can be utilized by designers, both in the development of new, and the recycling of existing elderly housing developments.

The objectives of the study are:

1. To undertake a literature review examining the role of outdoor space surrounding senior citizen housing developments.

2. To understand the age-related changes that affect design.

3. To identify an ideology of aging that can be recognized in the design process.

4. To undertake an analysis of outdoor spaces in existing senior citizen housing developments in Winnipeg.

5. To provide guidance for those involved in the planning, design and management of outdoor spaces associated with the elderly.

1.4 LIMITATIONS OF THE STUDY

There are several limitations to the study.

First, the study focuses on the housing situation in Winnipeg. It deals with the issue of winter weather which could effect decision-making in a different manner than in locations with milder climates.

Second, the study deals with housing developments for senior citizens. Many of the elderly still live in single family detached homes, however, the study does not deal with this aspect of elderly housing. It is hoped, nonetheless, that some of the study's results will apply to this portion of the elderly population.

Third, the study deals with the well elderly. Only 6% of Manitoba's elderly reside in nursing homes and only 14% are consumers of social services. (Dr. Betty Havens, Panel on Aging, 1982). The remainder, 80%, make up the well elderly. It is this majority that this study deals with.

Fourth, though site selection is an important aspect of elderly housing it will not be included in this study. Site selection has been satisfactorily covered in other sources and does not require reiteration. (Green, et.al.,1975; Millas, 1980; Obenland, et.al.,1978).

1.5   METHODOLOGY

There are three components to the problem of outdoor spaces surrounding developments for senior citizens. They are:

1. The elderly person.

2. The ideological base.

3. The housing context.

An understanding of the elderly person is essential to this problem. Age-related changes and specific needs of the elderly influence design decisions regarding the exterior home environment. Chapters II and III deal with this component. At the conclusion of Chapter III a series of design principles that deal with elderly people are formulated.

The designer's preconceptions of the elderly's role in society, the accepted housing form, the role of the outdoor environment, and the design process are factors which influence the design of outdoor spaces surrounding senior citizen housing developments. These preconceptions can be the cause of stereotyped solutions. The aim of Chapter IV is to establish an ideology that forms the basis of design thinking.

The third component is the housing context. An evaluation of the existing senior citizen housing developments was undertaken in order to identify design issues and form the basis for future policies.

These three components interact to create more specific design guidelines. Figure 1 diagrammatically explains the problem and the three aspects involved.
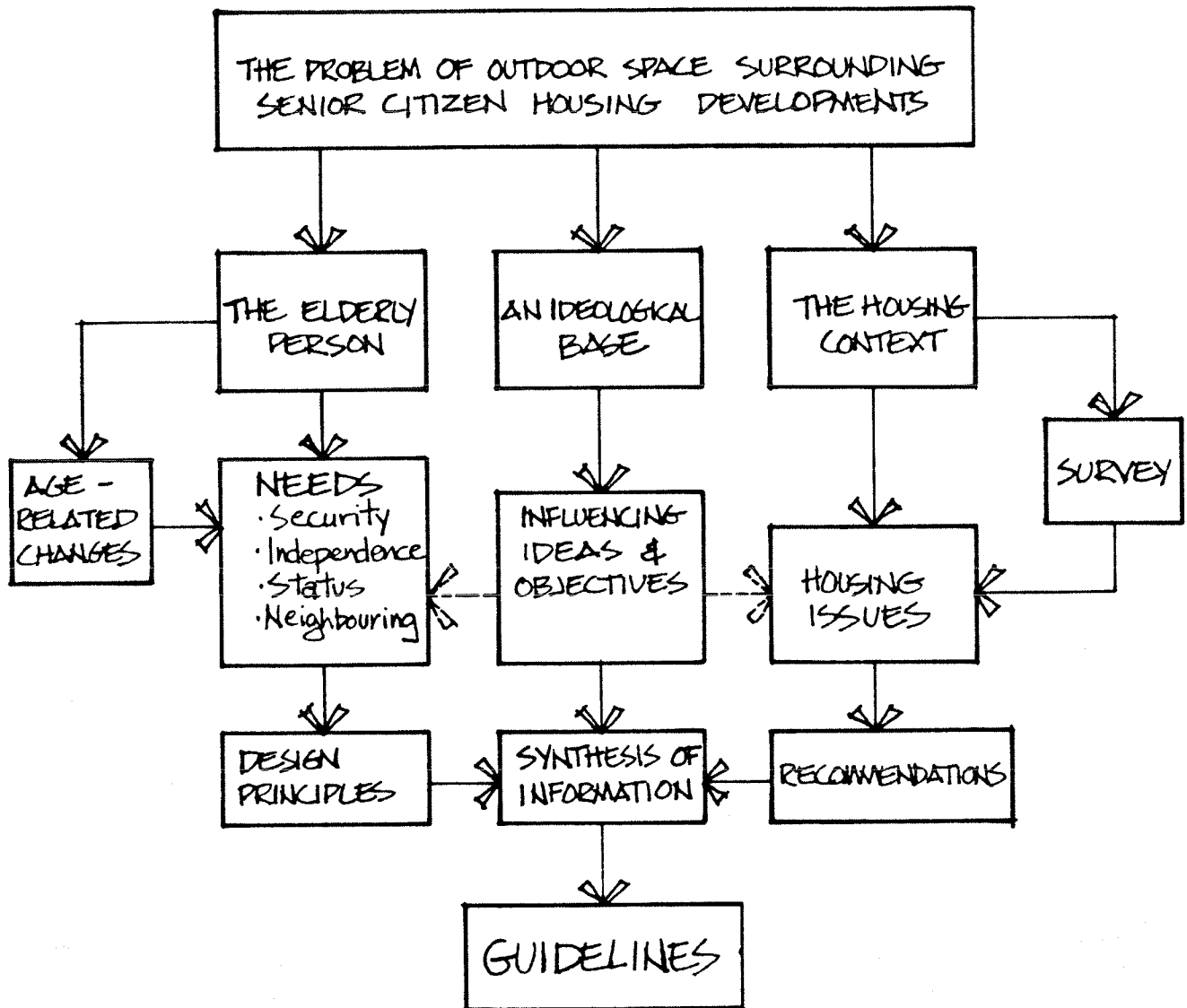
Figure 1: The Problem of Outdoor Space

Chapter II

AGE RELATED CHANGES

2.1   INTRODUCTION

There are many age-related changes which will affect the de-
sign and detailing of the older persons built environment.
Michael Audain's opinion is that " we have probably oversold
the importance of design details in housing for the aged.
Most old people do not require design details that are radi-
cally different from those appreciated by the entire popula-
tion."[2] He goes on to give examples of these details which
rarely are seen in the general public housing environment
but which everyone would appreciate.   His statement cannot
be denied.   The omission of these everyday standard details
for the general public can be overlooked yet, for the elder-
ly, these same details are crucial.

    The elderly's physical capabilities are a determinant in
forming design details and therefore a list of age-related
changes has been developed. The designer must use this list
with discretion.   Age and individuality go hand in hand.
Whereas one person will have problems with hearing, another
will not.   The severity of the age-related changes covers
the entire spectrum. the best intention to compensate for a
lack in physical capability can produce disastrous results.
This occurred in a housing project for the elderly studied
by Carp (1976).   The refrigerator had been raised off the
floor so that residents did not have to stoop in order to
remove things.   Those who were short, however, had to stand
on a chair in order to remove frozen goods from the freezer
- a foolish compromise.   It can also be argued that too
many design details can lead to a life of complacency re-
sulting in unexercised bodies and minds.   In actuality this
fear would seldom find root in the reality of the world.

    It was stated at the beginning that this study dealt with
the well elderly not those confined to nursing homes.   Yet
even among the well elderly there are changes in the body

---

[2] Michael Audain,   "Rethinking Housing for the Elderly." in
    Housing the Elderly:Proceedings from the Regional Seminars
    and Workshops 1974 -1975.   The Canadian Council on Social
    Development, p. 3.

which influences how a designer details a bench or organizes a site. Unfortunately literature which addresses physical changes and needs of the well elderly is not written for designers. This chapter attempts to deal with age-related changes from a design point of view. At the onset, it should be noted that diseases common in old age and specific age-related changes will not be organized separately. Further, age-related changes which produce no consequent design influence have been deleted.

2.2   CHANGES IN THE SENSES

The most important aspect of age-related change that the designer must deal with is changes with the senses.

> Since behavior is directly related to the individual's ability to perceive the environment through the sensory organs, it is important for the aged (and for those working with them) to know the consequencs of sensory deprivation.[3]

The loss of some of the senses can affect not only the ability to perform simple tasks but may have psychological and social effects as well.(Wantz and Gay 1981). One of the most interesting studies on sensory loss was done by Pastalan. Age-related sensory loss's were simulated and then tested on four doctoral students in architecture. Environments were evaluated by them while wearing the sensory loss devices. They found, as expected, that sensory losses constrain people from using environments effectively as presently designed. "While it is apparently impossible to forestall sensory losses, this experience suggests that through appropriately programmed environmental stimuli, the environment can be made to function as a more effective support network and mitigate the cosequences of sensory losses."[4] The method suggested by Pastalan in organizing the environment to overcome sensory loss is appropriatly discussed under 'Independence' in Chapter III. Vision, hearing, kinesthesis, temperature and touch will be discussed in turn.

---

[3] Ruby H. Neuhaus and Robert H. Neuhaus, Successful Aging, (Toronto: John Wiley and Sons Inc.,1982.), p.33.

[4] Leon Pastalan, "The Simulation os Age Related Sensory Losses: A New Approach to the Study of Environmental Barriers" in Environmental Design Research, Vol.1, ed. W.Preiser, (Stroudsburg, Pennsylvania: Dowden Hutchinson & Ross Inc.,1973), p.387.

2.2.1 Vision

Visual acuity decreases early in life (around the thirties) and declines gradually until, at age 65, 40% of men and 60% of women have vision poorer than 20/70. (Neuhaus and Neuhaus 1982, Wantz and Gay 1981). Changes in the eye structure and muscles will cause the eye to lose its ability to maintain sharp images at close range. (Neuhaus and Neuhaus 1982) Negotiating stairs and distinguishing floor from wall surfaces becomes a real problem. This is often compensated for with the use of bifocals. Though glasses help,F.Carp and L. Pastalan suggest using clearly demarcated edges in the environment and forms which are sharply dilineated and clearly distinguished from one another. Pastalan advices to use colour carefully. Closely related colours tend to blend into each other, making it difficult to distinguish wall from floor. The opposite, extremes in colours, can cause unstable boundaries. In all cases the ability to perceive fine visual detail is impaired. (Pastalan, 1973).

The elderly require more time for their eyes to adjust to dark and light. This is because the aging retina requires more light, yet the pupil becomes smaller and lets in less light than in previous years. This affects the ability to see clearly in low levels of light. Problems occur when moving from a well lit indoor residential situation to a night street situation.

Peripheral vision is sometimes reduced causing signals outside the central range of vision to be missed. This has implications when designing signage. (Carp 1976).

> Colour vision holds up better than shape perception, although some hues tend to fade owing to lens opacity. Colour coding the environment is especially helpful to the old.[5]

There are three serious eye conditions that can occur in old age: glaucoma, retinal blindness, and cataracts. Glaucoma is a common cause of blindness if neglected; retinal blindness retains peripheral vision but the ability to read is lost; cataracts (opaqueing of the lens) will cause problems with glare in high light conditions. It is better to use several low watt bulbs then one intense artificial light source when trying to reduce glare. (Pastalan, 1973).

---

[5] F. Carp, "Urban Life Style and Life Style Factors," in Community Planning for an Aging Society. eds. M.P.Lawton and others,(Stroudsburg, Pennsylvania: Dowden, Hutchinson and Ross Inc.,1976). p.22.

2.2.2 Hearing

Hearing loss is much more common than loss of sight, but loss is so gradual that many people have permanent damage before it is detected. About 30% of the population over 65 have hearing difficulties. (Neuhaus and Neuhaus 1982). It is also more common in men and one source indicated 50% of all men have hearing losses. (Wantz and Gay 1981) It is the high pitched sounds rather than the low pitched sounds that are more commonly affected. Also background noise can seriously impede the ability to hear. (Pastalan, 1973). The most obvious result of hearing losses is the feeling of being socially isolated, and withdrawing from social involvement.

2.2.3 Kinesthetic Sensitivity

This deals with a person's awareness of body position. It involves malfunctions with the apparatus of the inner ear in conjunction with dulled sensitivity of receptors in muscles and joints. (Wantz and Gay 1981). The result is that old people often report dizziness or they will constantly check to see if they are placing their hands and feet in the right position.

2.2.4 Taste and Smell

Both taste and smell decrease and higher levels of stimulation are required for older persons than for younger counterparts. Pastalan's work indicated that the loss of taste was the most dramatic experience of sensory loss. One source indicated that orginally there are 250 taste buds in each capsule on the tongue but that in old age this number drops to 100. (Neuhaus and Neuhaus 1982 p.59) "Street smells such as exhaust fumes, bakery smells, freshly mown grass, the scent of flowers were all significantly reduced and affected the richness of environmental information."[6]

---

[6] L. Pastalan, "The Simulation of Age Related Sensory Losses", p.387.

2.2.5   Touch

There are five types of stimulation relating to the sense of
touch: cold, heat, touch, pain, and pressure.   Cold and
heat will be discussed in regards to changes to the skin.
When people age there is a loss of elasticity of the skin
and a general thinning of the tissue covering the body.
There is also a loss of the insulating fatty layers and a
loss of sweat glands.   Consequently the body cannot adjust
as efficiently to heat or cold. When the elderly person can
no longer perspire freely and is subject to prolonged heat,
hyperthermia may set in.   The opposite occurs in winter.
Due to the lack of insulating fat and poor circulation hy-
pothermia can result.

These elderly ladies are protecting their heads
from the hot sun with sheets of paper.

Figure 2:   Sun Protection

Also,   there is a loss of epidermic cells which produce
the brown pigment that protects the skin from ultra violet
rays.   Elderly people must be aware of the increased chance
of sunburn and skin cancer.

Pain and pressure generally decrease with aging.   Why
this occurs is not known. Various theories exist.   This
could be due to an increased pain threshold or "a loss of

tactile response as both perception and motor abilities
decline in reaction to stimuli."[7]

2.3   THE CENTRAL NERVOUS SYSTEM

The central nervous system is made up of the brain and the
spinal cord.   One of the results of aging (varying with the
individual) is the gradual reduction of the number of neuron
cells in the central nervous system.   These neuron cells do
not reproduce themselves and once they are lost they cannot
be replaced.   The junction of neurons establish a complex
network of synaspes through which impulses from the brain
are transmitted.   If neurons are lost the impulses slow
down.   The most obvious result in elderly people is the
slowing down in tests of reaction time.   But this slowing
down shows itself in all behaviours that rely on the central
nervous system.   Thus the motor skill areas and sensory or-
gans (mentioned in the previous section) are included.
(M.S.Wantz and J.E.Gay 1981).

2.3.1   Reaction and Motor Responses

As has been stated, reaction time is correlated with the
central nervous system.   Since reaction time involves other
factors such as perception, attention, and short term memory
as well as the transmission of neural impulses, it is un-
clear what importance the central nervous system plays (Neu-
haus and Neuhause 1982).   Though reaction time between a
stimulation and a response time slows, movement time in sim-
ple tasks such as tapping rapidly or talking spontaneously
does not decline until after seventy.   Unfamiliarity in a
task or extraneous stimulation forces the elderly person to
become slower and less accurate in comparison to his younger
counterpart, especially when the older person is under time
pressure.   When the older person is allowed to pace herself,
the reaction time is almost as quick as a younger person.
Problems in documenting this research involves motivation
and the fear of failure, and the relevance of the task and
information given.   (F.Carp 1976, Neuhaus and Neuhaus 1982).

Francis Carp, in his research on transportation and the
aging, has looked at environmental problems as they relate
to responses in the elderly.   He suggests that the elderly
need plenty of time to "get ready".   As an example, getting
off at the correct bus stop when using public transportation

---

[7] R.H.Neuhaus and R.H.Neuhaus, Successful Aging (Toronto:
John Wiley and Sons, 1982) p.60.

requires a prior signal. Because the elderly need time to respond at their own rate crossing a road where signals are paced at the convience of automobiles can cause difficulty.

> Old people need a strong, clear signal and an environment without distractions, in order to perceive the environment accurately so that they can respond to it appropriately.[8]

2.3.2   Learning and Memory

There is a difficult distinction to make between learning and memory which MUST be made when dealing with the elderly. Where memory   stops   and   learning begins   is   unclear. (M.S.Wantz and J.E.Gay 1981).   Learning can take place at any age.   The forces against learning are myths, stereotyping and fear of failure.   Short term recall seems to degenerate with age but memory itself does not seem to be affected. (M.S.Wantz and J.E.Gay 1981).

2.4   THE SKELETAL SYSTEM

2.4.1   Changes in Posture and Stature

Older people tend to be shorter.   Two reasons account for this.   First, these people " were born at a time when average heights were less by several inches than is currently the case."[9] This increase in height during the last century has been attributed to better environments and nutrition and has presently reached a plateau.   However there is a lifetime loss of height of 1-2 inches (2.5-5cm) which has been shown in longitudinal studies (I. Rossman 1982).   This loss occurs in shrinkage of the trunk and not in the length of the bones.   A disease called Osteoporosis also causes shrinkage in body height.   This disease is four times more common in women and involves a loss of bone mass and sometimes a round back deformity known as Dowagers Hump.

---

[8] F.Carp, "Urban Life Style and Life-Cycle Factors" in Community Planning for an Aging Society.   Edited by M.P.Lawton and others, (Sroudsburg, Pennsylvania: Dowden Hutchinson and Ross Inc.,1976), pp.23-24.

[9] Isadore Rossman, "Bodily Changes with Aging" in Adult Development and Aging, eds. K.W.Schaie and J.Geiwitz (Toronto: Little, Brown and Company 1982), p.343.

2.4.2   General Aspects of Aging and the Skeletal System

Bones lose their elasticity, become more brittle, and tolerate less stress during the aging process. This is due to the loss of calcium and increased porosity and erosion of the bones. Arthritic conditions are often the result of this deterioration and have become the second most common reason for disabilities during the aging process. (M.S.Wantz and J.E.Gay 1981 p.122).

Osteoporosis, previously mentioned, is a very serious disease caused by the lack of calcium in the bone. Chronic pain, disabililty and an increased incidence of fractures are symptons of this disease. Generally, with Osteoporosis the body can no longer sustain the mechanical stresses of daily life. Falling becomes a serious problem. Special attention must be given to pavements, edgings on planting beds and handrails to insure safety and increase independence.

2.5   THE MUSCLAR SYSTEM

With aging comes a change in muscular size, strength, endurance and agility. This decline occurs first in the male and will begin in the thirties. The decline in the muscle mass occurs much later in the female (I. Rossman 1982). Exactly why muscle cells degenerate is not known but in part " this is related to changes in connective and circulatory tissue, a loss of neurons, and a decreased capacity for transmitting nerve impulses, as well, as a reduction in physical activity."[10] As a resultt most older people take a longer time to complete a task and will not only feel weaker, but are weaker, in an anatomical sense. Exercise is imperative to minimize the effects of loss of muscular strength. To promote muscle strength, endurance and agility, exercise opportunities should be made available in the home environment. The presence of a volleyball court or garden area can act as an incentive to participate in exercise.

---

[10] M.S.Wantz and J.E.Gay, The Aging Process: A Health Perspective (Cambridge Massachusetts: Winthrop Publishers, Inc. 1981), p.124.
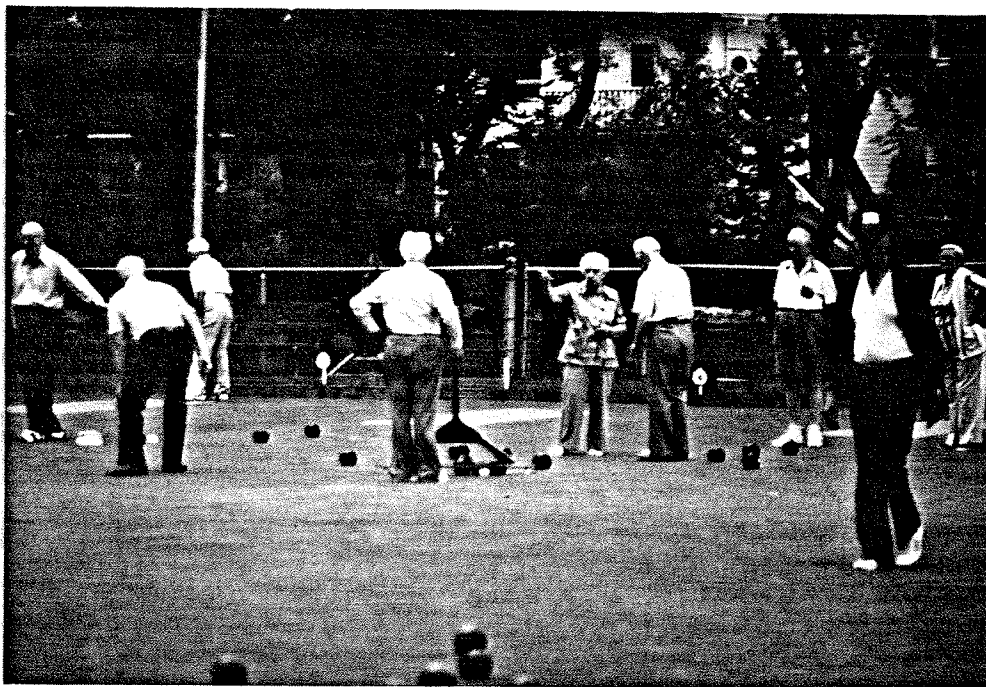
Exercise is imperative to minimize the loss of
muscular strength. Exercise opportunities should
exist close to or within the home environment.

Figure 3: Exercise and Muscle Strength

2.6 THE CARDIOVASCULAR SYSTEM

The cardiovascular system degenerates with age. The cardiac
output decreases between 30 and 40% between the ages twenty-
five and sixty-five.   It is thought that to help compensate
for this decrease in output the heart will actually undergo
an abnormal increase in size if hypertension is absent.
(Other sources such as Neuhaus and Neuhaus indicate the
heart may shrink). The cardiac output will also not be able
to reach the same high levels as it formerly did when put
under stress such as physical exercise. (I. Rossman 1982
p.349).   There are reasons to believe that cardiovascular
problems are linked with affluent socioeconomic, industri-
lized countries with implications that high-calorie diets,
smoking, low exercise levels and overworking heighten risk
of cardiovascular problems. Some of the symptoms of cardio-
vascular diseases are: pain, shortness of breath, irregular
rhythms in the heart, psychological confusion when blood
pressure is diminished (Wantz and Gay 1982), blurred vision
and memory impairment in cases of hypertension and, finally,
in the case of strokes, movement disabilities. One in every
20 persons over 65 are affected by stroke.   (Neuhaus and
Neuhaus 1982).   Therefore in a 200 unit senior citizen de-
velopment it is likely that ten people could suffer from
strokes.

2.7 THE RESPIRATORY SYSTEM

The ability to remain physically active depends on the respiratory system. (Wantz and Gay 1981). Smoking is a major influence in this ability. Three major respiratory changes are associated with aging. The first is the lung structure including lung elasticity. The second is gas exchange and air circulation which allows oxygen to enter the blood system and the third is ventilation control; the ability to take in air. (Neuhaus and Neuhaus 1982). Lung diseases such as Bronchitis, Emphysema and lung cancer can also occur, though these diseases are not a factor in normal aging. Persistant coughing, spitting, breathlessness, and sensitivity to cold air are some of the symptoms found with impaired respiratory systems.

2.8 CONCLUSIONS

The age-related changes that have been identified are natural; they occur at different rates in the majority of people. It must be made clear that the old are not sick. The aim of mentioning these changes is not to create a hospital environment that reduces risks completely, but to make designers aware of the responsibilities that are involved in designing for elderly people. If the designer understands that muscles degenerate and require exercise, then he will create a housing environment that encourages physical health. If he understands that sweat glands decrease in the elderly person and cause a slowing of temperature regulation, then the shade tree takes on a greater significance.

Changes in the senses, the central nervous system, the skeletal system,, the muscle system, the cardiovascular system, and the respiratory system may all affect the design process. Of all of these, the changes occurring in the senses is the most important to the designer. Sensory changes most strongly effect the way the elderly person perceives the environment, and therefore may directly correspond with a physical design oriented solution.

Chapter III

NEEDS OF THE ELDERLY

3.1   INTRODUCTION

     There are many reasons why senior citizen developments
have been universally sucessful in their basic concept. Mi-
chael Audain[11] states that the two most obvious reasons, re-
duced housing cost, and special design features, are factors
which "in themselves,   cannot substantiate the need for
building special housing complexes."[12] He suggests   that
these necessary factors can be better supplied through sub-
sidies allowing the elderly person to remain in their own
homes.

     The reasons for the high popularity with housing develop-
ments for the elderly are because they offer security, inde-
pendence and status: security in knowing what will happen
should one become ill; independence in making choices and
not having to be overly reliant on others; maintaining sta-
tus in a mini-community where before loss of job, social
roles, spouse and, sometimes, health alientated the elderly
from society.

     Audain relates the success of providing security, inde-
pendence and status, in part, to a fourth quality - neigh-
bouring.   It is hoped that loneliness will be reduced by
providing opportunities to meet and form friendships with
one's peers.

     From a management point of view the developments allow
for formulation and concentration of user services.   This
chapter focuses on the four forgotten needs: security, in-
dependence, status and neighbouring.

_____

[11] Michael Audain served as a research director for the Be-
    yond Shelter study and was program director at the Cana-
    dian Council on Social Development. p.12

[12] Michael Audain,"Rethinking Housing for the Elderly." in
    Housing the Elderly, p. 4.

3.2 SECURITY

When Michael Audain sited security as a major attraction of
elderly persons housing he did not mention it in relation to
any physical security needs. He was concerned with security
as it related to sickness, financial matters, nursing care,
counselling, legal aid, and so forth. He stated that people
had to feel secure about their basic arrangements in life in
order to feel secure about making independant decisions.

Security can also be discussed in terms of physical se-
curity, as it relates to the environment in which people
live. The degree to which the elderly feel secure about
their neighbourhood, their yard, the parking and entrance
areas will, in part, determine their independence in leaving
the security of their apartments to take part in outside ac-
tivities. The elderly's perception of their environment af-
fects how secure and comfortable they feel. The location of
the development in the community , the territorial defini-
tion of the yard, the size of the development, and the form
of the building are factors which influence security. Phys-
ical security means freedom from invasion from outsiders.
These outsiders may or may not have bad intentions. The
fact is that an environment should be defensible both from
the viewpoint of crime as well as territorial claims and
personal space.

The provision of physical security in housing for the
elderly is all too often limited to doormen, intercom sys-
tems, peepholes and locks. The regional seminars on housing
dvelopments held by the Canadian Council on Social Develop-
ment in 1974-1975, mentioned physical security once. This
was by an Ontario delegation which assumed that incorporat-
ing security for residents meant hiring a security guard in
large projects 24 hours a day. (Jan McClain 1974-1975). An
evaluation of Winnipeg's senior citizen housing developments
shows that managers and designers are concerned with build-
ing security. Nearly 70% had an intercom system. In speak-
ing with those residents who did not have an intercom system
it was discovered that they locked the building doors at
8:00 in the evening. Also 4.1% had a resident manager or
nurse. Further, security of buildings was also achieved
through the use of lounge areas adjacent to the entrance.
This informal method which has been referred to by Jane Ja-
cobs as the "public eyes" is an excellent way of monitoring
entrances during the day. It seems, however, that the same
effort and thought to make the building secure has not been
given the grounds surrounding the development. The percep-
tion of whether the grounds are secure is not dependant on a
lock security system. Tenant surveillance, therefore, be-
comes an important principle which must be utilized in the
yard. Windows should overlook the yard, and enclosure of
outdoor areas should still provide for casual surveillance

by the tenants. Also, plantings which may hide intruders should never be placed next to walkways used at night.[13] The principle of secure planting should be acknowledged when designing housing for seniors.

Security needs vary from one neighbourhood to another and as the quality of the neighbourhood changes. This is discussed further in the following section. As a result, judgements about yard security are often difficult to make. These judgements could only be made by the residents and managers themselves. It was not within the scope of this study to circulate a questionnaire on yard security, but other studies do address the yard and neighbourhood security.

3.2.1 Neighbourhood Conditions

The neighbourhood has been identified as one of the major factors which affect perceptions of security. This is a factor which originally should have been addressed in site location determinants. If, however, the development has been placed in a neighbourhood of poor physical condition, then the outdoor space has to be designed in an appropriate manner.

In the Princeton Study on high rise housing it was concluded that

> the surrounding neighbourhood seems to be far more significant than any other factor in affecting the residents' feeling of security. Of the ways suggested by respondants to improve security, 'increasing the number of police' and 'improving the neighbourhood' were the top two of nine choices, and residents of tower and garden apartments made these recommendations in equal proportions. Neither type of building form elicited security solutions which were more socially based or more mechanically/physically based than the other.[14]

---

[13] This does not mean shrubs and trees can not be used. Often designers or managers delete all vegetation for fear of crime, thus creating a very sterile environment. Careful placement of planting can avoid dangerous situations.

[14] Galen Cranz and Thomas L. Schumacher, The Impact of High-Rise Housing on Older Residents (Princeton, New Jersey: Working paper 19. School of Architecture and Urban Planning, 1975), p.8.

The location of this housing project in a commercial, inner city area warrants a more secure outdoor space.

Figure 4: Location and Security

Another study was done by the Philadelphia Geriatric Centre on security and the elderly. Their results also mentioned the neighbourhood and surrounding grounds as places where tenants did not feel secure. During the late evening, feelings of security were lowest in the surrounding neighbourhood. In comparison the majority (around 90%) felt secure in their apartments. The paper discusses how social isolation is compounded when elderly people restrict their movements for fear of crime.

3.2.2 Number of Units

The size of the development and its design can effect how secure people feel about their immediate outdoor environment. The Princeton Study (Cranz and Schumacher, 1975) concluded that the people living in garden apartments knew many more people by sight than the high rise dwellers did. They attributed this both to the size of the housing development and the circulation system. One hundred units seems to be the threshold where people do or do not know each other by sight. Knowing people by sight is important if one is to recognize strangers who do not belong. People will not feel secure if they are sitting outdoors with a group of people

they do not even recognize. Knowing people by sight is just
as important outside the building as within it.   The semi-
private nature of outdoor space makes it less private then
the semiprivate areas inside buildings and it is, there-
fore, more important that people are recognized.   Outdoors,
people tend to feel less compelled to ask strangers the rea-
son for their presence.   The maximum number given by Oscar
Newman is two hundred families for a doorman to recognize as
tenants.   (Newman 1972 p.194).   The large discrepancy be-
tween the two figures may be due to the people involved.   It
is the doorman's occupation to watch people enter and exit
the building. On the other hand, the 100 unit figure repre-
sents the elderly tenants, who recognize each other, through
daily, casual contact.

     The number of recognizeable people, therefore, who use
the outdoor space can affect how safe people feel, and that
number appears to be limited to no more than one hundred
units.   If the housing development is larger than one hun-
dred units then the design and circulation should divide the
larger number of units into smaller areas, each with their
own entrance.

     Oscar Newman cites another valuable function when break-
ing down areas into manageable units.   He gives the example
of a family apartment where 12 families share an entrance
and, therefore, can easily recognize each other by sight.
He found that the value of an outdoor area increases when it
is shared by only 12 families opposed to 100.   It is possi-
ble that the semiprivate outdoor spaces, which are shared by
a smaller percentage of elderly,   will become more signifi-
cant to that group.   This, in turn, will increase the users
sense of personal ownership, and make him more apt to ques-
tion the presence of a stranger, thus increasing the precep-
tion of security.

This is one of Winnipeg's largest senior citizen
housing developments. It has 373 units.

Figure 5:   The Number of Units

3.2.3   Territoriality and Security

Territoriality plays a major role in making a place feel se-
cure.   In private detached housing erecting a fence or
planting a hedge to define the boundaries of the yard, seems
to come naturally to the homeowner.   This extends to row-
houses or townhouses if they are owned, and to rental units
if the mechanisms for definition are not expensive or can be
removed, or people plan to stay a long time.   High rise
housing often poses problems in territorial definition be-
cause of the interface between the private apartment and the
public corridor.   What happens in that corridor, (who uses
it, who cleans it) is not the concern of the apartment
dweller, but the domain of the management.   This can pose a
major problem for some housing, but in the case of senior
citizen housing the concern over corridor safety has almost
been eliminated. The elderly can easily recognize each oth-
er by their age and its unlikely that the elderly or their
friends will cause disturbances.   The design of many hi-
ghrise developments often include a small lounge area on
each floor where residents get to know each other. The cor-
ridor and public lounge areas often become an extension of
the private apartment in the sense that the elderly feel se-
cure in it.

The outdoor space surrounding the housing complex must have similar feelings of security if it is to be used and cared for. The definition of territory (in this case the semiprivate yard), through the use of real or symbolic bar- riers (such as fences, hedges, stairs, flower borders etc.) will serve "to inform that one is passing from a space which is public where one's presence is not questioned through a barrier to a space which is private and where one's presence requires justification."[15] Vandalism also becomes a problem when yards are not defined properly. (see Figure 6). Signs of vandalism increase the threatening perception of the out- door environment.
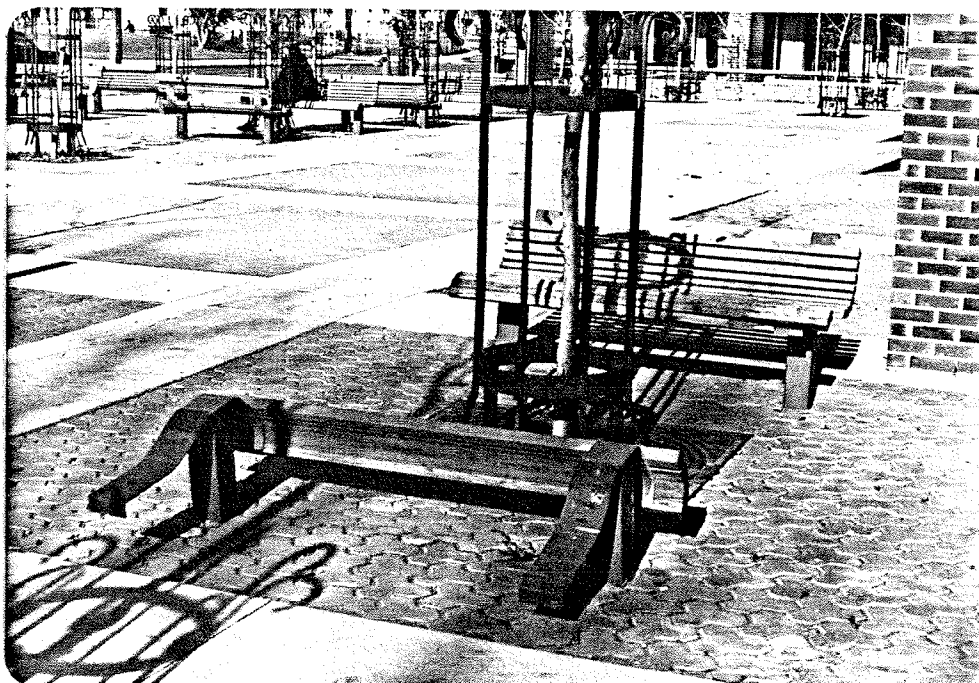
This outdoor yard feels like a public plaza. The vandalised benches might have been prevented, had the yard used territorial mechanisms to define the space.

Figure 6: Vandalized Benches

[15] Oscar Newman, Defensible Space, (New York: Collier Books, 1976). p. 63.

3.2.4 Barrier Free Environment

An environment which is not barrier free will not feel secure. Not only will barriers give psychological feelings of insecurity, they will also be a deterrant to active use of the outdoor area.

3.3 INDEPENDENCE

Independence is the quality or condition of being able to manage one's own affairs, being in control, and not being dependent on another group. It is not only a factor which the elderly need and want to retain, it is also a factor which many have had to confront out of necessity. The end of the extended family, and the decline of the nuclear family in conjunction with increased mobility, has forced many elderly people to retain their independent living arrangements away from children and grandchildren, whether, they want to or not. (A. Comfort, 1976). Independence, according to Michael Audain, is one of the qualities which housing developments for the elderly foster and thus, should be encouraged. The outdoor environment has its role to play in extending independence through design that acknowledges the elderly's physical capabilities as well as, effecting the elderly's perception of being independent. being independent. This can be done in four ways:

1. Allowing residents to manipulate their environments

2. Recognizing the individuality of the elderly and designing environments for a wide range of capabilities.

3. Organizing the environment to ensure a clear and legible order which the elderly can understand.

4. Using appropriate design details to provide a barrier free environment.

We are all dependent on each other and on our environment. The aging process acknowledges this to all. It is when independence is abruptly cut off or taken away when dependence takes on the horrible configuration of apathy and despair. The goal of encouraging independence as long as possible and in every manner possible must be taken seriously. This objective cannot cease at social services, interior building details, and good site location, but must extend its scope to include the immediate outdoor environment surrounding housing for the elderly.

3.3.1 Manipulation of the Environment

Being able to manipulate or influence ones environment is a concept introduced by Louis E. Gelwicks and Robert J. Newcomer in their book Planning Housing Environments for the Elderly. They call this concept "effectance" and base the need for effectance "on the fact that normal individuals need to feel that they can control their own destiny, to be independent and on top of things. It opposes the anxiety of being entirely at the mercy of environment, other people, or fate."[16] Given that feelings of independence are associated with the ability to manipulate and control ones environment, the designer should allow opportunities for this to occur.

Most of today's old people grew up in single family dwellings and many, before moving into a congregate housing environment for the elderly, moved directly from a home which they had lived in for many years. How do the elderly people feel about their homes? In an unpublished thesis by F. M. Cates 32 elderly homeowners were interviewed. The majority of the elderly associated home ownership with space to breathe, privacy, freedom, and independence.

> It is best to keep as active as possible in retirement. To enjoy life you must keep doing as much as you can enjoy to do. I think that looking after your own home is a big step to remaining independent. If I was to lose my house I would feel....I was no longer in charge of my life... I would feel dependent on others too strongly in an apartment or whatever.[17]

or

> You can do as you please, it keeps the old folks going... with all the work that has to be done. You know, keeping busy is rewarding for me and if my husband didn't have his garden he would go crazy.[18]

---

[16] Louis E. Gelwicks and Robert J.Newcomer Planning Housing Environments for the Elderly (Washington D.C.: The National Council on the Aging Inc. 1974). p.52.

[17] F.M. Cates, "The Shelter Concerns of Low-Income, Elderly Homeowners: Key Issues in the Delivery of Housing Programs." Unpublished thesis from the University of Manitoba, Dept. of City Planning. p.98.

[18] Ibid. p.98.

Cates found that the major problem elderly had with the single family dwelling was the financial and physical burdens of maintenance. There was too much emphasis on manipulating the environment which the elderly found difficult to handle. Further to this the <u>Housing after Retirement</u> study found that having someone to do the maintenance was an important factor for senior citizen housing. Cates recommends the problem be solved through a system of programs to help the elderly maintain their own homes. Certainly this is an excellent solution for many. For others however, the combined stresses of maintenance problems, financial matters and loneliness will persuade many elderly people to move to a senior citizen development. Unfortunately, within the city of Winnipeg this move will mean a loss of the pleasant associations, and meaningful roles that occur when owning a single family home.

In evaluating the single family dwelling one finds that there are basically three elements that can be manipulated. The interior of the dwelling, the exterior of the dwelling and the site. Of the three, the site ranks highest in what I have termed 'quality manipulative ability.' For example, if one were to paint the interior, or exterior of the house, or the fence, the fence painting would probably be the easiest in terms of effort involved. The site also has the most social manipulative power. If one is watering the plants or hoeing the garden there is a greater chance that a passerby will stop to chat than if one is inside dusting the furniture. Also the site and exterior dwelling have the only opportunity for making a public expression of individuality. In most of Winnipeg's senior citizen developments <u>eliminating</u>, rather than, <u>reducing</u> maintenance is the solution. Thus, two of the three manipulative elements, the site and exterior dwelling, are simply excluded. The alternative solution is to leave all three elements, but reduce each to a manageable level.

Another factor which arises is the relationship between the responsibility each tenant has in keeping up his dwelling to what is known as the undermanning theory. This theory and its implications are described in Robert Bechtels "Aging and Environmental Forces." The theory is described as "the simple minded notion that when there are a few people to do a task, they have to work harder than if there were more people to do the same task."[19] The example that Bechtel gives is of a study of a comparison between elderly

---

[19] Robert Bechtel, "Aging and Environmental Forces" in <u>Environmental Research and Aging</u>, (Washington D.C.: Gerontological Society, Research and Development Grants Program, Administration on Aging, Dept. of Health, Education and Welfare, 1974), p.27.

THE YARD | THE EXTERIOR DWELLING | THE INTERIOR DWELLING
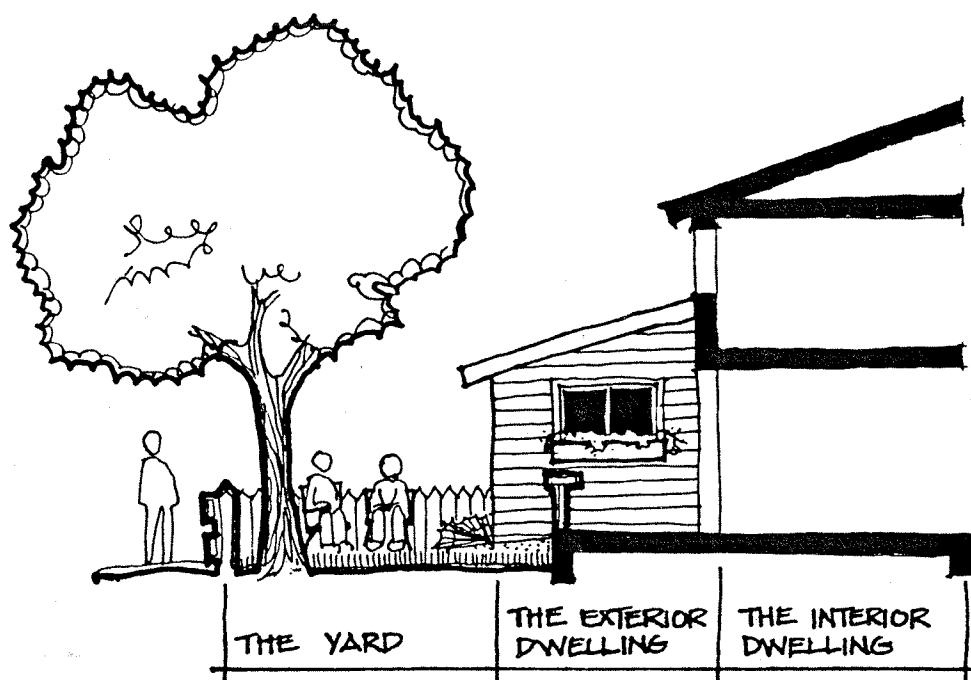
The three manipulative elements of the home environment.

Figure 7: Manipulation of the Environment

people in two separate communities. (By Barker 1960). The Kansas community had less people than the English community, but more community activities. The study found that the Kansas community, which was undermanned, felt more pressure to participate and did so. Bechtel goes on to cite other examples such as undermanned situations in small schools and churches having to work harder or having better attendence than their larger counterparts.

The theory of an undermanned environment has much to suggest in designing a total environment for the elderly. Looked at from the previous research on undermanned environments, the elderly are clearly in a grossly overmanned situation. Admonitions to successful retirement may be of some help (Carp, 1972) but unless behavior settings are created that have meaningful activites, the elderly will remain in an overmanned situation.

The overmanned situation is one that actually pressures participants to more passive activity. And it may be that with decreasing ability the more passive activities are more desireable. But

the evidence indicates that for any type of
environment, institutional or community wide,
breaking it into smaller units and deliberately
creating an undermanned situation has wide ben-
efits in greater social participation and general
satisfaction.[20]

A problem which arises specific to outdoor space is
the division of responsibilities for maintaining a semipri-
vate outdoor space and private outdoor space. It is reason-
able to expect that people will only put money, effort and
time into an area if it is an extension of their private do-
main. Semi-private space will only be manipulated if spe-
cial benefits or special interest is accrued. It will also
greatly depend on the size of the housing development. A
private balcony in a large housing context is easy to manip-
ulate, but the ability of an elderly person to change the
semiprivate grounds is rather overwhelming.

3.3.2   Designing Environments for Individuals: Choice

The elderly are individuals and cannot be categorized as be-
ing all the same. Housing for the elderly is only homogene-
ous according to age and in some cases, income. The remain-
ing charateristics are very heterogeneous. They vary in
cultural background, intellectual ability, political and
ethical opinions, interests, physical capabilities and pri-
orities. Some elderly have learned through formal educa-
tion, while others have learned through experience; some are
actively involved in sports, while others are confined to
walkers and wheelchairs; some value the outdoor environment,
while others do not. People come to a senior citizen hous-
ing development with their own interests and their own capa-
bilities. The environment must be able to meet individual
needs if each person is to feel independent. This takes
place on a macro scale - the housing market within the city
and neighbourhood, and on a micro scale - the senior citizen
housing development itself. Meeting individual needs at
both these levels increases choice, thereby extending inde-
pendence.

Housing choice is a recommendation made by the majority
of housing need planning studies for the elderly. In Winni-
peg these recommendations have fallen on deaf ears when it
comes to choices in housing form, in semiprivate and pri-
vate outdoor spaces, and in direct street access. The
choices offered and the desires of the elderly are in

_____

[20] Ibid., pp.27-28.

Zone of Over Support

Stress Dependency

Upper Adaptive Level

Zone of Adaptability

Individual Capability

Stress

Lower Adaptive Level

Zone of Under Support

The delicate balance between independence and
dependence is shown by Louis E. Gelwick's and
Robert J. Nercomer's man-environment interaction
diagram. (Newcomer and Gelwicks, 1974, p.41).

Figure 8: Man - Environment Interaction

3.3.3 Organization of the Environment

Organizing the environment in a clear and legible manner is
important in encouraging feelings of independence.   If peo-
ple are confused by what they see they will be forced to be
dependent on others to show the way.   Understanding sensory
deprivation and its effects is very important in organizing
the environment. Leon A. Pastalan is one of the few people
who have dealt with this in the literature.   He believes
that designs for the elderly must compensate for the dimin-
ishing visual, audile, thermal and tactile senses. He pres-
ents three concepts where solutions to the elderly's prob-
lems can be found:

1. Organized space as stimulus

2. Organized space as orientation

3. Organized space as mastery   (Leon Pastalan 1973)

Pastalan hopes that if these concepts are utilized the nar-

rowing homerange[21] of the elderly can be expanded allowing them to be more independent.

1) "Organized space as stimulus involves the principles of getting the message or environmental cues across through stimulation."[22] This means repeating a message in many sensory ways, and repeatedly, so that the elderly person can understand the message. Perception problems, whether they be seeing, hearing, smelling, or touch, can be overcome, when the environment communicates through repetitive, and 'redundant' cues and a variety of sensory means.

2) Organized space as orientation requires structuring of the environment to ensure each area has a clear, singular use. These areas should be identified with appropriate cues and landmarks. The purpose is to avoid confusion by creating points of reference. "It should be kept firmly in mind that the changes in sensory accuity and other important physiological factors of this population is such that the usual subtle and complex architectural statements are not only largely unappreciated but are dysfunctional as well."[23]

3) Organized space as mastery involves two aspects: micro and macro environments. On the micro level spaces should be organized in a defensible manner so that the vulnerable elderly person can easily defend his territory. The macro level consists of the overall building and neighbourhood and its accompanying support systems. It should be of a scale and complexity that is perceivable to the elderly person who's sensory capabilities are diminishing. This macro level environment must fall within the elderly person's home range.

---

[21] Homerange consists of all the places which can be considered used and understood by an individual. A complete definition of homerange is provided in Chapter V, pages 69-71.

[22] Leon A. Pastalan, "The Simulation of Age-Related Sensory Losses: A New Approach to the Study of Environmental Barriers." p.388.

[23] Ibid., p.388.

3.3.4 Appropriate Details: Paced Alternatives

Appropriate details are important in extending the independence of the elderly. The literature includes many books on details for the disabled and the elderly.(Sorenson 1979, CMHC 1972, Green, et.al.,1974). Sorenson's book is particularily useful in detailing entrances. Details can not be forgotten. In most cases, thoughtless design results in frustration and dependancy, while appropriate details with paced alternatives extend the elderly's level of independence. In this way the elderly are allowed to choose the level they are capable of.

3.4 STATUS

Status was the third need (after security and independence) which Michael Audain identified as important to the elderly and which should provided for in senior citizen housing. Status is associated with social roles and to some extent material possesions. Both of these factors decrease in old age. The types of losses that old people experience are mentioned in almost every text on aging. Michael Audain's list includes: loss of status in the labour force when retirement occurs; loss of status as a parent when children grow up and move away; loss of status in the community when younger volunteers take over; loss of status as homeowner when the house is sold; loss of status in sports when health wanes; loss of status when the husband/wife dies. (Michael Audain 1974-1975).

> Status loss for the elderly due to the disappearance of various roles means that considerable thought must be given to the assurance of significant social roles in old age, so that this stage of life becomes one of taking on new roles and associated status, rather than one of gradual allienation. In part, this can be achieved if we recognize that the elderly - like the young - have a claim to a distinct culture within western society.[24]

---

[24] Michael Audain, "Rethinking Housing for the Elderly." p.6.

3.4.1 Significant Social Roles: Homeowner

Status can be achieved in the housing development by providing significant social roles, and the environment can support this by providing the setting in which significant social roles may occur. Specific to the outdoor environment is the social role of homeowner and the accompanying yard. Many of today's elderly owned a home before moving to an elderly person's development. Cates has analysed the home-ownership statistics for Canada and specifically Winnipeg. In Canada the 1976 census showed that 64.3% of all elderly households were homeowners. This is a decrease from 67.8% in 1971. In Winnipeg 59% of elderly headed households were homeowners (1971 census) and this decreased to 54.5% in the 1976 census. (Cates 1981). These figures obviously do not recognize the substantial number of elderly people who sold their home before reaching 65. The literature indicates two major reasons why the elderly move from a single family dwelling: the cost of maintaining a house and yard on a fixed income, and reduced physical ability causing difficulty in maintenance. In the former, there are many elderly who are capable and willing to handle yard work, but can no longer afford it. In the latter, there are many who do not object to yard work, but do object to the amount of work involved. The majority of these elderly people appreciate and expect not having to deal with these concerns in elderly persons housing. However, it still means they will experience the loss of homeownership and the social roles which accompany this. For example: talking to the mailman, chatting with neighbours over the garden fence, observing the street while watering the flowers. All these items are still possible if the design of outdoor space recognizes status and the loss of homeownership as worthwhile social roles to retain. This can be done in row housing for example, where the size of the yard is considerably smaller than the house yard, thus reducing maintenance and cost factors but still allowing for social roles and neighbouring to occur. More choice should be offered in this manner.
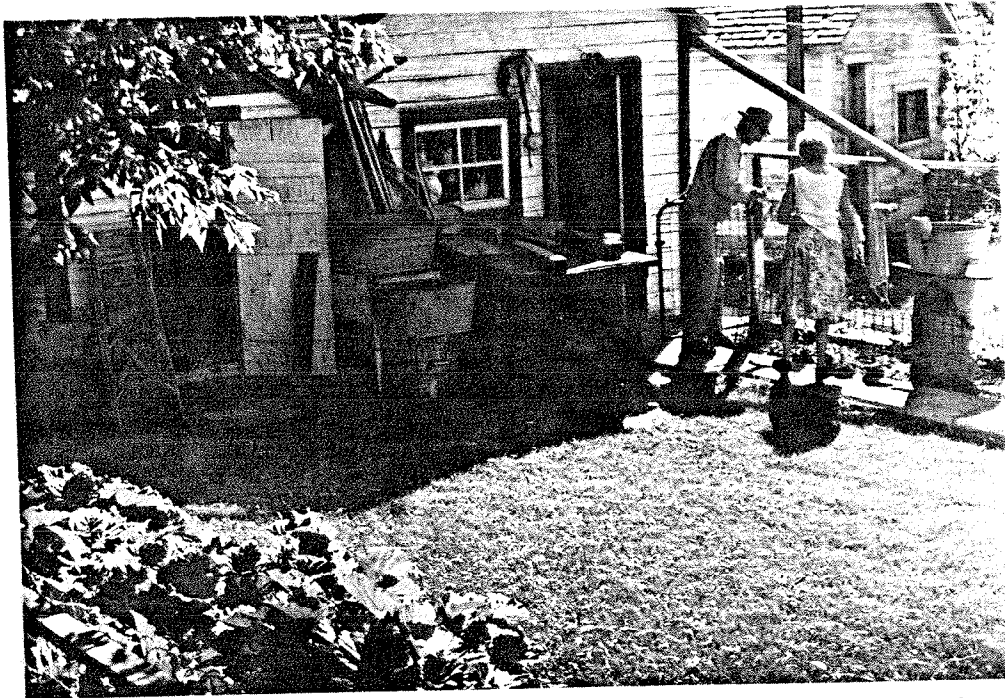
Many elderly people enjoy doing light yard work.
The role of home owner is important to them.

Figure 9: The Home Owner Role

3.4.2   The Housing Image: Scale and Beauty

Another way of increasing status is through the image of the
housing development.   The image can affect how people feel
about living in senior citizen developments and the confi-
dence with which they invite family and friends to visit.   A
development devoid of human scale and interest from the out-
side reinforces the loss of status associated with a previ-
ous home.   It is hoped that large developments will be
avoided in future. Millas discusses the problems of outdoor
space and neighbourhood image that are associated with the
high rise.

> The scale of buildings is an important considera-
> tion in the visual and physical ambience of a
> neighbourhood.   Tall buildings create special
> problems in the spaces around and between them.
> Tall buildings do not contribute to a human scaled
> environment.   Their size makes it difficult to be
> compatible with smaller buildings.
>
>   Tall buildings in high density areas have a
> tendancy to internalize facilities and to create
> unattractive and alien pedestrian environments
> around them.   A homogenity and continuity of

building appearance should be provided at the
"micro" neighbourhood level. This gives the eld-
erly a basis for developing a perception and iden-
tity of their neighbourhood.[25]

Other qualities, such as beauty and charm, are important
in housing for the elderly. If the grounds create a favour-
able impression with the elderly and society, then the eld-
erly's status is increased.
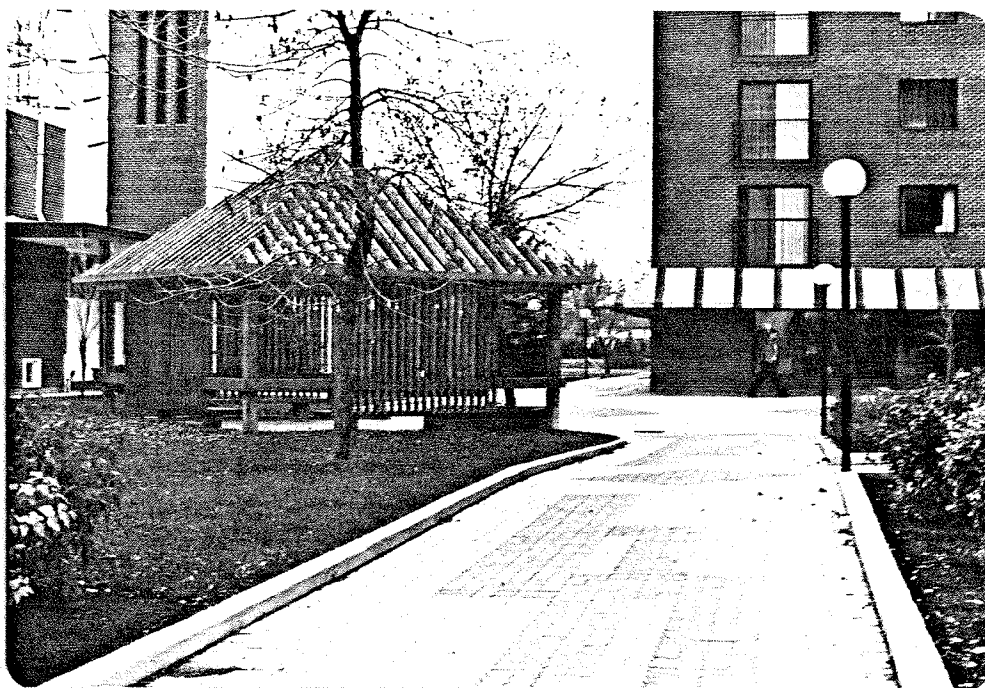
Figure 10: A Pleasant Image Increases Status

3.4.3 Barrier Free Environment

A barrier free environment is also required if feelings of
status and selfworth are to be retained. When details such
as raised garden planters and shaded gardening areas are
provided, the outdoor home environment reinforces the elder-
ly person's status.

---

[25] Artistides J. Millas, "Planning for the Elderly Within
the context of a Neighbourhood." in Ekistics, July/August
1980, p.271.

3.5 SOCIAL INTEGRATION OR NEIGHBOURING

The design of the outdoor home environment can offer excellent opportunities for spontaneous neighbouring to occur. Neighbouring is defined by Michael Audain as:

> that expression of interest in those who live nearby, whether through visiting, chatting on the telephone, mutual aid such as help in illness, or merely exchanging a smile and a friendly word in the elevator.....It is generally recognized that social integration or neighbouring is not only desireable but essential for high resident satisfaction in housing for the elderly. But how do we achieve it?[26]

Neighbouring can be encouraged through the design of the built environment and specifically through the elements of the yard, and the street. (Greenbie 1981).

The yard acts as a transition zone between the public street and the private interior. Clare Cooper Marcus points out in Easter Hill Village, a low income, family housing development, that the porches became places for neighbouring and casual socializing. When the interiors were not suitable for company, visitors could be entertained on the porch. The porches allowed for socializing to occur without going through the bothersome routine of cleaning the house for company. The porch could be screened against insects in summer, and converted into an indoor glassed porch in winter.

A high percentage of developments in Winnipeg have bachelor suites. A common criticism by the elderly living in these suites is the need to tidy the bed alcove for unexpected company. There is no place to chat with the casual visitor except in the privacy of the apartment. This situation can stifle neighbouring. There also seems to be a formal commitment to everlasting friendship when one invites someone over to the private apartment, whereas visiting in a yard over the garden fence allows socializing to occur in a more casual , uncommitted, and spontaneous manner. The very act of being in the yard is an unspoken invitation that one can be approached for a brief visit, whereas knocking on an apartment door involves a much greater effort and elicits feelings that one is intruding. A poem by Robert Frost captures the spontaneity of the over the garden wall visit.

A TIME TO TALK

---

[26] Ibid., p.7.

When a friend calls to me from the road
And slows his horse to a meaning walk,
I don't stand still and look around
On all the hills I haven't hoed,
And shout from where I am, "What is it?"
No, not as there is a time to talk.
I thrust my hoe in the mellow ground,
Blade - end up and five feet tall,
And plod: I go up to the stone wall
For a friendly visit.[27]

One of the programs offered by the age and opportunity cen-
ter in Winnipeg focuses on "friendly visits". Though this
is a worthwhile service and no doubt successful, one wonders
why friendly visits have to be programmed through an organi-
zation, when they may occur naturally in the proper behav-
iour setting. (see Figure 11).

This porch provides an appropriate setting for
neighbouring to occur.

Figure 11: Increasing Neighbouring Opportunities

---

[27] Robert Frost, with an introduction and commentary by
Louis Untermeyer Robert Frost's Poems (New York: Washing-
ton Square Press, 1971), p.174.

Sponsoring agencies must shift more responsibility and support towards the resident constituency. Participation is artificial unless it carries responsibility. When residents are involved, they become less dependent on the staff or volunteers for friendship and maintenance needs.[28]

It is difficult for residents to take responsibility for friendly visits when the environment is designed in such a manner, as to discourage social interaction. The yard and transition zone between the private home and public walk or corridor has to be given more thought. Without a transition zone between the private apartment and the public street or public corridor, neighbouring in this manner cannot be achieved. Another function of the yard is to provide a "reason for being there". Taking part in the activities of the street is natural when one is biding time in ones own yard. The yard creates an opportunity for becoming part of street life without being questioned about ones reasons and intentions.

In communal areas the street and entrance benches are important vehicles to neighbouring. Watching the residents come and go encourages group contacts. One elderly man explained how a friend, riding the local transit bus, saw him sitting on a street bench. The friend got off the next stop, so that he could come say hello. Street and entrance benches are vital for spontaneous neighbouring.

3.6   CONCLUSIONS

The elderly, like everyone else, require security, independence, status and neighbouring within their lives, in order to feel comfortable with themselves and society. The outdoor environment can contribute to the satisfaction of those needs. The following is a summary of the design considerations which have to be addressed in order to achieve these four basic needs.

1.   Security

    a) tenant surveillance

    b) secure planting

----

[28] Jeffrey Patterson "Summary of Discussion in Vancouver Workshops", Housing the Elderly: Proceedings from the Regional Seminars and Workshops, p.68.

    c) limited number of familiar faces

    d) personal ownership

    e) territorial definition

    f) barrier free environment

2. Independence

    a) manipulation opportunities

    b) undermanned behaviour settings

    c) housing choice

    d) range of yard scale

    e) variety of three dimensional space

    f) organized space 1) as stimulus, 2) as orientation, 3) as mastery

    g) appropriate details : paced alternatives

3. Status

    a) significant social roles: homeowner

    b) feelings of ownership

    c) human scale

    d) beauty and charm

    e) barrier free environment

4. Neighbouring

    a) transition yard

    b) street connection

    c) reason for being there

    d) street and entrance benches

These design considerations are developed into a series of design guidelines found in Chapter V.

Chapter IV

AN IDEOLOGICAL BASE

4.1 INTRODUCTION

The previous two chapters discussed the problem of outdoor
spaces surrounding senior citizen housing developments from
the perspective of the elderly person.   Understanding this
aspect of the problem is important, but does not constitute
the entire contextual framework.   This chapter will deal
with the ideas and objectives which influence design expres-
sion, as it relates to outdoor space surrounding housing
schemes for the elderly.

> The following argument is based on the assumption
> that physical clarity cannot be achieved in a
> form, until there is first some programmatic clar-
> ity in the designer's mind and actions; and that
> for this to be possible, in turn,   the designer
> must trace his design problem to its earliest
> functional origins and be able to find some sort
> of pattern in them.[29]

If outdoor space in the housing environment is to develop
order and meaning for those living there, as well as, socie-
ty, then the following influencing factors must be investi-
gated:

1. Societal attitudes towards the aged.

2. Attitudes towards housing form for the elderly.

3. The influence of the landscape on man.

4. Attitudes towards the design process.

---

[29] Christopher Alexander,   A Synthesis of Form (Cambridge,
Massachusetts: Harvard University Press, 1964), p.15.

4.2 ATTITUDES TOWARDS THE AGED

Various cultures throughout history have had different atti-
tudes towards the aged. Malcolm Cowley provides a brief sy-
nopsis.   In primitive societies where writing had not yet
been introduced the aged held an important role.   They were
"living libraries", transmitting their culture to the next
generation and were, therefore, held with highest esteem.
Comparing hunters and nomads to agricultural societies it is
found that the latter treated the old better, mainly because
there was always something the older person could do.   The
former often lived in areas where food was scarce and the
elderly often starved or were abandoned when the tribe left
for better hunting grounds.   It usually followed that when
children were treated well so were the elderly. If children
were mistreated, bonds of affection never developed and con-
sequently the elderly were also mistreated in their turn.
After writing had developed the elderly retained their sta-
tus because the amount of property they owned was protected
by law.   Later on the extended family structure was to be-
come the protection under which the elderly survived.   This
lasted till the early twentieth century. What was once con-
sidered family responsibility, has in the recent past been
taken over by goverment agencies. (Cowley 1980 p.30-33)

Malcolm Cowley, in his eightieth year, wrote:

> If we judge by earlier examples, this is not one
> of the eras when older people might expect to be
> honoured and cherished.   They have fared best, as
> we have seen, in agriculture or trading societies,
> in settled communities that remembered the past,
> and in periods of relative social stability. Ours
> is a period of frantic changes when memories have
> become irrelevant; when experience is less to be
> valued then youthful force and adaptability.   It
> is a long time since the country might have been
> described as basically agricultural;   now our
> lives, in some respects, have come to resemble
> those of the hunting or food-gathering tribes.
> Like them we wander over the face of the land;
> like them we regard the old as encumbrances to be
> left behind or sent off to die in what we think is
> a safe haven.[30]

Others have a more optimistic view of age, critized by Mal-
colm Cowley as encouraging, but fanciful. The books, A Good
Age, and A Time to Enjoy, and the magazine article, "Good
Old", (The Winnipeg Free Press, January, 1982), reflects

---

[30] Malcolm Cowley The View from 80 (New York: The Viking
Press 1980), p.34-35.

today's new image of the energetic, healthy and successful
old. (see figure 12 and figure 13). Though this new con-
cept of "old" is presented in books and magazine articles,
the reality of the world still imprisons the old in its
stereotyped images. A recent newspaper article about the
Manitoba Society of Seniors, a seniors advocate group, con-
firms this problem.

>   Our problem, said Thornhill, is that the image the
>   public has of seniors and that the aged have of
>   themselves "is rather dismal." People have the
>   notion that seniors "are discards," he said. As a
>   result, many seniors think there's nothing to be
>   done.
>
>   But , he said, retirement life can be invigo-
>   rating if seniors will organize, take the initia-
>   tive and look to themselves, and if those ap-
>   proaching 65 properly prepare to take full
>   advantage of their approching new life of free-
>   dom.[31]

Designers must be aware that what they design is a symbol
of society's attitudes towards the aged. That attitude can-
not push the elderly out of sight nor should it pretend that
the elderly are in perfect health. Designers must seek an
understanding of what it is like to be old through knowledge
of age-related changes, the needs of the elderly, and per-
sonal contact. Do housing developments for the elderly be-
tray the designer's/society's biases and stereotypes, or do
they disclose a healthy and normal view of aging?

---

[31] Vern Fowlie, "Seniors' society rallies support," The Win-
nipeg Free Press, Monday, April 25, 1983, p.16.

Harold and Bertha Soderquist joined the Peace Corps in 1974, when he was eighty and she was seventy-six. The oldest volunteers, they were assigned to teach in a secondary school in Western Samoa. Although the Peace Corps does not expect volunteers over the age of fifty to do well in language training, the Soderquists refused to be let off the hook. "We went home and crammed," said Bertha Soderquist. "You pass with a one and we both got one plus."

This couple represents two of the fifty-four people which Alex Comfort includes in his optimistic book, "A Good Age". (Illustrated by Michael Leonard, page 212.)

When he retired he suffered a mild heart attack and took up jogging. Now he runs the marathon.

Two years ago, *HUGH CLIFFORD, 75*, ran a marathon for the first time. He finished the 26-mile race in a slow four hours, 41 minutes and 46 seconds. Last May he competed in the Vancouver International Marathon and won the Canadian masters medal as the fastest marathoner over 70, with a time of 4:04:17.

Mr. Clifford has never done what was expected of him. A school dropout at 16, he fled to the West Indies to avoid the conventional, professional English life his parents planned for him. After coming to Canada he joined the infant CCF party in 1933 and ran unsuccessfully for the NDP in five elections. A man who says he is unemployable, he went into business for himself as a picture framer. When he saw that old men were expected to retire on an income from investments, sit on their backsides, and smoke a pipe, he gave up his pipe. "I wasn't going to fulfil that image," he says.

And he hasn't. He has no investments. He and his wife, Jane, live on their government pensions in the small, pre-fab log house they built in 1952 on a large, still untamed lot in West Vancouver. He's an ardent angler, stomping up and down streams, actively pursuing steelhead trout. As a director of the Steelhead Society of British Columbia, he sits on a forest land-use committee with representatives of government, industry and environmental groups.

When he retired at 64, he had a mild heart attack, a warning that set him to cycling, swimming and losing 25 pounds. He eventually gave up swimming for jogging, an activity he hated but kept at until he'd done a mile three times. Then he was addicted. Now he's replaced the hiking boots he first ran in with six pairs of good running shoes. He paid $5 for his first pair, and he still owns them; he calls them his dancing shoes. He runs every second or third day, about 50 kilometres a week, following a route along city streets and blacktopped seaside paths. In between runs, he does stretching exercises, reads magazines about running, lifts weights, keeps a daily diary of his distances in which he works out his minutes-per-kilometre rate. He trains for many annual distance races, attending a weekly marathon clinic at his local YMCA and joining "fun runs," where he gets a kick out of running with people much younger than himself.

He has a sense of physical wellbeing he never had before: "I am fit. Without a blush, I tell you that I am really fit."   — *Audrey Grescoe*

Article "Good Old", written by Audrey Grescoe in Today Magazine, January 9, 1982, p.11. Winnipeg Free Press Supplement.

Figure 13:   The Elderly are Running Marathons

4.2.1   Theories of Aging

The study of aging is of increasing interest researchers.
This level of work indicates a sincere interest in the eld-
erly and the aging process by society. This is due in part
to the increased number of elderly in the population makeup,
as well as, the increased prospects of an active and healthy
role for the elderly in todays society.

Neuhaus and Neuhaus have catagorized theories of aging
under three headings: biological, psychological and sociolo-
gical. None of these theories, according to them, have been
fully accepted and all are still being modified.   As knowl-
edge of the aging process increases a theory of aging which
encompasses the biological, psychological and sociological
aspects will likely be developed.   Several of the aging
theories are presented in Appendix B.

Allowing theories of aging to influence design can be a
problem.   For example, the biological theories do not seem
to bare any relevance to the housing problem.   Those theo-
ries which do have obvious design implications, such as the
'disengagement theory' and 'activity theory' are contradic-
tory, adding to the confusion of decision-making. Theories,
(because they have not been proven) should be used with dis-
cretion.

4.3   ATTITUDES TOWARDS HOUSING FORM FOR THE ELDERLY

Current attitudes towards housing form are restricted to
worthwhile but often technical details.   Attempts to raise
issues beyond the level of design details have been made,
but often are lost among the more tangible design detail
recommendations. The proceedings from the regional seminars
and workshops 1974-75, of the Canadian Council on Social De-
velopment made a recommendation regarding housing form.

> Incentives for new kinds of senior citizen housing
> such as granny apartments or group homes should be
> supported through changes in funding and zoning.[32]

Has anything come of this recommendation 7 years later?
There are no prototype developments in Winnipeg other than
perhaps "Jacks", a hostel for transient men in the Main
Street area.

---

[32] Jeffrey Patterson, "Summary of Discussion in Vancouver
Workshops", p. 53.

On the other hand, details such as: 1) placement of lounges on the ground floor rather than the basement, 2) mandatory bathroom rails 3) the neccessity of two handrails in fire exit stairwells etc, are easier to implement. These details are important but, it appears as if the very essence of a home is being lost in bettering the "development monster" which was created in the first place. As has been stated elsewhere, these types of developments are accepted everywhere in western societies, the majority have long waiting lists, and they do provide some sense of independence, security and status for the elderly, nonetheless, it is time to reevaluate the housing image and form.

The image of senior citizen housing in Winnipeg is that of an apartment (85.9% of the developments are apartments); specifically a high rise apartment (50.7% of developments are high rises); and one where private outdoor space is seldom appreciated. (75.3% have no private yards or balconies). It is understandable that the elderly want to live amongst their peers, but the mass production of large apartment complexes is exaggerating the point. Options must exist for those elderly who's lifestyle does not fit this type of building. The following cartoon expresses the prevalent ideology in senior citizen housing. Is this the image we should be portraying?

Grandma's House is the "Big House"
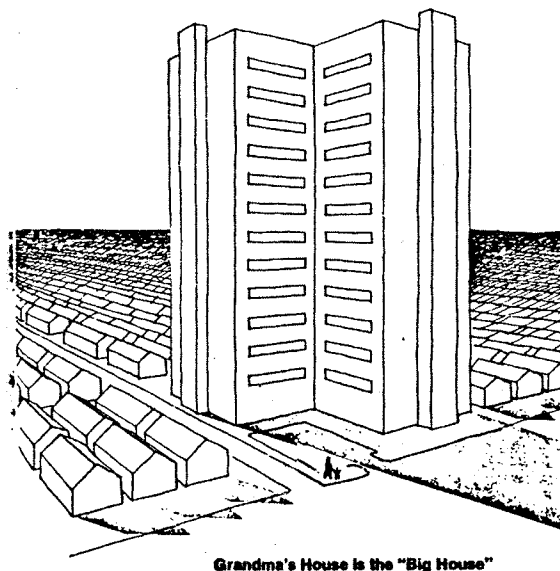
Figure 14:   The Housing Image (Gelwicks & Newcomer, 1974)

The presentation of the Mennonite Brethern Geriatric Association to the Wolseley Residents Association and Wolsely community on June 24,1982 in Winnipeg is a perfect example of hostility between those who want to build for seniors and the people of the community. Many issues were raised at this meeting, but clearly the main concerns addressed by the residents were centered on image. Existing senior citizens developments within the community (Lions Manor and Greenwood Place) have reinforced residents' concerns. The height of the building, the inappropriate high density in relation to the single family units, and the lack of parking conflicting with child safety were all concerns which produced images the residents rejected. The senior citizen housing development image must change if it is to be accepted within the single family residential community.

Justification for the high rise building form centers on monetary issues. Three of the four reasons given by Green, et.al., in Housing for the Elderly : The Development and Design Process were: 1)high cost of suburban and urban land, 2) site development costs, 3) and management costs. The fourth reason stated the necessity of building near services where land costs are high in order to assimilate the elderly into the main stream of community activity. (Green 1975, p.113.) Ironically, the price paid for bringing the elderly close to services has separated them from the community. The community in turn has suffered from this separation.

The outdoor yard surrounding the development is the physical connection between the community and the senior citizen housing development. The design of this exterior space must unite the two in a manner that not only encourages interaction, but excepts the elderly as part of the community.

Another concern with the high rise form is the difficulty which the elderly have in relating to each other in these complexes.

> Finally, it seems that families are not the only ones concerned about large-scale projects. The difficulty the elderly see in projects is not that the residents are "ghettoized", but that they are simply not able to relate to one another in a meaningful way in large projects. Large projects lead to feelings of anxiety and disorientation. This is especially unbearable to seniors who may have experienced the loss of a loved one.[33]

---

[33] Jeffrey Patterson, "Summary Discussions in Vancouver Workshops." from the proceedings from the Regional Seminars and Workshops. 1974-1975. p.53.

In contrast, the following description of a home for the
elderly suggests a living environment which is more appro-
priate for the elderly. It was designed by " Ian McDougall,
an architect who knew that government mortgage funds were
available for non-profit organizations. He held meetings
with old people to convince them they could get low-cost
housing without putting up capital. He was looking for de-
sign ideas. A moment of inspiration came when an
80-year-old widow said she'd like to live in a duplex in her
own neighbourhood. With that in mind, Mcdougall designed a
duplex-size building with six apartments. It would sit on a
50-foot lot between two houses."[34]

As a person ages home range decreases, putting an in-
creased emphasis on the neighbourhood (Gelwicks 1970). This
is in direct contrast to the rest of society, where the mo-
bility of people's lifestyles have extended the homerange,
putting a decreased emphasis on the neighbourhood (Everitt
and Cadwallader 1981). If the elderly are held hostage in
the highrise bastions then there is no hope at all of coming
in contact with the rest of society on a day to day basis.

Three steps should be taken to overcome attitudinal prob-
lems of housing form for the elderly. All mechanisms for
social and community interaction must be utilized and this
includes outdoor space in the forms of yards, two and three
storey balconies, transition zones between private apart-
ments and public corridors, and housing forms which respond
to these outdoor spaces. Second, the recommendation of the
Canadian Council on Social Development in 1974-1975, regard-
ing prototype housing, must be incorporated in the planning
and design of elderly persons housing. Third, communities
with existing services for senior citizens must be identi-
fied, so that smaller housing schemes can benefit from an
existing service base.

4.4   THE NATURAL LANDSCAPE

The natural landscape, either in the form of garden or wil-
derness area is a necessity in living. Our daily food and
in some cases our shelter is derived from nature. It is not
surprising that the natural landscape, as a physical sus-
tainer of life, can also be considered a psychological sus-
tainer of life, and has been throughout historical evolu-
tion. Examples include: the biblical garden of Eden with its
tree of life; the Persian and Islamic gardens which were
physical and psychological refuges from the hostile desert

---

[34] Audrey Grescoe, "Little Old Lady in a Hard Hat," in Today
Magazine, page 9.

environment; the Chinese and Japanese gardens which were symbolic and were used for personal reflection; many of the medieval gardens which used herbs for medicinal purposes and were also used for meditation; and even the natural wilds of North America were idolized in the form of animal spirits by the native people. This psychological connection with the natural landscape as a place for healing, renewal, tranquility, reflection, or meditation is now being given serious scientific study. Studies, especially in the field of horticulture, have shown that gardening can have therapeutic effects.[35] An article in <u>Dimensions in Health Service</u> (September, 1981) praises the effects of the natural environment on the mentally frail. The article documents the improvement of the residents after the open space has been landscaped for their enjoyment.

Wantz and Gay hypothesize that environmental stress plays a part in the aging process. Environmental stress is often viewed as the city, with its pollution and fast pace of life. (see Figure 15)
For decades people have sought the natural environment as a solice against the hectic and visual hard life of our cities. The country of Germany is an example where a visit to a health resort is prescribed by the medical profession. These health resorts center around a "Kur" (cure) Park which is beautifully landscaped.[36]
The home environment must provide this experience for those elderly who can no longer travel long distances to cottages, farms and parks for this type of experience. It seems appropriate that in the later stages of life one should no longer have to battle a stressful physical environment. The opportunity to spend some time close to nature should be readily available. Remembering that the elderly's home range decreases with time, distances to nature should be no further than the immediate home environment.

Gardening, a component of the natural landscape, is special in its ability to influence the gardner. Charles A. Lewis writes,

---

[35] Phil Graham, supervisor of R.B. Russell Children's garden in Winnipeg informed me that research is being undertaken by the department of Horticulture, Kansas State University, and that recently, papers were presented at the University of British Columbia on horticultural therapy.

[36] Interview with a senior citizen from Germany and visits to two health resorts frequented by seniors: Bad Pyrmont and Bad Salzufern, Germany.

Figure 2.9 Environmental stress may play a significant role in aging.

Figure 15: Environmental Stress (Wantz & Gay, 1981)
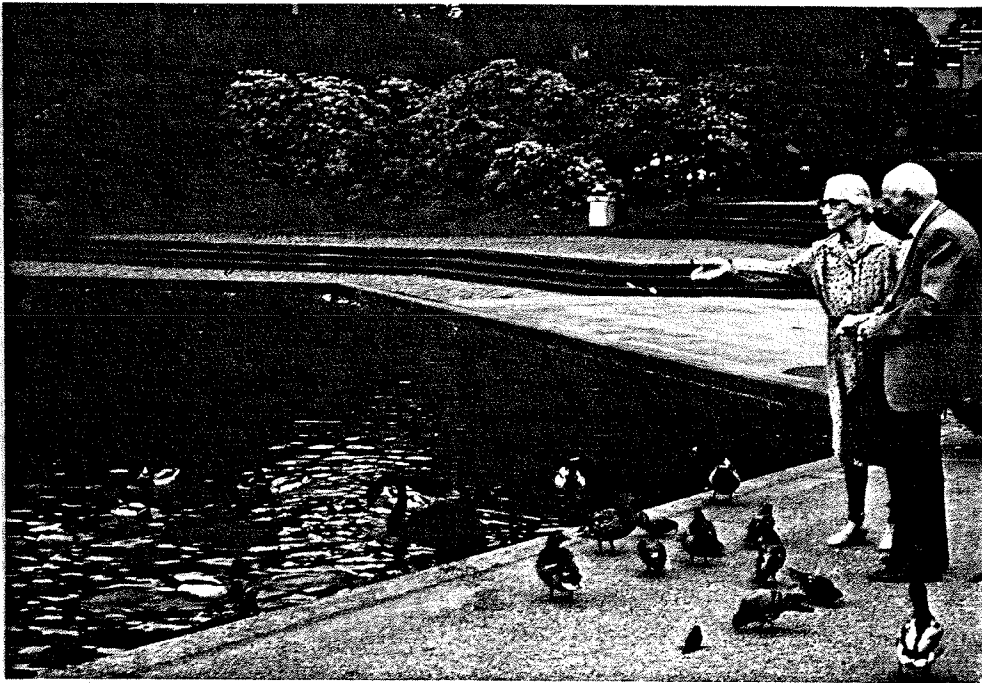
Figure 16: The Healing Beauty of the Outdoor Environment

> For sixteen years as advisor for gardening activi-
> ties in public housing and other low-income areas,
> I have seen how gardening can, in the chaotic en-
> vironment of the inner city, re-establish and re-
> inforce needed human values. It can help people
> find themselves.[37]

Does one have to scientifically quantify everything in order
to prove the worth of a garden? I would agree with Gillian
Darley

> Writing this ...the idea of giving tenants space
> to garden (and it can be just a balcony, or ter-
> race) seems so obvious as to be crude. Yet papers
> are being written, and model schemes are pointed
> to, merely on the grounds that tenants have taken
> on the upkeep of their surroundings for themselves
> as though this was in some way out of the ordi-
> nary. It is perhaps an adequate and eloquent il-
> lustration that we have lost sight of the simple
> and humane touches beneath the regulations, the
> requirements and the constraints.[38]

It is necessary then, that some part of the housing develop-
ment acknowledge the natural environment. This may be done
in several ways. First, there should be an opportunity to
garden for residents who wish to do so. In row housing this
may take place in private yards, but in apartments a plot
garden area should be designated for this purpose. Second,
plants may be used as building blocks in organizing the
site, adding visual and seasonal beauty, besides orienta-
tion. Third, sites which have existing natural features
such as a riverbank frontage, an aspen grove or a farmers
field, should be protected, since visits to natural areas
for some elderly are rare.

4.4.1 Winter

Winter is both of long duration and severe in the prairie
provinces, and can pose a problem to some elderly people.
The cold air can worsen respiratory and arthritic condi-
tions. The white snow combined with low sun angles can
cause blinding visual glare problems. Many elderly people
fear going out during winter months for fear of slipping on

---

[37] Carles A. Lewis "The Healing Role of Inner City Gardens",
AIA Journal, Febuary 1979, p. 36.

[38] Gillian Darley, "An Age for Concern - Part 2 Home Images"
Architects' Journal December 16, 1981, p.19.

icy walks. The loss of insulating fat in the skin tissues makes cold days seem colder. What role can the exterior housing environment play in winter?

Four roles can be identified: visual, functional, social, and leisure. The visual role is important to those elderly people who are confined indoors in the winter. A visually interesting landscape with a variety of views is necessary. The importance of a view can not be underestimated when one considers the lonely house bound elderly person. Views must recognize the problem of glare from south facing windows. The functional role of entering and exiting the building requires special design attention if it is to be a safe procedure. Airlocks, handrails and covered walks are a few ways of solving the problem. Those with private yards will have to shovel walks adding a social role to the yard. Walks should never be long and stairs should be avoided. Those unable to shovel their own walks should be able to contact a friend, manager or volunteer service. Thus, in winter, the unshovelled walkway becomes an opportunity for the elderly person to come in contact with the community. A leisure component could also be added to the exterior outdoor yard. For some elderly this would be to strenuous, while others need only be encouraged through an outdoor winter leisure program. The winter exterior yard should not be thought of as a waste of space, but as a resource which has potential for visual, functional, social and leisure use.

4.5   THE DESIGN PROCESS

Christopher Alexander writes in Notes on the Synthesis of Form, that design problems today are becoming increasingly complex. This is due, in part, to a growing body of knowledge that can no longer be ignored. Alexander critizes designers for refusing to cope logically with this complexity. They turn rather, to intuition and artistic individuality, the designers greatest gifts, to design forms which become simplistic and meaningless, because they are unable to deal with the complicated information.

The unimaginative repetition of the high rise senior citizen housing development in Winnipeg suggests that the complexity of the problem is not being dealt with. A solution which is meaningful for those living there, as well as meaningful to society, must address all aspects of the problem. This includes the role of outdoor spaces in these developments, their relationship to the building and the process taken to come to a solution that is acceptable.

A design process is usually individual to the designer, but in all cases information relevant to the project must be

acquired.   In order to solve the incongruities between the existing housing environment and the identified needs of the elderly, several steps in the design process should occur. These include:

1.   The elderly have special problems due to their age. A designer must be aware of the complexity of this problem and familiarize himself with the current research and thinking.   This is not easy because the broad scope of the topic is overwhelming.   This thesis has in Chapter II and III, drawn together information on the elderly, and transformed it into design principles which can easily be utilized by the designer.

2.   The elderly should be involved in the design process. If the development already exists, then the redesign of the outdoor yard should always include the ideas and opinions of the tenants living there.   In a proposed development this is more difficult.   Evaluations of existing senior citizen developments will have to be used.

3.   Use appropriate methods when asking information from the elderly.   One simple slide show procedure is documented in The Gerontologist, (Hartman, et.al.,1976).

4.   Use appropriate forms when presenting designs.   Models and perspectives are easier to understand for those who are not in the design fields.

5.   Seek out the support of interested organizations who will be familiar with housing issues, or have special concerns.   For example:

a) The tenant association of the particular housing development you are working with.

b) The Age and Opportunity Centre

c) Senior advocacy groups

d) If the development is in the planning process then a non-profit senior citizen housing corporation or a senior citizen co-operative housing group should be contacted.

6.   There is an integral connection between the community, the yard and the building; acknowledge this.

7.   Housing for the elderly should not stand out as different from other housing.

8. Evaluate the design after completion.

Chapter V

SURVEY

5.1   INTRODUCTION

An evaluation survey of outdoor spaces surrounding housing developments for senior citizens was undertaken in Winnipeg. The purpose of this survey was twofold. First, it was necessary to discover and clarify what exactly the problem with outdoor space was, and second, to take an inventory of the type of outdoor features which were being provided. In order to accomplish this task a one page survey sheet was developed. The survey covered five basic topics. These included:

1. Questions on housing form and the resulting outdoor space.

2. Questions on outdoor leisure activity.

3. Questions on parking.

4. Questions on entrance design.

5. And a brief question on site location.

These five topics evolved from two sources. First, previous observations of a housing development by the author identified these areas as distinct entities of outdoor space. Second, these areas were also identified in Housing for the Elderly:The Development and Design Process (Green, et.al., 1975).

5.2   METHODOLOGY

A short, one page evaluation survey was developed according to the above objectives. (see appendix C) Space was left on the sheet for two contact photos of each development. A list of senior citizen developments was then obtained from the City of Winnipeg. This list included three catagories: M.H.R.C. Housing; privately owned housing with a minimal level of care such as a resident nurse and/or a common eating facility and; privately owned housing with no care. The

56

survey took place in Winnipeg in early October. In total 73
senior citizen housing developments were visited and the ap-
propriate information noted and photographs taken.   The in-
formation was then tabulated.   The location of 73 senior
citizen developments were mapped.   (see Figure 17).   The
next section will list the results of the survey giving both
actual numbers and percentages. Discussions and conclusions
will follow the results.
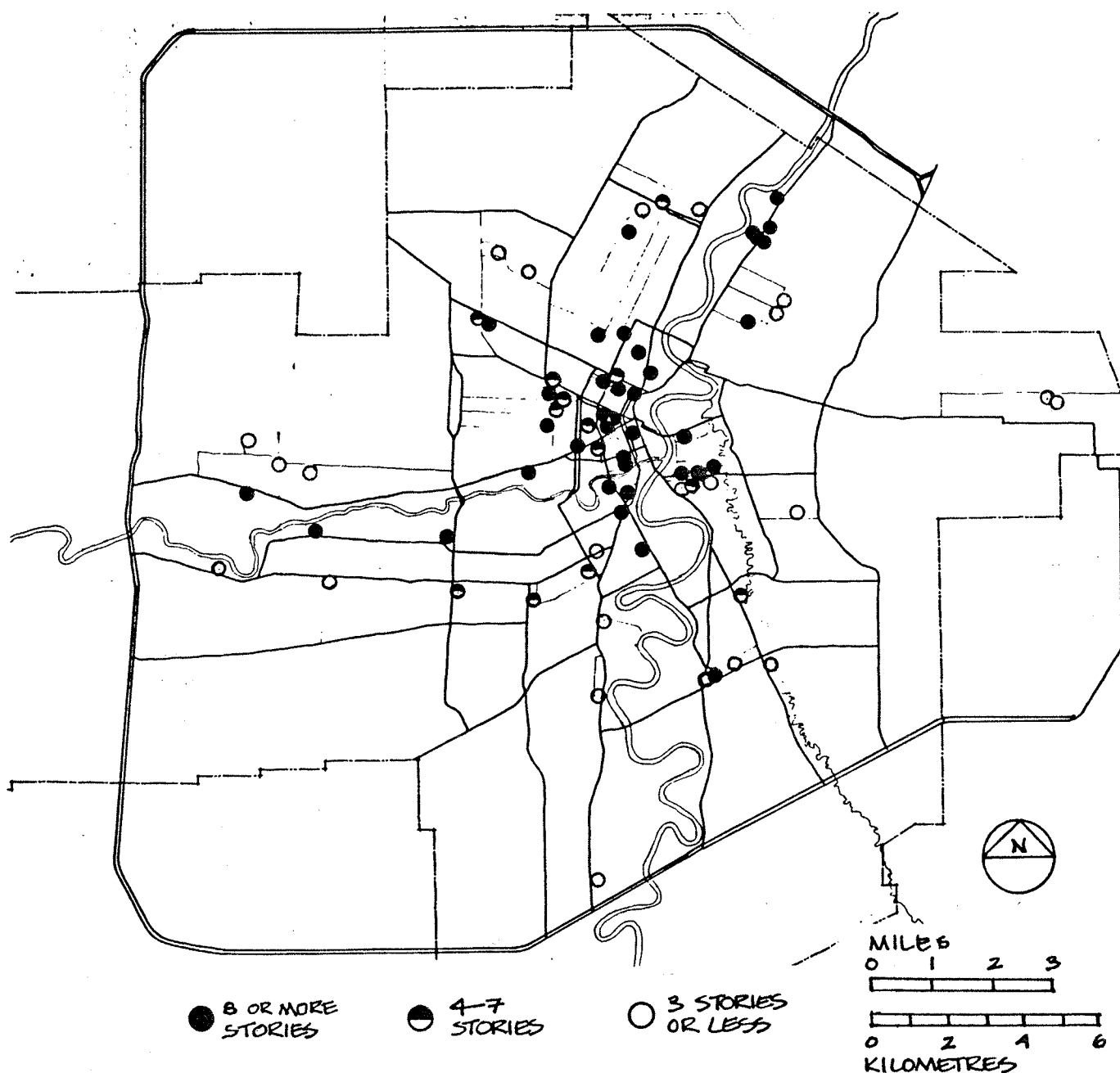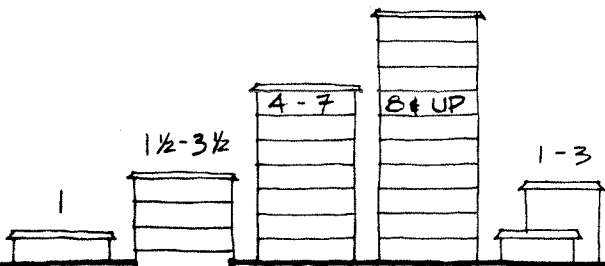
Figure 17: Location of Housing Developments

5.3 FINDINGS

5.3.1 Dwelling and Outdoor Space

TABLE 1

The Type of Housing Form

TYPE OF DEVELOPMENT	ROW HOUSE	LOW RISE	MED. RISE	HIGH RISE	COMBINATION	TOTAL
NUMBER OF DEVELOPMENTS	8	11	15	37	2	73
PERCENTAGE OF DEVELOPMENTS	11%	15.1%	20.1%	50.7%	2.7%	100%
NUMBER OF UNITS	364	777	1254	5317	186	7898
PERCENTAGE OF UNITS	4.6%	9.8%	15.9%	67.3%	2.3%	100%

NUMBER OF STORIES: 1 (ROW HOUSE), 1½-3½ (LOW RISE), 4-7 (MED. RISE), 8 & UP (HIGH RISE), 1-3 (COMBINATION)

The medium / high rise differentiation is very important. The Beyond Shelter study found that the elderly were neither for nor against living in high rises. Don Epstein's study (1976) claims this was because the Beyond Shelter study did not differeniate between high rise and medium rise apartments. High rises were defined in the The Beyond Shelter study as any building over four stories. He points out the great acceptance of medium rise housing as opposed to high rise housing in the Housing after Retirement study.

TABLE 2

Street Access from the Dwelling

STREET/DWELLING ACCESS	YES	NO	BOTH	TOTAL
NUMBER OF DEVELOPMENTS	3	67	3	73
PERCENTAGE OF DEVELOPMENTS	4.1 %	91.8 %	4.1 %	100%

TABLE 3

The Type of Private Outdoor Space

TYPE OF PRIVATE SPACE	SMALL YARD	PRIVATE BALCONY	SMALL YARD & BALCONY	NO PRIVATE SPACE	TOTAL
NUMBER OF DEVELOPMENTS	6	9	3	55	73
PERCENTAGE OF DEVELOPMENTS	8.2 %	12.3%	4.1%	75.3%	100%

TABLE 4

The Type of Semiprivate Outdoor Space
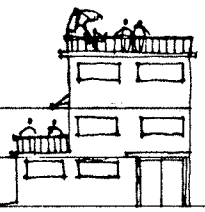
TYPE OF SEMI-PRIVATE SPACE	1 CLOSED	2 OPEN	3 OPEN & DEMARKED	4 OPEN COMB.	5 CLOSED W. OTHER	6 TOKEN PIECE	TOTAL
NUMBER OF DEVELOPMENTS	2	14	18	16	21	2	73
PERCENTAGE OF DEVELOPMENTS	2.7%	19.1%	24.7%	21.9%	28.8%	2.7%	100%

The semiprivate outdoor space was first divided into two main catagories, open and closed. These catagories were derived from a Princeton University Study by Galen Cranz and Thomas L. Schumacher. It was discovered that most of the Winnipeg developments had combinations of these basic types of outdoor space and that these could be further subdivided. Six types of semiprivate outdoor space was formed.

1. closed - This meant enclosed by a high fence or hedge above eye level or a roof garden where one could not see in.

2. open with no demarkation - This meant outdoor space which had no physical barriers between the semiprivate and public spaces. This included area's with foundation planting or speciman planting.

3. open and demarked - This consisted of semiprivate outdoor space which was separated physically from the public outdoor space through the use of a fence, hedge, wall or berm. These elements must be either low enough or permeable to allow visual surveillance of both public and private spaces.

4. combination of open or open & demarked.

5. closed with a combination of 2 or 3

6. token piece - This constituted semiprivate outdoor space which existed only at the entrance of the development and was not large enough to be considered useful for activities other than viewing the entrance.

TABLE 5

Percentage of Roof Gardens

	COMMUNAL BALCONY OR ROOF GARDEN PRESENT	TOTAL
NUMBER OF DEVELOPMENTS	8 OUT OF A POSSIBLE	73
PERCENTAGE OF DEVELOPMENTS	10.7 % OUT OF A POSSIBLE	100 %

5.3.2 Outdoor Leisure Activity

TABLE 6

The Type of Leisure Activity

LEISURE ACTIVITY	SHUFFLE BOARD	SHUFFLE BD. PLOT GARDENS CHECKER BD.	BIKE RACK	PLOT GARDENS	NONE	TOTAL
NUMBER OF DEVELOPMENTS	2	1	1	13	56	73
PERCENTAGE OF DEVELOPMENTS	2.7 %	1.4 %	1.4 %	17.8%	77.7%	100%

The leisure activity table does not include activities found on private balconies such as gardening and barbequing. It also does not include "indicator" gardens. Indicator gardens were so named because they indicate a desire to garden where no "official opportunity" to garden is available. An example of an indicator garden is the vegetable garden found directly underneath a window of an apartment where there is no street/dwelling access. (see Figure 22).

If private balconies and yards are included in the leisure activity figure than the number of developments offering leisure activities would increase to 41.1% from 32.3%.

TABLE 7

The Number of Gardens

TYPE OF GARDEN	PLOT GARDENS	INDICATOR GARDENS	NO GARDEN	TOTAL
NUMBER OF DEVELOPMENTS	14	7	52	73
PERCENTAGE OF DEVELOPMENTS	19.2%	9.6%	71.2%	100%

TABLE 8

The Number of Stories VS. Number of Gardens

GARDEN VS. # OF STORIES	1 STOREY		1½-3½ STORIES		4-6 STORIES		9 or GREATER		TOTAL	
	no.	%	no.	%	no.	%	no.	%	no.	%
PLOT GARDENS	7	50	5	35.7	0	0	2	14.3	14	100
INDICATOR GARDENS	2	28.6	2	28.6	1	14.3	1	14.3	7	100
TOTAL	9	42.9	7	33.3	2	9.5	3	14.3	21	100

9 + 7 = 16 = 76.2%   2 + 3 = 5 = 23.8%

TABLE 9

Relationship Between Private Space and Gardens

GARDEN VS PRIVATE SPACE	PRIVATE SPACE BALCONY OR YARD		NO PRIVATE SPACE		TOTAL	
	no.	%	no.	%	no.	%
PLOT GARDENS	6	42.9	8	57.1	14	100
INDICATOR GARDENS	2	28.6	5	71.4	7	100
TOTAL	8	38.1	13	61.9	21	100

62

TABLE 10

The Type of Vegetation Present

TYPE OF VEGETATION	TREES	SHRUBS	FLOWERS	GARDEN	GRASS
NUMBER OF DEVELOPMENTS	68	64	52	21	66
PERCENTAGE OF DEVELOPMENTS	93.2 %	87.7 %	71.2 %	28.8%	90.4%

TABLE 11

The Type of Seating Available

TYPE OF SEATING	BENCHES ONLY	PICNIC TABLES	P. TABLES & BENCHES	OTHER	OTHER, P. TABLES & BENCHES	NONE	TOTAL
NUMBER OF DEVELOPMENTS	29	4	9	1	9	21	73
PERCENTAGE OF DEVELOPMENTS	39.7%	5.5%	12.3%	1.4 %	12.3%	28.8%	100%

5.3.3   Parking

TABLE 12

The Type of Parking Available

TYPE OF PARKING	TENANT PARKING	TENANT & VISITOR	NO PARKING FACILITIES	TOTAL
NUMBER OF DEVELOPMENTS	52	20	1	73
PERCENTAGE OF DEVELOPMENTS	71.2%	27.4 %	1.4 %	100%

The average ratio of stalls to units is one stall to every 5.4 units. (1274 stalls to 6912 units)

The lowest ratio of stalls per unit is one stall to every 22.77 units and occurred in a housing development where there were 4 stalls to 91 units.

The highest ratio was one stall to every 1.76 units and occurred in a housing development where there were 50 stalls for 88 units.

Six of the developments had underground parking, accounting for 8.2% of all developments in Winnipeg.

5.3.4   Entrance Design

TABLE 13

Seating at the Entrance

WAS THERE SEATING AT THE ENTRANCE	YES	NO	TOTAL
NUMBER OF DEVELOPMENTS	43	30	73
PERCENTAGE OF DEVELOPMENTS	58.9%	41.1%	100%

TABLE 14

The Type of Access

MEANS OF ENTERING	RAMP ONLY	STAIRS & RAMP	AT GRADE	SMALL STOOP	OTHER	TOTAL
NUMBER OF DEVELOPMENTS	4	8	51	5	5	73
PERCENTAGE OF DEVELOPMENTS	5.5%	11%	70%	6.8%	6.8%	100%

TABLE 15

The Location of Handrails

LOCATION OF HANDRAILS	AT RAMP	AT STAIRS	AT STAIRS & RAMP	AT SIDEWALKS	NONE	TOTAL
NUMBER OF DEVELOPMENTS	7	3	6	7	50	7
PERCENTAGE OF DEVELOPMENTS	9.6%	4.1%	8.2%	9.6%	68.5%	100%
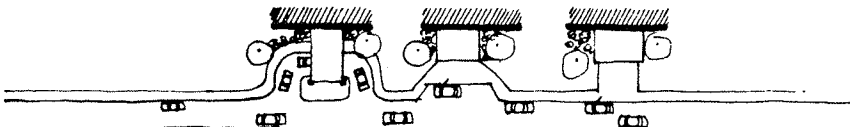
TABLE 16

The Presence of a Covered Entrance

IS THERE A COVERED ENTRANCE	YES	NO	BOTH YES & NO	YES, BUT TOO SMALL	TOTAL
NUMBER OF DEVELOPMENTS	59	5	2	8	73
PERCENTAGE OF DEVELOPMENTS	80.8%	6.9%	2.7%	11%	100%

TABLE 17

The Number of Drop-off Zones

IS THERE A DROP OFF ZONE?	YES; COVERED DROP OFF AREA	YES, DROP OFF ONLY	NONE	TOTAL
NUMBER OF DEVELOPMENTS	5	21	47	73
PERCENTAGE OF DEVELOPMENTS	6.8%	28.8%	64.4%	100%

TABLE 18

The Type of Exterior Lighting Used

TYPE OF LIGHTING	UNDER CANOPY	WALL MOUNTED	POLE LIGHTS	COMBINATION OF THREE	NONE OUTSIDE	TOTAL
NUMBER OF DEVELOPMENTS	37	22	2	11	1	73
PERCENTAGE OF DEVELOPMENTS	50.7%	30.1%	2.7%	15.1%	1.4%	100%

TABLE 19

The Type of Exterior Paving Material

SIDEWALK MATERIAL	POURED CONCRETE	CONCRETE PAVERS	BRICK PAVERS	UNISTONE PAVERS	ASPHALT	EXPOSED AGGREGATE	COMBINATION	TOTAL
NUMBER OF DEVELOPMENTS	47	2	4	3	1	1	15	73
PERCENTAGE OF DEVELOPMENTS	64.4%	2.7%	5.5%	4.1%	1.4%	1.4%	20.5%	100%

TABLE 20

The Type of Security

FORM OF SECURITY	INTERCOM	SUPERVISED	NONE	TOTAL
NUMBER OF DEVELOPMENTS	50	3	20	73
PERCENTAGE OF DEVELOPMENTS	68.5%	4.1%	27.4%	100%

5.3.5 Neighbourhood Conditions

TABLE 21

Bus Stop Within Walking Distance

IS THERE A BUS STOP NEARBY 1-2 BLOCKS (400-800' or 121.9 -243.8m)	YES	NO	TOTAL
NUMBER OF DEVELOPMENTS	69	4	73
PERCENTAGE OF DEVELOPMENTS	94.5%	5.5%	100%

TABLE 22

Grocery Store Within Walking Distance

IS THERE A GROCERY STORE NEARBY ? 2-3 BLOCKS (800-1200' or 243.8m - 365.8m)	YES	NO	TOTAL
NUMBER OF DEVELOPMENTS	55	18	73
PERCENTAGE OF DEVELOPMENTS	75.3%	24.7%	100%

5.4 DISCUSSION

5.4.1 Dwelling and Outdoor Space

The following conclusions can be drawn from the survey section entitled dwelling and outdoor space. An over- whelming majority, 91.8%, of the developments were apartments having no direct access to the street from the dwelling. Over half of these apartments were high rises consisting of eight or more stories. Private space was seen as a low priority with 75.3% of the dwellings not including private space. Over a third of the developments offered a variety of semiprivate spaces. Also a third of the developments had placed some

sort of element demarking the boundary. In general the
semiprivate spaces were difficult to evaluate.

Several questions regarding these ·conclusions can be
raised about housing form, and the nature of territory. Is
the apartment and specifically the high rise an appropriate
way of housing the elderly?   Does it reflect the elderly's
desired housing form?   Should this housing form be perpetu-
ated? Is private space important to the elderly? What role
does private space, transitional space, and communal outdoor
space play in the elderly housing context?   These questions
will be discussed under the following headings: 1) Housing
form, 2) private outdoor space, and, 3)communal outdoor
space.

5.4.1.1   Housing Form

The high rise housing form dominating the senior citizen de-
velopment housing options in Winnipeg is in conflict with
the elderly's desired housing form consisting of medium and
low rise apartments and low rise housing. (Health and Wel-
fare Canada, 1976; Read-op Centre Limited.,1978; Don Ep-
stein, 1976).   The Health and Welfare Canada report indicat-
ed that only 3.7% of the elderly chose high rise housing as
their first choice while 41.6% indicated it would be their
last choice. Other sources such as the Beyond Shelter study
did not find a great dislike amongst the elderly for the
high rise. Don Epstein (1976) critisizes this study for not
making the distinction between the high rise and medium rise
apartment and basis their noncommital results on the fact
that this distinction was not made.

Betty Havens, Manitoba's first provincial gerontologist
questions the justification of high rises. "How many people
from the prairies over 70 today have ever lived in a high
rise? Most lived in houses, or three or four- storey apart-
ments.   All of a sudden when they are 70, they're supposed
to live in a mountain."³⁹ In light of the fact that the high
rise is not a preferred housing choice of those retired it
does not seem   to be an appropriate way of providing hous-
ing.

Socially high rises do not seem to work well. A study
by Princeton University found that " three   indices of so-
cial satisfaction - knowing other people, degree of boredom,
and amount of activity - appear to be negatively affected by

---

³⁹ Val Werier,   'Manitoba Rates High in Treatment of Elder-
   ly", The Winnipeg Free Press, Saturday, Feruary 12, 1983.
   p.5

the high rise configuration,   specifically its size"[40] when
one compares   garden apartments with high rises.   Though,
Cranz and Schumacher, think that this can be compensated for
in the initial design of the high rise and with follow up
social services,   this author disagrees with them.   Design
that caters to the desires of the elderly are preferable to
special designs and social services in order to make high
rises acceptable and liveable for the elderly.

Figure 18:   This is One of Winnipeg's Many High Rises for
             the Elderly.

     Socializing and how it occurs must be given serious
thought.   The 1971 Manitoba study   of the elderly showed
that social isolation was a serious problem amongst the eld-
erly.   When one compares the figures between those living in
the general population and those living in special develop-
ments the percentage that experienced severe social isola-
tion was about the same.   (slightly higher for the develop-
ments 61.9% vs 64.7%).   Obviously the factors which

---

[40] Galen Cranz and Thomas L. Schumacher,   The Impact of
     High-Rise Housing on Older Residents.   (Princeton, New
     Jersey: Working Paper 18, Research Center for Urban and
     Environmental Planning, School of Architectural and Urban
     Planning,) p. 9.

encourage social interaction does not just involve bringing the elderly together but entails mechanisms for socialization if social isolation is to be avoided.

Greenbie discusses the absence of social mechanisms in apartment towers,

> Apartment towers for the affluent and near affluent thus become highly condensed in city dormitory suburbs, communities of limited liability where maintenance, management, and surveillance of public spaces is done by paid professionals who often do not even live in the building. But for low-income people, or even the relatively well-off whose conceptual resources are bound to the village scale of the familiar culture, cubicals stacked around elevator shafts offer no opportunity either for private yard life or neighborly street life and the kinds of personal mutual assistance so important on that level.[41]

The social aspects of yard life and street life have been already briefly mentioned in the chapter on the needs of the elderly and will be discussed further in the section on private outdoor space.

Though the high rise can be critized, the apartment is still accepted by the elderly in the form of a low or medium rise apartment. The popularity of low/medium rise apartment living can be attributed to three reasons: 1)the need for maintenance, 2) the security offered in a locked single entrance, and 3) the proximity to the ground compared to a high rise. The communal yard surrounding the apartment must compensate for the lack of a private yard. This will be discussed under communal outdoor space.

5.4.1.2   Private Outdoor Space

Very little mention is given to private outdoor space in the literature and, therefore, the importance of private outdoor space to the elderly is not immediatly clear. It is clear, with only 24.7% of the housing developments offering a private balcony or yard, that builders and designers do not consider private outdoor space a priority. They believe:

---

[41] Barrie B. Greenbie, <u>Spaces:Dimensions of the Human Landscape</u> (Newhaven and London: Yale University Press 1981) p.84.

1. It is too costly to provide.

2. Elderly people will not miss outdoor space.

3. The elderly do not want nor can they afford maintenance problems.

In speaking with an architect who was working on a senior citizen development in Winnipeg it appeared that the cost of providing balconies was a major form determinant. Balconies are considered luxury items and it is difficult to convince project sponsors and housing financers that the money is well spent.

Cranz and Schumacher's findings indicated that the majority of residents did not miss having a balcony. However, they also discovered that those who did have balconies enjoyed them and they felt it would be better to respond to their capacity to enjoy than to "seize on the ability to lower expectations and environmental quality."[42] Interviews done with fourteen people in Lions Manor in Winnipeg indicated that 64.3% would have appreciated balconies (Thiessen, 1981). The paper indicated the importance of a balcony to one man who had gardened on a previous balcony producing 303 tomatoes in one year. The evaluation survey for this practicum was done in October, but even at this time many of the balconies and yards showed signs of use such as barbeques, vegetable and flower pots and lawn furniture.

Maintenance problems of balconies and yards seems to be a third factor against outdoor space. In almost all cases I believe the elderly would enjoy and accept the maintenance responsibilities of their small piece of yard or a small balcony. After all most are accustomed to a yard very much larger than a balcony. Maintenance is becoming an excuse for not providing what would be very appreciated. (see Figure 19).

One of the best arguments for providing a balcony or yard is found in the concept of home range. Various definitions of home range exist. (Gelwicks 1970, Stea 1970, Everitt and Cadwallader 1977, Pastalan 1971-73) The factors which make up a persons home range includes: other people, objects, bounded space, a dimension of meaningfulness and the individual perception of the person experiencing the home range. (Stea 1970). Home range differs between

---

[42] Galen Cranz and Thomas L. Schumacher Open Space for Housing for the Elderly, (Princeton New Jersey: Working Paper 19, Research Center for Urban and Environmental Planning, School of Architecture and Urban Planning, 1975). p.4.

These yards act as the public visitor entrance,
as well as a private yard. Each yard provides
a place for flowers and garen paraphernalia. How-
ever, the yards could have been more private. On
the right are individual garden plots. The
management cuts the grass.

Figure 19: Private Yards

individuals and changes as an individual matures.   Pastalan
relates it to a human development continuum.

> At infancy, for instance, one's home range scarce-
> ly extends beyond the body...However as a child
> develops physically and intellectually ¬his home
> range begins to expand.   For instance,   the child
> begins to make sense out of his surroundings in
> his crib, his nursery, and so on.....Then as he
> increases in age and development he continues to
> expand his home range until he   reaches maturity
> where he has almost an unlimited home range.   Once
> the person reaches his full adult capacity, his
> home range is fairly stable for a long period of
> time until sometime in the sixties.   At this point
> a person begins to experience a reduction in sen-
> sory acuity, health, energy levels, and activities
> of daily   living....These losses increase in se-
> verity with each decade of life after 65 so that
> essentially between 75 and 85 the sensory deterio-
> ration becomes rather serious....so   that as these

factors of deterioration manifast themselves with
increasing severity over time, there is a reduc-
tion in one's life space or home range.[43]

Gelwicks points out that the older person spends more time
in the home setting and derives more psychological support
from objects near at hand. "The proximal environment as-
sumes an importance in the aged not often perceived by the
mobile young adult (Birren 1967)."[44] The environments sur-
rounding the immediate apartment must be given more thought
and consideration. These areas help bring variety into the
elderly persons life and in the case of a private yard, add
a measure of status in a continuum where loss is the norm.
The value of a small piece of private yard or a balcony
takes on more importance because of the decrease in home
range in the aging process.

Neighbouring is another reason for including yards and
balconies. The balconies however, must not be over three
stories to be given socializing attributes. "Anything high-
er, and the street becomes a "view" - the vitality of the
connection is destroyed. From the second and third floors
people can shout down to the street, throw down a jacket or
a ball; people in the street can whistle for a person to
come to the window and even glimpse the expressions on a
person's face inside."[45] Over four stories the connection
between the ground and balcony is lost. This is especially
true for elderly people with deteriorating eyesight and/or
hearing.

Balconies above three stories are still useful for pri-
vate outdoor hobbies, entertaining friends, or enjoying a
quiet time in the fresh air. However, they can not be given
the same neighbouring attributes as the two and three storey
balconies, or the same connection with the earth. (Greenbie
1981).

---

[43] Leon A. Pastalan "How the Elderly Negotiate their Envi-
ronment," in Housing and Environment for the Elderly ed.
Thomas O. Byerts (Washington D.C.:Department of Health,
Education and Welfare 1973/71?) p.25-26.

[44] Birren, 1967, quoted in LOuis E. Gelwicks "Home Range and
Use of Space by an Aging Population" in Spatial Behaviour
of Older People, eds. Leon A. Pastalan and Danial H.
Carson (Ann Arbor, Michigan: The University of Michigan
1970)

[45] Christopher Alexander et al A Pattern Language, (New
York: Oxford University Press 1977) p.771.

5.4.1.3   Communal Outdoor Spaces

Since 75.3% of Winnipeg's senior citizen developments did not have any private space in the form of balconies or yards and even less had a transitional area from the private apartment to the street or hallway, the design of the areas surrounding the apartment takes on an increased significanse. These "interactional territories" (see appendix A for definition) must be multifunctional serving individual needs. Some of the functions of the yard are: private space for the individual, outdoor rooms for small, medium and large sized groups, recreation and leisure, outdoor work areas, play areas for grandchildren and private entertainment areas for family and friends.

The complexity of the outdoor yard poses four problems:

1.   The functional problem of organizing and designing the multi- functional activity areas

2.   The problem of creating subtle territorial distinctions that can still be perceived by the elderly.

3.   Designing territories according to the context in which the housing development finds itself. Depending on the neighbourhood and the size and form of the development, the design of the outdoor yard will change.

In the Winnipeg evaluation of the semiprivate yards, the territories were described as open, closed, demarked, various combinations, and token. (see table 4). This type of evaluation began to give an indication that a variety of territorial spaces were being attempted in Winnipeg. However, the complexity of this area and individual problems specific to each housing development make it difficult to draw general conclusions. For example, a yard without a fence in the inner city can be disastrous, while in other situations, where the open space is next to a farmers field or a riverbank, this is desireable. A barrier would be confining.

The Cranz and Shumacher study showed that the majority of the elderly preferred open yards to yards that were completely closed in; not allowing views out. (see Figure 20) It became clear during the Winnipeg field evaluation, that many of the yards (28.8%) offered both closed and open yards. Yards that were in the completely closed, completely open, and token categories were automatically considered poorly designed. The closed yards were considered too prison like; open yards did not have enough territorial definition to make the yard feel psychologically or physically secure and; the "token" yards were too small to be considered

This is one of two developments in Winnipeg which
had a completely closed in yard. The atmosphere is
prison-like. The fence act as a physical barrier
between the community and the elderly living there.

Figure 20: A Closed in Yard

a yard.   Together this made up almost 25% of the housing
developments.   The remainder were not necessarily designed
well, but had made attempts to define the yard and provide
some variety.

10.7% had a communal balcony or roof garden.   This was
not expected and seemed a pleasant way of incorporating a
form of closed semiprivate space into the design.   The op-
portunity for this type of outdoor space was recognized in
many of the developments.

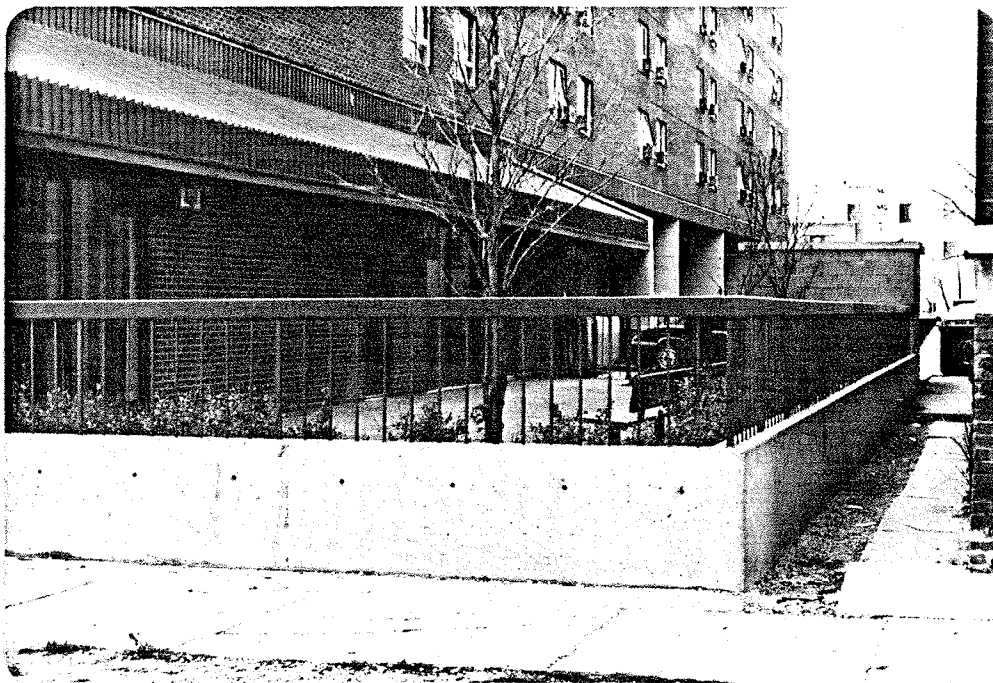Figure 21: A Closed Yard

Figure 22: An Open Yard
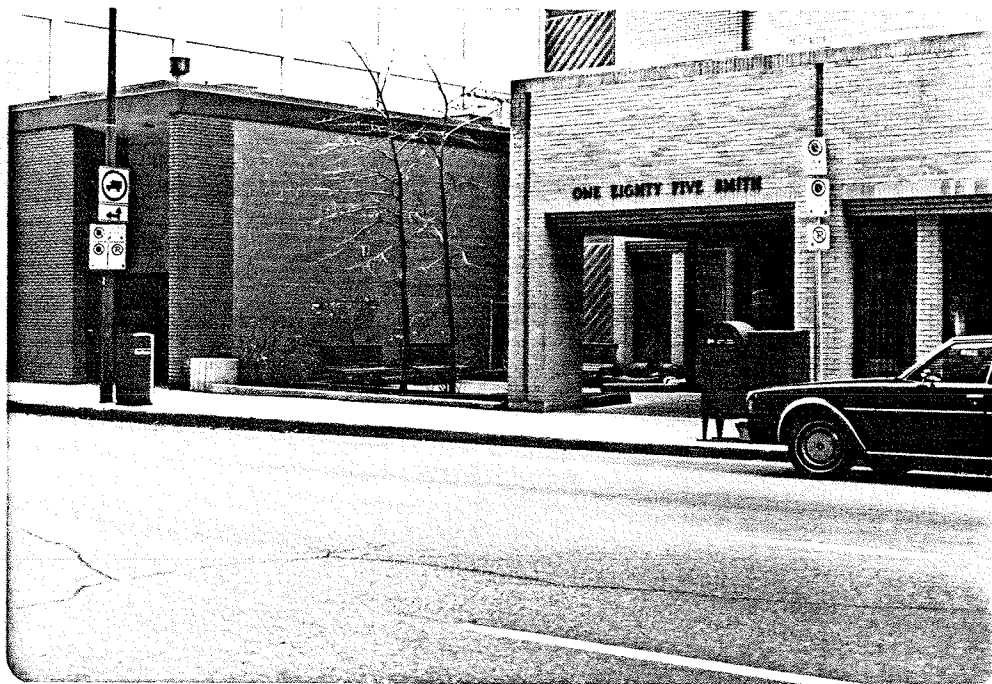
Figure 23:   An Open and Demarked Yard

Figure 24:   A Token Yard

5.4.2   Outdoor Leisure Activity

Most of the developments (77.7%) did not have any formal
places for recreational activities.   Gardens were the most
common recreational activity identified.   In all cases the
figures in the results did not include container gardens in-
cluded on balconies;   had they been included the gardening
figure would have been much higher.   The size, type and lo-
cation of the garden sometimes made it difficult to decide
what actually constituted a garden. Only gardens which ap-
peared as if they had been tended and owned by individual
residents were included in the figure.   Management gardens
were not included.   These were then further divided into
plot gardens and indicator gardens.   Indicator gardens were
very small gardens in odd, out of the way places, or under-
neath windows of apartments.   (see Figure 25) They were an
indication that someone wanted to garden, but either no pri-
vate outdoor space was available to do this, or the manage-
ment had not designated a particular spot on the grounds to
garden.   Indicator gardens were important indications of de-
sire, and one wonders how many residents wanted to garden,
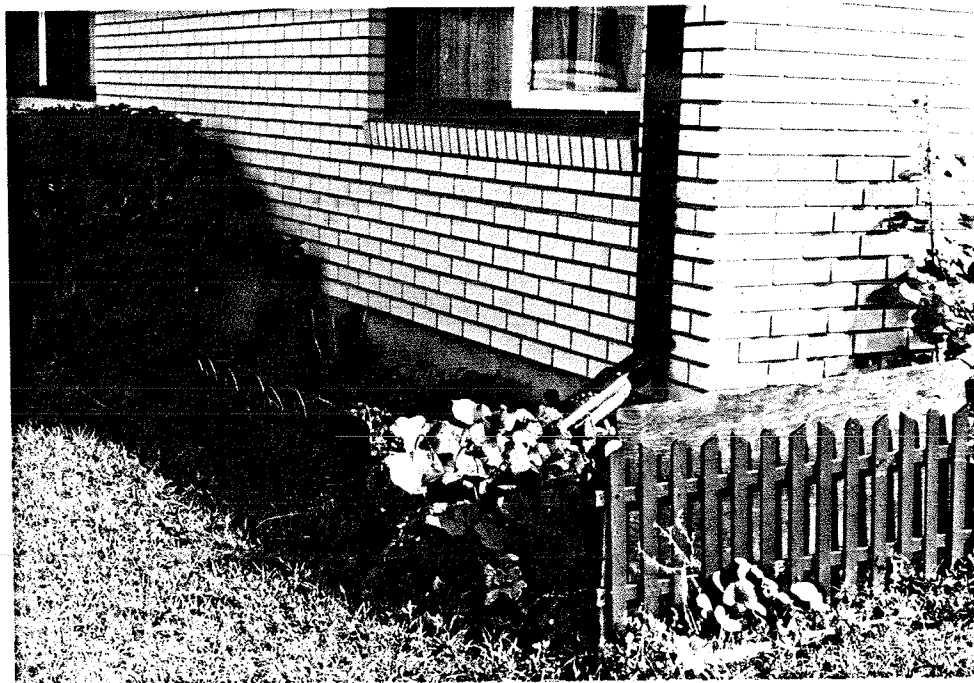but hesitated to ask the management for fear they would say
no.

Figure 25:   An Indicator Garden

To what extent outdoor leisure and recreation activities are offered in the home environment depends on the size of the development, the presence of other recreation facilities in the community and the presence of private space. Several studies have indicated what type of outdoor leisure activities are preferred , but many of the recreation activities identified (watching television, driving for pleasure) do not relate to the outdoor environment or the home environment. (McAvoy 1979). Those activites identified by McAvoy which relate to the outdoor home environment are:

visiting friends and relatives (74.6%)
reading (66.9%)
gardening (49.4%)
walking (30.7%)
caring for animals (10.6%)   (McAvoy 1979, p.43)

The above percentages indicate the percentage of people who listed these activities as one of the top five participated in during the past year. The top five preferred activities were identified as:

visiting friends and relatives (60.7%)
reading (54.8%)
gardening (53.2%)
walking (45.4%)
fishing (24.8%)

Both visiting and reading can be done outdoors but requires a suitable environment. Seating becomes an important element for this type of activity. 28.8% of the developments did not provide permanent outdoor seating facilities in the semiprivate outdoor area. This would require that a lawn chair be brought out. (see Figure 26)

McAvoy also found that the reason people participated in leisure activites were for socializing (88.9%), self-fulfillment (79.6%), closeness to nature (73.3%); physical exercise (61.0%), and learning (51.6%). (McAvoy 1979). The satisfaction of participation in leisure by the elderly seems to warrent a greater need by designers to take leisure and recreation seriously. Decrease in the home range for the elderly also points in an increased awareness that the home and immediate neighbourhood must be more responsible in providing this leisure opportunity.
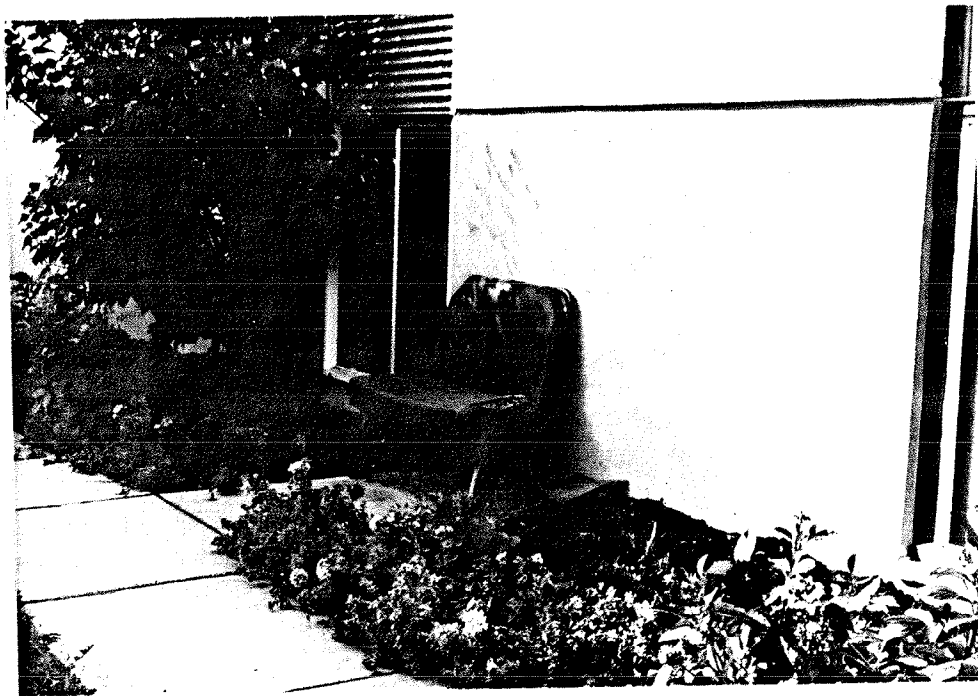
Figure 26:   A Comfortable Bench

5.4.3   Parking

All housing developments except one in Winnipeg provided
parking facilities.   The average ratio of stalls to units
was 1 stall to every 5.4 units.   This was in keeping with
C.M.H.C.'s recommendations in Housing the Elderly at one
stall to every 6 units in the downtown area;   one stall to
every 5 units in the suburb areas and;   one stall to every 4
units in areas which have poor transportation.   The most
extreme case found in Winnipeg had one stall to every 22.8
units which is unacceptable.   This existed in a development
with 91 units, where only 4 tenant stalls were provided and
no visitor parking. Gelwicks points out that parking stalls
have more value than just parking a car.

> Another case in point is the fact that many homes
> for the aged are reluctant to provide parking
> spaces and/or garages for their residents due to
> the observation that, as they grow older, the res-
> idents use their cars less frequently.   The psy-
> chological value of having the car available, how-
> ever, even if used only once a month may far
> outweigh the cost of providing the space to accom-

modate it.[44]

Eight housing developments had underground parking. Whether this is preferable to above ground parking is unclear.

Underground parking has its advantages, especially in Winnipeg's winter months. Seperating pedestrian and vehicle traffic reduces chances of collision. The indoor parking also increases the elderly's desire and ability to travel from the home environment when cars do not have to be plugged in, or frost scraped from the windows. There are two aspects to the problem. The first is whether underground parking is safer from vandalism and assault, then above ground parking. The Winnipeg Police have kept no statistics on this matter and were unable to give a general opinion. The second is the perceived safety the elderly feel in undergound parking. Are they anxious that someone will rob them and no one will see? Studies regarding parking safety in underground garages and feelings of safety, need to be completed before recommendations regarding underground parking can be made.

Tenant parking may be sufficient according to C.M.H.C.'s recommendations (Housing the Elderly, 1972) ,however, further studies have to be done to verify this. It is possible that environmental and economic constraints determines the amount of available land for parking, rather than the elderly's needs and desires.

Visitor parking stalls must also be given more consideration. Only 27.4% of Winnipeg's housing developments identified visitor parking stalls. The lack of these stalls can pose problems in the community. Visitor parking was a major concern of neighbours in an inner city area which felt the increased number of visitor cars on the street reduced saftey for young children in the neighbourhood. Feelings of resentment rose between the community and the housing development.[47] If visitors are to be encouraged and the loneliness of the elderly reduced, more thought has to be given to visitor parking.

---

[44] Louis E. Gelwicks, "Home Range and Use of Space by an Aging Population" in Spatial Behaviour of Older People, p. 59.

[47] Meeting between the Wolsely residents association and the Mennonite Brethern Gerontological Association. September 1982.

5.4.4   Entrance Design

Entrance design has been given a great deal of attention in the literature. (Sorenson 1979, Green et al 1975, CMHC 1972). Designers seem to grasp the social and functional importance of the entrance to the elderly. It is unfortunate that even though the literature has not forgotten the entrance, the real world has. The Winnipeg survey showed great variation in the quality of entrances. For example, 68.5% did not have handrails. One development had a barbed wire fence to stop trespassers obviously a poor solution for the elderly living there. (see Figure 27).
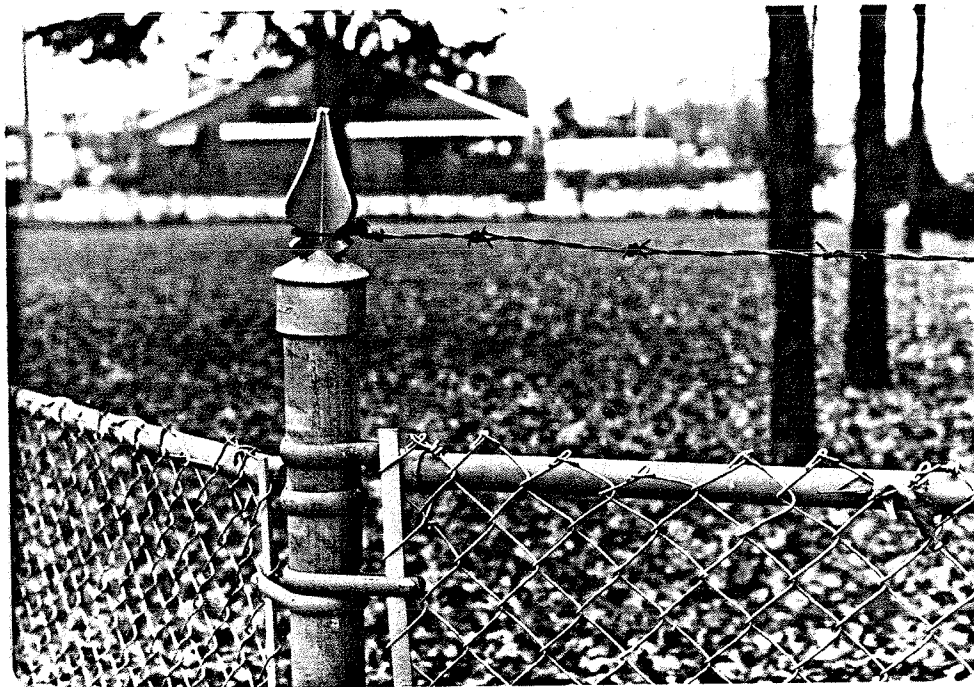

Figure 27:   A Poor Handrail Detail

Most of the developments had a covered entrance (91.8%) but 11% were too small to provide any protection from rain or snow build-up. Though 70% were on grade entrances, many were steep enough to be considered ramps, and should have had handrails. Walk details in particular were very poor. (see Figure 28). Low planters and heaving sidewalks are dangerous to elderly people with poor eyesight. Many of the details at the entrance were poorly executed. Others however, were protected by covered dropoff areas, well lit, and offered pleasant places to sit while waiting. (see Figure 29).
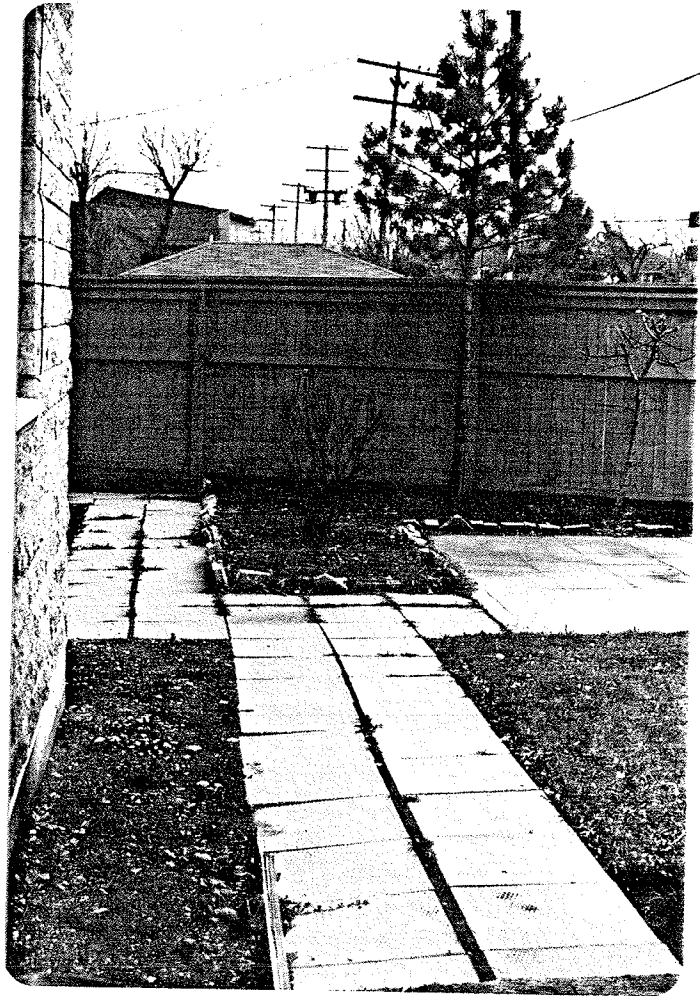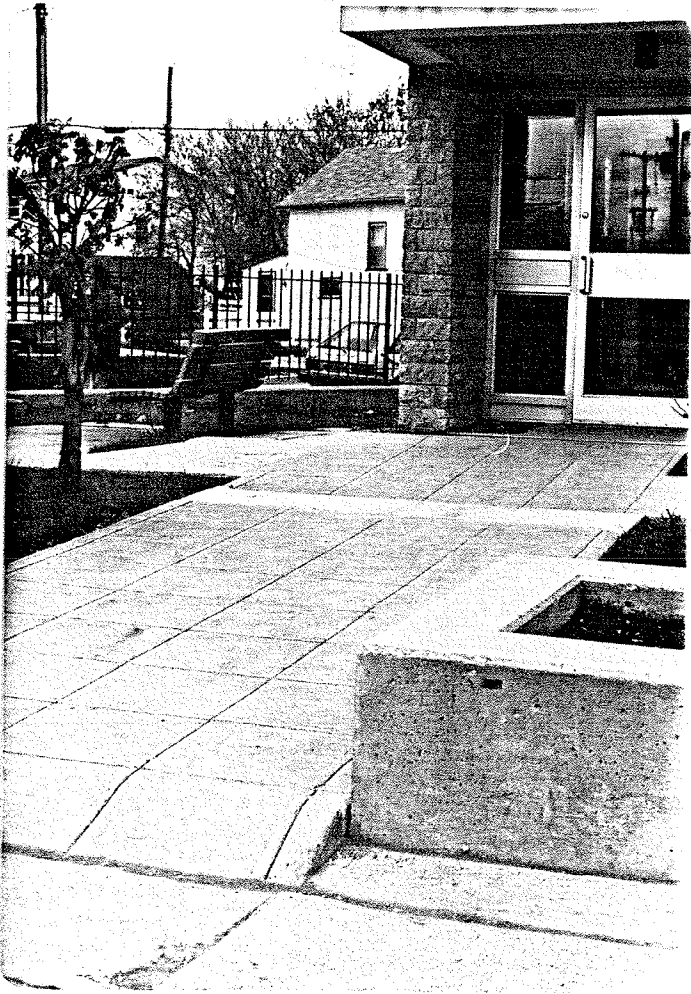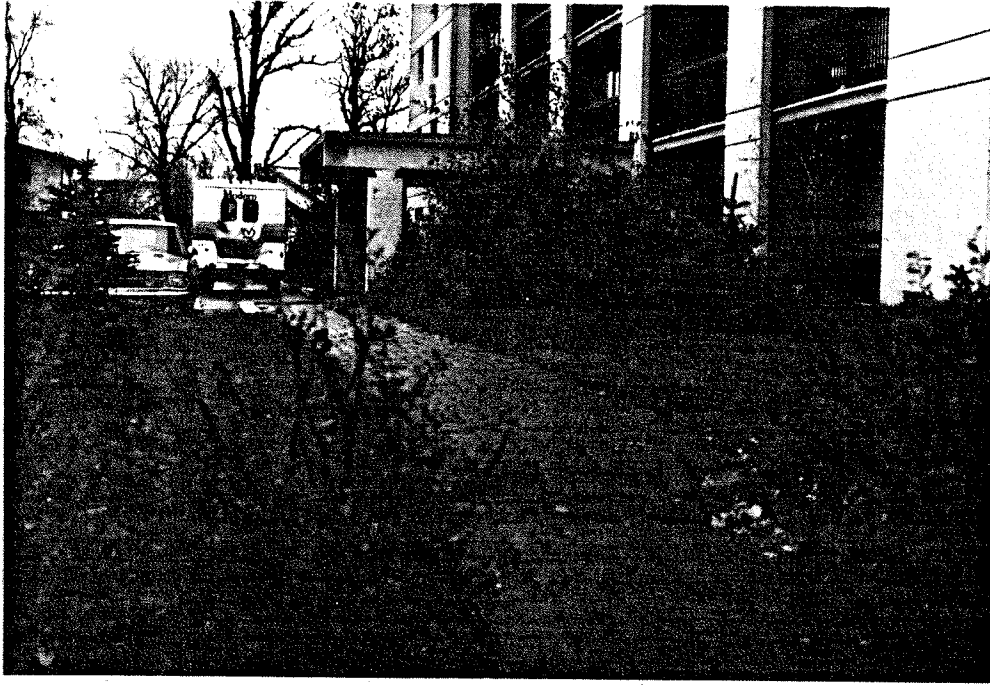
Figure 28:   Examples of Poor Walk Details

Figure 29:   A Pleasant Entrance Area

The building entrance plays an   important social   role. The bench beside the entrance door cannot be omitted under any excuse.   Permanent benches located elsewhere on the property do not make up for the entrance bench. I asked one man where he usually sat outdoors.   He got up from his in- door bench and ushered me outside.   He informed me, while gesturing with his hand, that what he wanted was a bench right here in front of the entrance.   When asked whether he could not bring out his lawnchair, he answered that he often did but it was not the same thing. A bother and effort when so many people sat there anyway.   Delving a bit   into his past, I discovered his wife had recently died, and he was lonely.   He had sold the house and moved into this bachelor apartment. In his case the entrance bench (both indoors and out) was a place to meet people.   41.1% of the senior citi- zen housing developments in Winnipeg did not have permanent outdoor entrance benches.

It was difficult to evaluate the lighting standards be- cause none of the developments were visited at night.   Ac- cording to the chapter on physical changes, bare bulbs and strong single light sources can cause glare problems.   This information was not known when the survey was taken, but the author remembers seeing many bare bulbs and single light sources in the entrance areas.   It was encouraging to see some of the developments with lighting that extended beyond the entrance to the pathways and outdoor areas surrounding the development.

5.4.5   Neighbourhood Conditions

The majority of the developments were well located in reference to bus stops and grocery stores.   One development advertised a free bus service to the shopping centres.   (see Figure 30).

Figure 30:   Some Housing Projects Offer a Bus Service.

5.5   RECOMMENDATIONS

Several implications for housing policy result from the survey.   The following recommendations regarding Winnipeg's senior citizen housing developments can be made:

1. Housing Form

    a) There should be more choice offered in the sheltered housing market; Specifically, more low rise buildings, and buildings with direct street access such as row houses.

    b) There should be more experimentation with prototype housing, and follow up evaluations on satisfaction should be carried out.

2. Private Outdoor Space

a) Private outdoor spaces need to be given higher priority. A percentage of all units within each scheme should have a private outdoor area, either in the form of a balcony or yard.

b) Private outdoor areas should be designed, so that they are accessible to persons in a wheelchair.

3. Communal Outdoor Space

a) The exterior site surrounding the building should be organized in a clear and comprehensible manner. Service areas, entrance areas, parking, communal amenity areas, leisure areas, and private yards should be clearly defined through boundary definition and landmarks or landscape elements.

b) A variety of spatial communal areas should be offered. This includes: closed areas, open areas which are not demarked, and open areas which are demarked with a visually permeable barrier, such as a fence, hedge, wall, or berm.

c) A variety of spatial scale should be offered in the communal outdoor areas. This includes quiet places for one or two, small group or family areas, and open areas for large group activities.

4. Outdoor Leisure Activities

a) More opportunties for leisure activities should be provided.

b) A plot garden area should be available in every housing development, even if all residents have private balconies.

c) Incentives for involvement should be made available through friendly contests and tournaments.

d) Permanent outdoor benches should be required in every communal area for visiting, reading and resting.

5. Parking

a) Visitor parking areas should be given more priority and thought. The number of stalls provided should depend on the size of the development, the public street space available, and the existing residential context.

b) Visitor parking areas should be clearly marked as such.

c) Parking needs of the elderly require further investigation; particularily the safety of underground and covered parking garages.

6. Entrance Design

a) Communal and private entrance areas should be accessible. Standards set out by Sorenson(1979), are particularly useful in providing such areas.

b) Communal entrance areas should have a seating area near by for casual socializing.

c) All exterior entrance areas should be covered to provide protection from rain and snow.

d) All exterior entrance areas should have a windlock to offer protection from the cold while opening the door.

e) All entrance areas should be well lit with several diffuse light sources.

f) All entrance areas should include a ledge (could be in the for of a bench or wall) to put down packages while unlocking the door.

7. Neighbourhood Conditions

a) Housing developments in rundown neighbourhoods should design their yards in a defencible manner.

b) A seating area should be located on the neighbourhood/ housing development contact zone to encourage community contacts.

c) The housing development should acknowledge the fabric of the surrounding neighbourhood, in both the building design and the yard / neighbourhood connection, for example, in a single family, low density neighbourhood it would be incongruous to build a highrise.

Chapter VI

GUIDELINES FOR OUTDOOR SPACE

These guidelines are a synthesis of the principles derived from Chapters II, III and IV and the recommendations which evolved from the survey, in Chapter V. It is essential that the guidelines presented here are tested through a statistical survey which compares the elderly's satisfaction with different housing types, and their accompanying outdoor yards. At the completion of such a survey, the guidelines would be adjusted and modified accordingly. In this sense the guidelines must be considered "preliminary guidelines". There is also a need for evaluations of housing developments which have utilized the guidelines suggested in this study. After such testing the guidelines should be reevaluated and improved upon.

The purpose of these guidelines is to serve new housing schemes in the planning stages, as well as, upgrading and transformations of existing housing developments. The format consists of a guideline statement, which is numbered, and a qualifying statement (if necessary) which is lettered. The following topics are addressed:

1. Housing Form

2. Private Outdoor Spaces

3. Communal Outdoor Spaces

    a) Outdoor Leisure Activities

    b) Parking

    c) Entrance Design

    d) Neighbourhood Conditions

4. Maintenance and Plant Material

The guidelines do not cover detailed criteria, such as access requirements, which are adequately covered in Sorenson's Design for Accessibility, and Green, et.al., Housing for the Elderly:The Development and the Design Process.

6.1   HOUSING FORM

1.   Offering choice, within the city and neighbourhood, is a factor in determining the building form of a proposed development.

   a) Elderly people are individuals and want to choose housing which fits their lifestyle.

2.   The form of a building is to acknowledge and respect the scale of the surrounding neighbourhood.

   a) Elderly people do not want to feel like anomalies, but as part of the community. "Sheltered housing should perhaps just proclaim itself for what it should be - just another good housing scheme."[48]
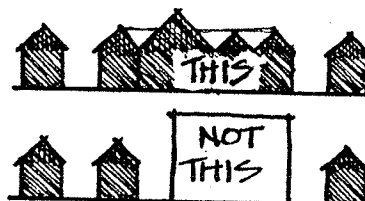
   b) The community will perceive the elderly as part of the neighbourhood, if the building looks as if it belongs in the neighbourhood.

3.   Buildings are to provide human scaled environments within and around them.

   a) Elderly people prefer buiding forms which they are accustomed to living in.

   b) Social interaction increases when buildings are on a scale which people can comprehend.

---

[48] Gillian Darley, "An Age for Concern," Architects' Journal, 1981, p.15.

4. Outdoor spaces and buildings are integral with each other. They should be conceived together from the first step of the design process.

   a) Outdoor spaces such as balconies and yards determine the housing form.

   b) The placement of the building and site activities are to be coordinated.

INDOOR LOUNGE
OUTDOOR COMMUNAL AREA
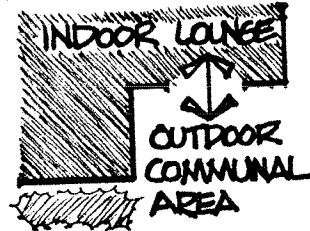
5. The housing form and its surroundings should be beautiful.

   a) Status is retained when the surroundings create a favourable impression with the elderly and society.

   b) Elderly people spend more time in the home setting and the environment therefore, assumes a greater importance.

6. The housing organization should limit the number of units using a common outdoor area and entrance to onehundred units.

   a) Limiting the number of units will allow the elderly to recognize neighbours, thereby increasing security.

   b) Opportunities for neighbouring are improved when residents recognize each other.

6.2   PRIVATE OUTDOOR SPACE: GENERAL INFORMATION

1. A percentage of all apartments within a housing development are to have a private outdoor balcony or yard.

   a) The elderly have individual interests, therefore choices in the type of outdoor space should be provided.

   b) Private outdoor areas create undermanned behaviour settings, (See page 28 for definition) encouraging the elderly to remain active.

   c) Private areas allow residents to manipulate their outdoor area, increasing their sense of independence, and giving them 'a reason for being there', while watching the street.

   d) Status is increased when residents have their own outdoor yard, and retain the role of yard owner.

2. The size of the yard is to be in proportion to the elderly's ability to maintain it.

   a) This will vary among individuals. A range of yard and balcony sizes should be provided.

   b) Choice and easy maintenance options are to be provided.

3. Balconies, terraces and yards are to receive some direct sunshine during spring, summer and fall.
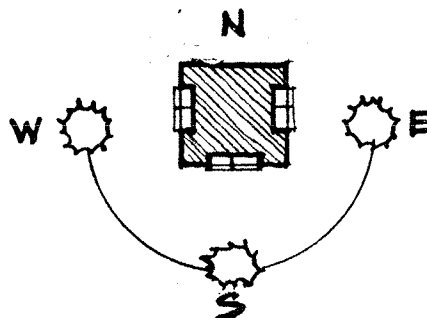
a) Sunshine is essential for growing plants, for providing vitamin D, and for letting light into the apartment.

4. Private outdoor areas are to have a weatherproof outdoor electric outlet, and a light which can be swithched on from the dwelling.

   a) The light fixture should be wall mounted a maximum height of 5'-5" (1.65m) off the floor for easy replacement of the light bulb.
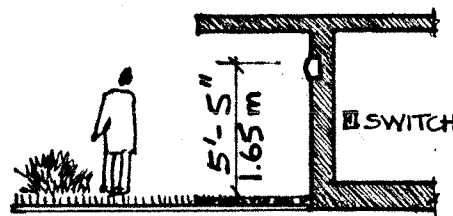
   b) The light should be recessed to avoid being hit on the head.

5. The distance between a private outdoor space and a wall or building face should be a minimum of 15 feet (4.75m) to allow for views and sun penetration.

   a) An interesting view is important for elderly who are confined to the home.

6. Access to the outdoor area should follow standards set by the Canadian Parapalegic Association and the National Building Code or be easily adapted to meet these standards.

   a) Elderly people who are normally mobile, might be confined to wheelchairs, or walkers due to illness or accidents.

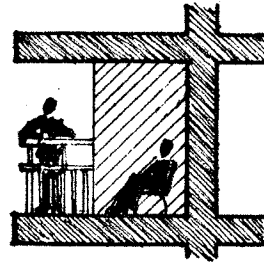   b) The threshold in the photo is unacceptable and raised decks will be required where this occurs.

6.2.1   Balconies
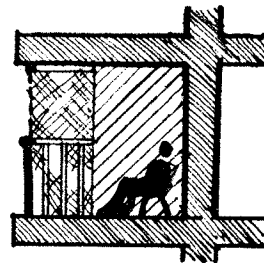
1. Balconies are to be semis-creened or recessed.

    a) Balconies feel psycholog-ically more secure if they are recessed.

    b) Privacy or neighbouring (choice) can occur when balconies are semis-creened.
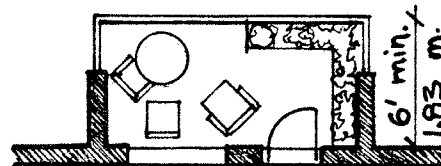
2. Balconies above twelve sto-ries are to have provisions for removable screens and windows.

    a) Winds are often strong twelve stories above ground level.

3. Balconies are to have a minimum depth of 6 ft. (1.83m), and a minimum area of 50 sq.ft. (4.65 sq.m).

    a) The balcony is to have enough room to hold a flower box, and table and chair comfortably.

4. Balconies are to have a se-cure railing with a minimum height of 4'-2" (1.27m).

    a) Elderly people feel more' secure with a higher railing. The building code recommends 3'-6" (1.07m).

    b) Views from both standing positions and sitting po-sitions should be taken into consideration when detailing balcony rail-ings.
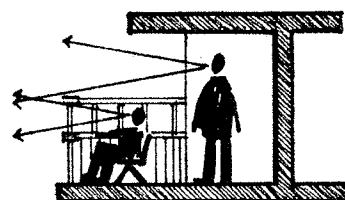
5. Apartments which do not have balconies are to be supplied with window boxes accessible from the apartment.

6. Balconies facing south are
    to have provisions for shad-
    ing the windows when neces-
    sary.

7. Balconies are to be supplied
    with a removable drainage
    tray ; a minimum of 1 ft.
    (30cm.) wide and a maximum
    of 2ft. (61cm) wide.

    a) Drainage trays are neces-
       sary in balcony gardens,
       because container plants
       dry out quickly and have
       to be watered often.

    b) Flower pots and garden
       boxes are the choice of
       the tenant. They sit on
       the drainage trays.

    c) The drainage trays can be
       removed or turned into a
       shelf for those who do
       not want to garden.
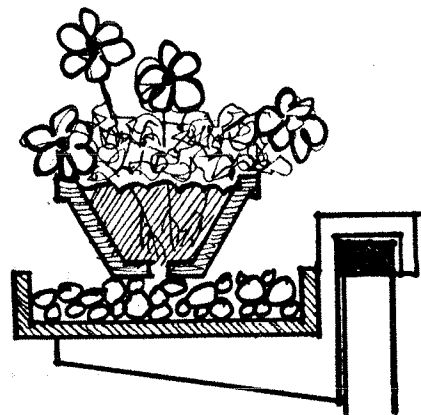
6.2.2   Terraces and Yards

1. Ground floor terraces and
    yards are to be equipped
    with high quality, secure
    locks.

2. A solid door should be used
    on the ground floor because
    it feels more secure than a
    sliding glass door.

3. Terraces and yards are to be
    a subtle balance of enclo-
    sure for privacy and openess
    for neighbouring.

4. The yard area is to be large
    enough to hold a table and
    chair, barbeque, and a gar-
    den area.

    a) The hard surfaced area
       should be approximately
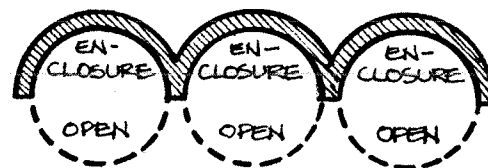
10' by 10' (3.05m x 3.05m).

   b) The garden area can be sodded for those who do not like to garden.

5. The design of the patio is to minimize costly or very strenuous maintenance.

   a) Keep private yards small.

   b) A section of the yard aera should be hard sur-faced to reduce costly maintenance.
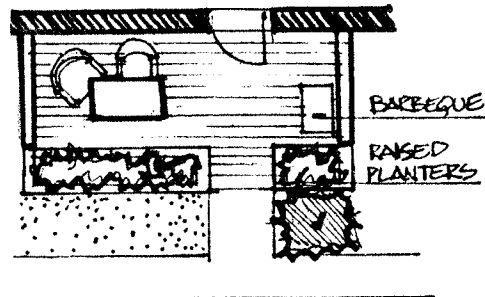
6. Raised planters are to be located in this area for those tenants who have difficulty bending.

7. On grade gardens and lawn areas are to be located in such a manner as to minimize time and energy necessary to mow the lawn and turn over the garden.

   a) One person could be hired to mow lawns and overturn the gardens if the tenants so wished.

   b) Shade areas are to be provided through the use of canopy trees and porches.
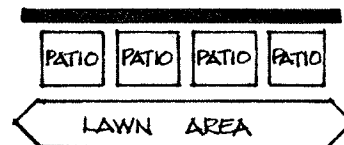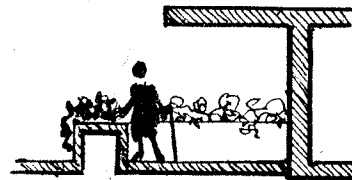
6.2.3 Transition Areas

1. A transition area is to exist between the private dwelling and the public corridor or street.

   a) Neighbouring is increased when there is an opportunity to visit in a spontaneous manner.

BARBEQUE

RAISED PLANTERS

PATIO PATIO PATIO PATIO

LAWN AREA

PUBLIC TRANSITION PRIVATE
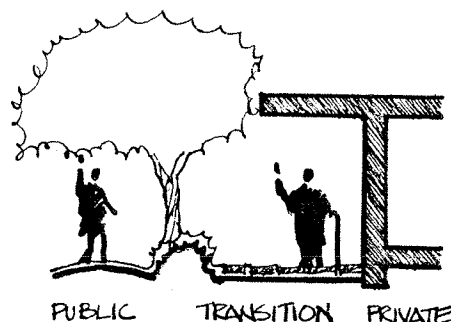
b) Independence is increased
when tenants have an op-
portunity to make a pub-
lic statement about their
individuality.

c) Security is increased
when there is tenant sur-
veillance.

2. Transition areas may have to
serve as semiprivate space
as well as a transition
area.

3. A covered porch is desire-
able before entering the
unit.

a) Protection is needed from
rain, sun, and snow when
entering the dwelling, as
well as, a place for cas-
ual visiting.

b) A porch provides a secure
place from which to sur-
vey the street.

6.3 <u>COMMUNAL</u> <u>OUTDOOR</u> <u>AREAS</u> : <u>GENERAL</u> <u>INFORMATION</u>

1. A communal outdoor area is
to exist for all develop-
ments.

a) Neighbouring is encour-
aged if there is an op-
portunity to meet as a
group.

b) An area for active lei-
sure is required which
can benefit all living in
apartment units.

c) Communal outdoor areas
are to be clearly organ-
ized.

d) Independence and confi-
dence is increased when

there is a clear understanding of how the environment is organized.

2. Communal outdoor areas are to be accessible to all residents.

   a) Security, independence and status is increased when outdoor areas are accessible to all, independent of their health and physical disabilities.

3. Communal outdoor areas in large developments are to provide a variety of territorial and social spaces. This may include closed, open and open and demarked spaces.

4. The communal outdoor area should include the following activities and functions:

   a) A neighbourhood/development contact zone consisting of:

      i)   The entrance drive and walk

      ii) The arrival or drop-off area

      iii) The parking area

      iv) The service access

   b) An active leisure activity area

   c) A variety of spaces for various sized groups including:

      i)   Quiet places for one or two
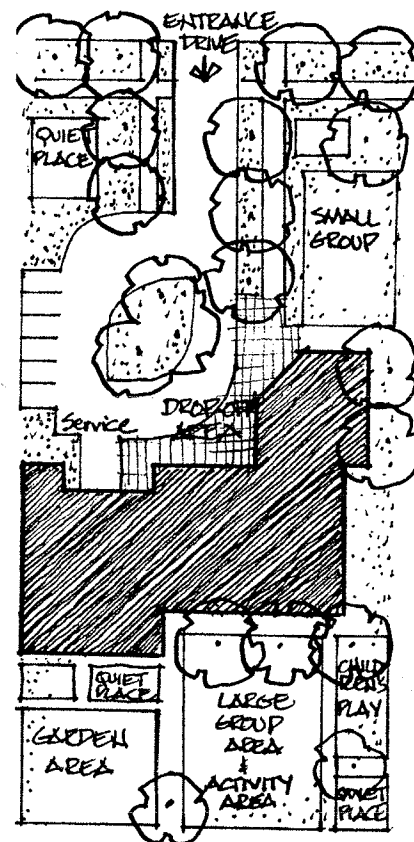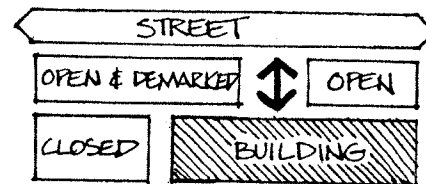
ii)   A   small   group
      area(s)

iii) A large group area

d) A small playground for
   grandchildren

6.4   NEIGHBOURHOOD DEVELOPMENT CONTACT ZONE

6.4.1   The Entrance Drive and Walk

1. The building is to be placed
   on the site in close proxim-
   ity to bus stops and shop-
   ping areas.

   a) Those who find long walks
      difficult will be dis-
      couraged if distances be-
      tween the site and the
      public street are too
      long.

   b) Security will increase if
      the public street and
      semipublic entrance are
      connected.

2. The building is to be kept
   in view at all times, while
   on the site.

   a) This will facilitate ori-
      entation and avoid confu-
      sion.

3. If an entrance drive is nec-
   essary, then the road should
   be wider than usual.

   a) Unless   walkways   are
      cleared consistantly in
      winter, most people will
      use the road as a walk-
      way. A wider roadway is
      thus needed for safety.

   b) Elderly drivers feel more
      comfortable if there is
      room to manouver while
      driving.
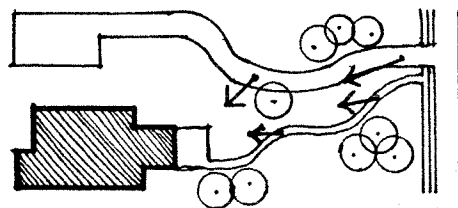
4. Both a pedestrian path and drive are to be constructed, if there is an entrance drive.

   a) Elderly people feel safer using walkways then the driveway. However, in winter walkways are often not shoveled properly and therefore a wider driveway is needed.

   b) Pathways should be shaded by trees or covered walks.
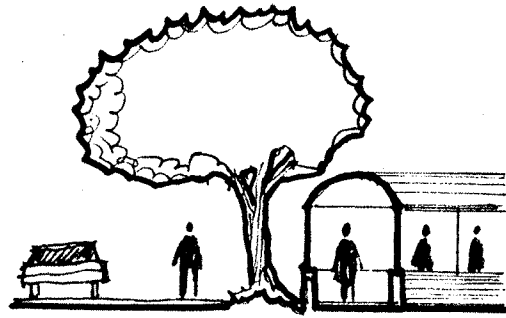
5. A rest area, sheltered from the rain and wind is to be placed where the entrance drive meets the public street.

   a) If there is no entrance drive then the rest area is to be placed where the walk meets the public street.
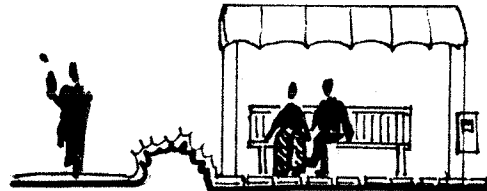
6. Handrails are to be placed along all pathways.

   a) This will increase independence for those who need extra support as well as, those who's eyesight is failing.

   b) Where possible handrails, fencing and even path lighting can be combined to reduce costs

   c) Large shrub massings are to be avoided along isolated pathways. The area will feel psychologically more secure if tenants can see there is no potential danger.

6.4.2   Drop - off Areas

1. A safe drop off area, away from busy traffic, and in close proximity to the main entrance. is to be provided in all developments.

2. The drop-off area and entrance area are to be covered.

3. Entrance areas are to be well lit with lighting diversified throughout the area to avoid glare.

   a) One bright light source causes glare. It is perferable to have numerous weaker light sources, than one bright one.

4. There is to be a seating area directly off the entrance area.

   a) An entrance bench allows an opportunity for neighbouring.

   b) Tenant surveillance will improve security.

   c) The seating area is to be shaded for part of the day.
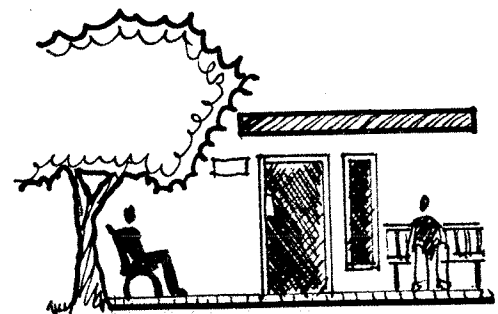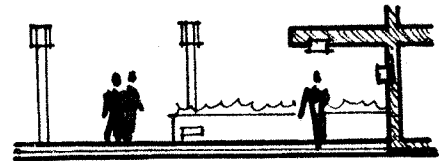
6.4.3   Parking : General Information

1. Parking areas are not to conflict with pedestrian movement patterns.

2. Parking stalls are to be wider than usual. 10ft. x 20ft. with a 23ft. aisle (3m x 6.1m x 7.3m aisle).

   a) Elderly people need more room to manouver their cars.

b) More room is required to get in and out of vehicles.

3. Parking areas are to be well lit with lighting diversified throughout the area to avoid glare.

    a) Green,et.al., (1975) recommends two footcandles of light in parking areas. This should increase to ten footcandles if it is a high vandalism area.

4. The parking area is to be designed so that it can be expanded if use and demand require it.

5. Walkways to the building from the parking area are to include handrails.

6. Parking areas are to be shaded from the sun.
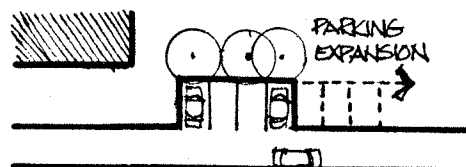
6.4.3.1 Visitor Parking

1. A clearly marked visitor parking area is to be provided close to the entrance, but separate from the pedestrian entrance and drop-off area.

2. The amount of visitor parking is to be determined by the size of the development, and the amount of free on-street parking available.

    a) Visitors are important to elderly people and should be encouraged by providing adequate visitor parking.

    b) Good visitor parking facilities will avoid con-

flicts with residential
family neighbourhoods.

6.4.4   Service Access

1. The service access to the
    garbage and kitchen areas
    should be located close to a
    public access road.

2. This area is not to be to-
    tally closed off from view,
    but is to offer surveillance
    from windows and other out-
    door areas.

6.5   THE LEISURE ACTIVITY AREA

1. There is to be a variety of
    leisure activities. (deter-
    mined in part by a tenant
    questionnaire).

    a) The elderly are individu-
        als and each person has
        his/her own leisure in-
        terests.

    b) The presence of physical
        leisure facilities en-
        courages physical activi-
        ties.

2. All apartment developments
    (even those with balconies)
    are to include a plot garden
    area.   Other activities may
    include: badminton and vol-
    leyball courts,   shuffle-
    board, checker and chess
    boards, a walking and jog-
    ging track , a pond and
    fountain area, and a play
    area for grandchildren.

3. All activity areas are to
    have benches and shaded are-
    as for spectators and pas-
    sive users.

a) Not all elderly people are capable or enjoy physical leisure activities, but like to participate as spectators.

6.5.1 Garden Areas

1. Garden areas should have both on grade plot gardens and raised gardens for people who have difficulty bending or are confined to a wheelchair.

2. Garden plots and walkways are to have good drainage.

   a) Raised beds out of pressure treated wood are a good way to raise beds for drainage.

3. Pathways are to be wide enough to accommodate a wheelchair with ease.

4. Garden areas are to be divided so that it is clear which garden belongs to which individual.

   a) This allows the tenants to use their own gardening methods.
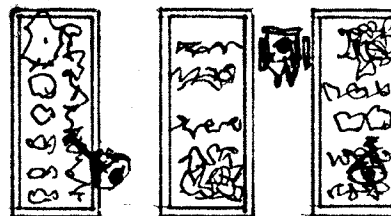
5. Garden areas are to be located close to shade trees or shade trellises.

   a) Many elderly people cannot withstand long periods of sun.

6. Garden areas are to be located near a water tap. A room within the building (with an access door to the garden) is to be designated for tool storage and a produce washup area. If this
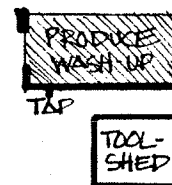
is not feasible then a communal toolshed is to be built next to the garden area.

7. Benches are to be placed close to the garden area for those who want to watch their garden grow.

6.6 A VARIETY OF EXTERIOR SPACES

1. A variety of different sized spaces is required. This includes quiet places for one or two, a small group area , and a large group area.

    a) Places feel most comfortable when they are designed for a specific function and are of a suitable scale.

2. Small scaled places for one or two persons are to be provided throughout the site, and each is to have its own character. This may range from a lone bench next to a busy street, to a shaded sitting area by a pond.
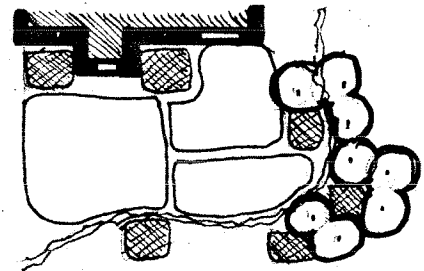
3. At least one small group area should be provided for those apartment units which do not have private outdoor space. Such an area has been more fully described under 'Family Barbeque Area'

4. The large group area is most important in developments of 100 or more tenants. This

allows organized outdoor group activities to occur.

6.6.1   Family Barbeque Area

1. A private family barbeque area is required in housing developments which have no private yards or balconies of their own.

    a) This area allows normal outdoor family activities to continue, such as outdoor barbeques, even when there is no private yard.

2. Standard picnic tables are not be used. A table with chairs (with backs) are preferable.

    a) Elderly people have a difficult time using picnic tables.

3. The barbeque area is to be partially screened from the building and other yard areas for privacy.

    a) To allow tenants to cook a barbequed meal if so desired without everyone watching.

    b) A garbage receptacle is to be placed in this area.

4. Seating areas should provide for both shade and sun.
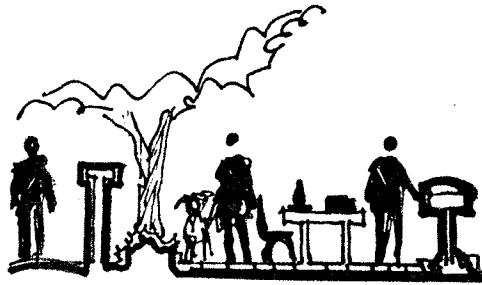
6.7 CHILDREN'S PLAY AREA

1. A small play area is to be set up in the outdoor yard, if an existing play area is not within a short and safe walking distance.

   a) Many elderly people would appreciate having an opportunity of seeing their grandchildren play.

   b) Grandchildren do not like to visit if there is nothing to do.

2. The play equipment should be closed from public view by a fence or hedge or by its placement on the site.

   a) The playground is only for the use of those who are being supervised by the tenants.

3. Benches are to be placed in the shade next to the play area so that grandparents can sitdown while supervising the children.

4. The play area should attempt to incorporate the four types of play:physical play, social play, creative play, and quiet play.
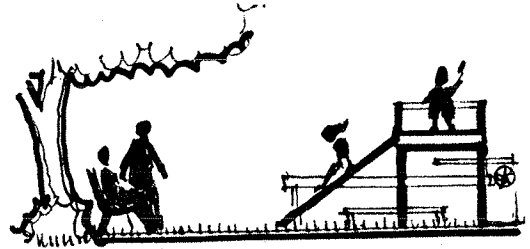
6.8 MAINTENANCE

1. A clear distinction is to be made between private yards and communal yards in the maintenance design of a housing development. A small private yard or balcony is the domain of a particular resident and maintenance will occur because the resident feels responsible

for his territory. Communal yards are the domain of the management and few tenants will feel maintenance responsibility for this land.

2. A maintenance policy needs to be developed by the administration and a tenants group to decide a strategy for maintenance work, and to determine the division of responsibilities.

   a) The policy should include a document for tenants which outlines their responsibilities in maintaining their own yards and balconies. It should also state a clear procedure for reducing their responsibilities if they are no longer physically capable of maintaining the yard.

   b) The group should also determine the interest and money available for tenant participation in keeping up communal yards. Paid part-time and/or volunteer positions could be organized for those wishing to partake in maintenance duties such as: cutting and watering the grass, painting fences, turning over vegetable beds, planting flowers, picking up garbage, etc.

3. Incentives for undertaking maintenance chores are to be considered. This is to include paid part-time positions if money is available. However, limited budgets often do not allow for this, and incentives for volunteering should exist. Some

people will consider the
intrinsic value of being
useful and contributing as
enough reward, but in many
cases, this will not work.
Friendly yard competitions
between the developments as
described by Charles Lewis
in "The Healing Role of In-
ner City Gardens", or recog-
nition of their contribution
through a fun awards night
are some ways this can be
done.

4. Materials chosen are to be
cost effective requiring a
minimal amount of mainte-
nance.

5. The design and detailing of
private and communal yards
is to consider the physical
ability of elderly people
when undertaking maintenance
duties.

6.9   PLANT MATERIAL

1. Many elderly people rarely
go out in winter. Visual
interest in the landscape is
necessary.

a) Choose plants with winter
colour. Use these plants
in massings making them
obvious to those with
failing eyesight.

b) Do not obscure active
areas such as streets and
entrances with plant ma-
terial. Watching people
on the street is impor-
tant for those confined
indoors.

c) Use edible plants which
attract birds and other
wildlife during the win-
ter months.

2. Use massings of shrubs and perennials to brighten up the springtime.

   a) Massings of flowers will create a strong aroma.

3. Plant a few fruit trees for those who like to make jams etc.

4. Annual flowers are to be used where the detail is appreciated and the yearly cost involved worthwhile.

Chapter VII

SUMMARY AND CONCLUSIONS

7.1   SUMMARY

This study has achieved two goals.   First, it has examined
the role of outdoor space in urban senior citizen housing in
Winnipeg.   Second, a set of guidelines have been developed
which can be used both in the development of new, and the
recycling of existing elderly housing developments. Several
objectives were established to complete these goals. A lit-
erature review examining the role of outdoor space surround-
ing housing for elderly people was undertaken.   Second, a
list of age-related changes was developed. Third, an ideol-
ogy of aging that can be recognized in the design process
was identified.   Fourth, an analysis of outdoor spaces in
existing senior citizen housing developments in Winnipeg was
completed and fifth, the information was synthesized to pro-
vide guidance for those involved in the planning, design and
management of outdoor space associated with elderly person
housing.

Designing outdoor spaces surrounding housing developments
for the elderly is not just a yard beautification exercise.
This study has identified that the home and its immediate
vicinity become more important with old age.   More time is
spent here, and therefore, the home environment must satisfy
the elderly's leisure and social needs, and their general
wellbeing.   The elderly's physical capabilities, their spe-
cial needs, and the ideological implications of the design
should all influence decision-making in the design process.

Age-related changes such as: changes in the senses, the
skeletal system, the muscular system,   the cardiovascular
system, and the respiratory system all have an affect on how
the elderly person negotiates his surroundings.   Of these
the changes in the senses are the most important to the de-
signer, because it with the senses that one perceives the
environment. Vision, hearing, kinesthetic sensitivety,
taste/smell, and touch affect the elderly's perception and
must be taken into consideration in design detailing, and in
the order a site posseses.

The elderly choose special senior citizen housing devel-
opments to live in, because this type of housing satisfies

four needs: security, independence, status, and neighbouring. Outdoor spaces surrounding these developments have a role to play in satisfying these needs.

The elderly's sense of physical and psychological security is affected by neighbourhood conditions, the number of units within the development, the territorial definition of the yard and, the degree to which the yards are barrier free. If the burden of insecurity is lifted then the elderly are free to experience independence.

Independence can be encouraged in many ways. Designers must allow the elderly to manipulate their own environment. They must recognize that the elderly are indivduals who want to choose a home which suits their lifestyle. Organization of the environment in a clear and legible manner will prevent feelings of confusion and helplessness. Using appropriate details are also important in extending independence. The goal of encouraging independence as long as possible can be achieved if the above steps are followed.

The elderly experience loss of status in every aspect of life. It is important that the designer take steps in providing a home environment which offers significant social roles, a positive housing image, and a barrier free environment.

Finally neighbouring opportunities are especially important for those who are lonely. Designers must create proper settings for neighbouring to occur, such as street and entrance benches, and public/private transition zones.

There are also ideological concerns which should affect the design of outdoor spaces surrounding senior citizen housing developments. These are society's attitudes towards the elderly, the effect of building form on the elderly and the community, the influnce of the natural landscape, and the design process. Society's attitudes towards the aged can strongly bias a design. A perception of the elderly as senile and sick will produce an entirely different design concept and building form, than one which views the elderly as healthy and energetic.

The importance of building form within the community is another issue. Hostilities can develop between the community and the elderly or those building for the elderly. Large scale projects do not relate to small scale residential housing and therefore these buildings come to isolate the elderly from the community.

The natural landcapes within these housing developments are often overlooked as an opportunity for creating human scaled environments that relate well to the surrounding

neighbourhood. Further benefits arise from gardening opportunities and views of nature which are important for those elderly who rarely travel from their home.

Society's attitudes, building form, and the natural landscape should all be recognized in the fourth factor, the design process. This process should incorporate research on aging, as well as the opinions of those living there; the elderly themselves.

Issues regarding outdoor spaces surrounding housing developments for the elderly have been identified in the study, through a survey of 73 housing developments in Winnipeg. Information regarding problems with dwelling and outdoor spaces, outdoor leisure activities, parking, entrance design, and neighbourhood conditions was gathered. Problems and issues have been identified and discussed.

The intent of this study is to provide an information base for the design office. With the exception of a few sources, there is little in-depth research on the role of outdoor spaces in senior citizen housing developments. Accumulating and organizing this information allows designers to quickly recognize the problems they must solve. This enables those using it to seek out information that is relevant to the planning and design of housing for the elderly. In its completed form, the study offers a basis for decision-making.

7.2   MAIN FINDINGS

The need for variety in the housing environment for the elderly is the major conclusion of this study. This finding is not uncommon, but a statement that has been repeated many times on the subject of elderly housing. (Carter ed. 1978; Darley 1981-1982; Epstein 1976; Gelwicks and Newcomer 1974; Lawton, Newcomer, Byerts eds.1976). This study extends the term "variety" to include not only changes in floor plans, but variety in housing form, variety in outdoor spaces which accompany these forms, and variety in the outdoor spaces themselves. In sharp contrast to the recommendations drawn from the literature, one is confronted with the reality of the housing available for senior citizens in Winnipeg. The incongruity of the literature findings in relation to the survey of senior citizen housing undertaken in Winnipeg verifies the disregard of valuable research material in the design process and resulting built environment. Francis Carp adequaetly expresses the importance of variety.

The point is crucial here because the first principle must be that there is no one best lifestyle

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 en-
vironments necessary to support the rich variety
of lifestyles that are appropriate among older
people.[49]

Another major finding of the study is that outdoor space
can play a significant role in the lives of elderly people,
and must not be forgotten in the design process. Taking
into consideration that 64.7% of those living in senior cit-
izen housing developments in Manitoba experienced social
isolation (Government of Manitoba, 1971), mechanisms for so-
cializing must be given greater emphasis. The outdoor yard
can act as a catalyst to the elderly's sense of security,
independence, status and neighbouring opportunities. Though
the outyard is not the only agent involved in providing
these qualities, it is nevertheless an important component
which cannot be ignored.

The ideas and objectives of society concerning the elder-
ly influence how and what we design for them. It is impera-
tive that designers recognize and rectify preconceptions and
biases towards the elderly. The form of housing develop-
ments mirror these attitudes, and create images which can
either isolate or welcome the elderly to the community in
which they live. The elderly have special problems. A de-
signer must be aware of the complexity of these problems and
familiarize himself with current research and thinking.
There must also be an opportunity for the the elderly to
voice their concerns and needs. Their opinions are valua-
ble.

[49] Frances M. Carp, "Urban Life Style and Life Cycle Fac-
tors," In Community Planning for an Aging Society, eds.
M.P. Lawton, R.J. Newcomer, amd T.O. Byerts. (Stouds-
burg, Pennsylvania: Dowdon, Hutchinson and Ross, Inc.,
1976),p.19.

7.3 DIRECTIONS FOR FUTURE RESEARCH

Future research is necessary to confirm the findings in this study. The most important is an opinion questionnaire of the elderly's needs and desires regarding the outdoor spaces which surround their housing developments. It is essential that the ideas presented here are tested through a statistical survey which compares the elderly's satisfaction with different housing forms and their accompanying outdoor yards. Having formed a basis for such a survey, through this study, a comprehensive questionnaire can be formulated. The guidelines at the conclusion of this chapter could then be adjusted according to the outcome of such a questionnaire. Comparisons between various housing types and outdoor spaces would provide useful information about how the elderly want to live.

Further to this type of questionnaire is the need to evaluate housing developments which have utilized the guidelines suggested in this study. After such testing the guidelines can be reevaluated and improved upon. Simmiliar studies in other parts of Canada are necessary, in order to confirm or refute the universality of this studies' findings.

The study may also have implications for the elderly living in single family dwellings. Many of the limitations imposed by age-related changes can be compensated for in the design of the yard, and through the use of good detailing. Yards can be made more secure by increasing the territorial definition of these private outdoor spaces. By choosing low maintenance materials and appropriate details, independence can be increased, and the status as homeowner retained.

The increasing number of elderly in the population, the importance of outdoor space for social interaction and leisure activities, and the lack of specific guidelines in outdoor residential design for the elderly, all indicate that this has been a worthy area for research. Without question, the outdoor residential environment becomes more important with old age and immobility. Change in the design and management of new senior citizen housing developments is necessary. Highrise housing that ignores the fabric of the surrounding community and limits social interaction should no longer be built. Other choices must be offered! Existing developments must take stock of their outdoor yards and develop them accordingly. Opportunities for interesting and meaningful open spaces surrounding senior citizen housing must be utilized to the fullest extent, if we take seriously the quality of life for the elderly.

HOUSING FOR THE ELDERLY BIBLIOGRAPHY

Alexander, Christopher. A Pattern Language. New
   York:Oxford University Press, 1977.

Alexander, Christopher. Notes on the Synthesis of Form.
   Cambridge, Massachusetts: Harvard University Press, 1964.

Ashley,M.J., Gryfe,C.I., Amies,A. " A Longitudinal Study of
   Falls in an Elderly Population : Some Circumstances of
   Falling". Age and Aging. 1977 , vol.6., pp.211-220.

Audain, Michael. "Rethinking Housing for the Elderly." in
   Housing for the Elderly. Winnipeg, The Canadian Council
   on Social Development, 1974-1975.

Beyond shelter. A study of NHA (National Housing Act)
   Financed Housing for the Elderly. Canadian Council on
   Social Development, 1973. 479pp.

Blonsky, Lawerence E. "The desire of Elderly Nonresidents to
   live in a Senior Citizen Apartment Building." The
   Gerontologist, Febuary 1975, pp.88-91.

Boldy, Duncan; Abel, Pat; Carter,Kenneth. The Elderly in
   Grouped Dwellings: A Profile. Institute of Biometry and
   Community Medicine University Britain.

Birren, E. James. "The Aged in Cities." The Gerontologist,
   1976, vol.16. pp.163-169.

Brian, David O. "Deaths Blamed on Cold". The Winnipeg Free
   Press January 12, Tuesday 1982. p.1&4.

Byerts, Thomas O. "Reflecting User Requirements in
   Designing City Parks." In Community Planning for an Aging
   Society: Designing Services and Facilities. Edited by M.
   Powell Lawton,Robert J. Newcomer and Thomas O. Byerts.
   Stroudsburg, Pennsylvania: Dowden, Hutchinson and Ross
   Inc., 1976.

Byerts, Thomas O. ed. Housing and Environment for the
   Elderly. Washington D.C: Research and Development Grants
   Program, Administration on Aging, Social and
   Rehabilitation Service, Department of Health, Education
   and Welfare, 1973. Proceedings from a conference on
   Behavioural Research

Canada Mortgage and Housing Corporation. _Housing the Elderly_. 1972.

Canada Mortgage and Housing Corporation. _Housing the Elderly : Design of the Unit_.

Carp, Frances M. "Walking as a Means of Transportation for Retired People." _The Gerontologist_, Summer 1971, Part 1, pp.104-111.

Carp, Frances, M. "Improving Housing and Environment for the Elderly through Transportation". In _Housing and Environment for the Elderly_. Edited by Thomas O. Byerts. Washington D.C.: Gerontological Society, Dept. of Health, Education and Welfare. 1973.

Carp, Fances M. "User Evaluation of Housing for the Elderly." In _The Gerontologist_, 1976, Vol. 16, No.2.

Carson, Danial H. "Natural Landscape as Meaningful Space for the Aged." In _Spatial Behavior of Older People_, pp.194-209. Edited by Leon A. Pastalan and Danial H. Carson. Ann Arbor,Michigan: The University of Michigan Wayne State University, Institute of Gerontology.

Carter, Novia ed. _Aging in Canada_. King, Ontario: Proceedings of a Seminar sponsored by the Samual and Saidye Bronfman Family Foundation. Eaton Hall, Seneca Colledge. October 1978.

Cates ,F.M. "The shelter Concerns of low-income Elderly Homeowners: key issues in the delivery of housing programs." City Planning Masters Thesis, University of Manitoba, 1981.

Comfort, Alex. _A Good Age_. New York: Crown Publishers, Inc., 1976.

Cowley, Malcom. _The View from Eighty_. New York: The Viking Press, 1976. 74pp.

Cranz, Galen and Schumacher, Thomas L.. _Open Space for Housing for the Elderly_. Princeton, New Jersey: Working Paper 19. Research Center for Urban and Environmental Planning, School of Architecture and Urban Planning, Princeton University,1975.

Cranz, Galen and Schumacher ,Thomas L. _The impact of Highrise Housing on Older Residents_. Princeton New Jersey: Working Paper 18. School of Architecture and Urban Planning. Princeton University, 1975.

Dangott,Lillian R. and Kalish,Richard A. A Time to Enjoy
    the Pleasures of Aging. Englewood Cliffs, New Jersey:
    Prentice-Hall Inc., 1979.

Darley, Gillian. "An Age for Concern -Parts 1-3."
    Architects' Journal, December 9,1981, pp.1114-1122;
    December 16,1981, pp.1169-1171; January 13,1982,
    pp.39-48.

Ekert, J.Kevin. "Urban Renewal and Redevelopment: High Risk
    for the Marginally Subsistent Elderly." The
    Gerontologist, 1979. vol.19, no.5. pp.496-502.

Epstein, Don. Retirement Housing in Urban Neighbourhoods:
    Some Inner City Options. Winnipeg, Canada: Institute of
    Urban Studies, University of Winnipeg, 1976.

Fowley, Vern. "Seniors' Society rallies support." The
    Winnipeg Free Press, Monday, April 25,1983, p.16.

Gelwicks, Louis E. and Newcomer, Robert J. Planning Housing
    Environments for the Elderly. Washington D.C.:The
    National Council on Aging Inc.,1974.

Gold, Seymour. "Nonuse of Neighbourhood Parks." In Urban
    Recreation Planning, pp.101-112. Philidelphia: Lea and
    Febiger, 1973.

Gold,Yhetta. "Exploration of Atria as a Housing Option for
    the elderly". A survey directed by the Age and
    Opportunity Centre Inc. for CMHC. Winnipeg,Manitoba.
    Dec.1977. Unpublished.

Goldenberg, Leon. Housing for the Elderly: New Trends in
    Europe. New York, New York: Garland STPM press, 1981.

Grant, Donald P. "An Architect Discovers the Aged." The
    Gerontologist, Winter 1970, Part 1. pp.275-281.

Green,I.; Fedewa,B.E.; Johnston,C.A.; Jackson,W.M.;
    Deardorff,H.L.. Housing for the Elderly: the Development
    and Design Process. Toronto: Van Norstrand Reinhold
    Company, 1975.

Grescoe, Audrey, "Little Old Lady in a Hard Hat." In Today
    Magazine. Toronto: Today Magazine Inc.,January 17,1981,
    p.9.

Hamovitch, Maurice B. and Peterson, James E. "Housing Needs
    and Satisfactions of the Elderly." The Gerontologist,
    1969-1970. vol.9,10.

Hartman,Chester; Horovitz,Jerry; and Herman,Robert.
    "Designing with the Elderly: A User Needs Survey for
    Housing Low-Income Senior Citizens." The Gerontologist,
    1976. vol.16, no.4, pp.303-311.

Health and Welfare Canada, New Horizons Program. Housing
    after Retirement. A study of the needs of Low-middle
    Income Senior Citizens in Winnipeg, 1974-1975. 55pp.

Howell, Sandra C. Private Space: Habitability of Apartments
    for the Elderly. Design Evaluation Project. Department
    of Architecture, Massachusetts, Institute of Technology,
    October 1976.

Hunt, J., Poulton, E., and Mumford, J.. "The Effects of
    Wind on People: New Criteria based on Wind Tunnel
    experiments." Building and Environment, volume 11, no.1,
    1976, pp.15-28.

Kendig, Hal. "Neighbourhood Conditions of the Aged and Local
    Government." The Gerontologist, 1976. vol.16,no.2.
    pp.148-156.

Lawton,Powell M.; Newcomer,Robert J.; Byerts,Thomas O..
    Community Planning for an Aging Society: Designing
    Services and Facilities. Stroudsburg, Pennsylvania:
    Dowden, Hutchinson and Ross, Inc. 1976.

Lewis Charles A. "The Healing Role of Inner City Gardens".
    In AIA Journal, Febuary 1979. pp.36-39.

Leaf, Alexander. "Getting Old." In Health Aspects of Aging,
    pp.19-26. Edited by Geral Dene Marr Burdman and Ruth M.
    Brewer. Portland, Oregon: Continuing Education
    Publications, 1978.

Lindheim,Rosyln. "Environments for the Elderly: Future
    Oriented Design for Living?" In Journal of Architectural
    Education, vol.27, no.2, pp.7.

Manitoba, Government of. Aging in Manitoba. vol.1.
    Winnipeg: Deptartment of Health and Social Development,
    1973.

McAvoy, Leo H."The Leisure Preferences, Problems and Needs
    of the Elderly." In Journal of Leisure Research. 1979.
    vol.11. pp.40-47.

McClain, Jan. Housing the Elderly. Proceedings from the
    regional seminars and workshops held in Winnipeg,
    Vancouver, Toronto, Montreal, and Halifax 1974-1975. The
    Canadian Council on Social Development. unpublished.
    available from the CMHC library.

McRae,John. <u>Elderly in the Environment: Northern Europe</u>. Tallahassee, Florida: Published under contract with the Florida Department of Health and Rehabilitative Services, Division of Aging, 1975.

Millas,A.J. "Planning for the Elderly within the Context of a Neighborhood." In <u>Ekistics</u>, July/August 1980, pp.264-273.

Neuhaus,Ruby H. and Neuhaus,Robert H.. <u>Successful Aging</u>. Toronto: John Wiley and Sons, 1982.

Neuman, Oscar. <u>Defensible Space</u>. New York: Collier Books - a division of Macmillan Publishing Co., Inc. 1976.

Newman,R.; Roberts,R.; Jenks,M.; Dyke,J. <u>Care of the Elderly</u>. Headington, Oxford: Social Services Building Research Team. Dept. of Architecture. Oxford Polytechnic, 1974.

Obenland,Robert James and Blumenthal,Morton J. <u>A Guide to the Design and Development of Housing for the Elderly</u>. Concord, Newhamshire: New England Non-Profit Housing Development Corporation, 1978.

Paddon, Michael and Butcher, Gregory. "The Banim Street Case". <u>Architects' Journal</u>, April 25,1979, pp.854-867.

Pastalan,Leon A.; and Carson,Danial H. eds. <u>Spatial Behaviour of Older People</u>. Ann Arbor,Michigan: The University of Michigan - Wayne State University. 223pp.

Pastalan, Leon. "How the Elderly Negotiate their Environment" In <u>Housing and Environment for the Elderly</u>. Edited by Thomas O. Byerts. Washington D.C.: Department of Health,Education and welfare, 1973.

Piper,S. "More Space and Gardens - a survey of Housing Association Tenants." <u>Housing Review</u>, March/April 1976, vol.25, No.2. p.46.

Rapelje,D., Papp,P., and Crawford L.. "Creating a Therapeutic Park for the Mentally Frail." In <u>Dimensions in Health Service</u>. September, 1981, pp.12-14.

The Read - Op Center Ltd. "Specialized Housing for Retired Persons: A Determination of the Winnipeg Market and Feasibility Assessment for a Specific Project." Winnipeg, Manitoba, 1978. For S.A.M. (Management) Inc. Unpublished Study.

Rose,Edgar A. and Bozeat,Nicholas R. <u>Communal Facilities in Sheltered Housing</u>. Westmead Farnborough , Hauts, England: Saxon House Teakfield Limited, 1980.

Rossman, Isadore. "Bodily Changes with Aging". In Readings in Adult Development and Aging, pp.342-255. Edited by K. Warner Schaie and James Geiwitz. Toronto: Little, Brown and Company, 1982.

Sommer, Robert and Becker,Franklin D. "The old men in Plaza Park." In Landscape Architecture, 1969. vol.59. pp.111-114.

Sorenson, Robert James. Design for Accessibility. New York: McGraw-Hill Inc., 1979.

Task Force Housing Group. "A room with a View" In Housing the Elderly in Kensington and Chelsea. 92 Ladbrook Grove W.11. July 1973.

Thiessen, Ingrid. "Problems and Needs of the Elderly in the Urban Landscape." Winnipeg Manitoba: University of Manitoba. Unpublished paper.

Weg, Ruth B. "Changing Physiology of Aging: Normal and Pathological." In Health Aspects of Aging. pp.27-41. Edited by Geral Dene Marr Burdman and Ruth M. Brewer. Portland Oregon: Continuing Publications, 1978. RC 952.5 .H43

White,David. "The struggle for the Window" In New Society, pp.661-663. March 1976.vol.35, no.691-703.

Wantz,Molly S. and Gay,John E. The Aging Process: A Health Perspective. Cambridge Massachusetts: Winthrop Publishers, Inc.,1981.

Yaffe,Sylvia. The Physical Security of Tenants in Federally-Assisted Housing for the Elderly. Fourth Report National Survey of Housing for the Elderly 1971. January 1974 Philadelphia Geriatric Center. United States Department of Health, Education and Welfare.

Appendix A

DEFINITION OF INTERACTIONAL TERRITORIES

Observation of territories has led to the idea that different types of territories exist. These have been divided into several catagories. An agreement on a standard categorization has not been made among sociologists. Lyman and Scott (1967) divide territory into four groups: public, home, interactional, and body; while Altman has three catogories: public, secondary and primary. These divisions do not coincide perfectly with each other because they have different connotations behind them.

Public territories are places which have free access and occupancy rights. An example would be the public street and shopping mall.

Secondary territories are places where a person or group has some say of who enters the territory, but this right is not exclusive. The home and interactional territories both fit into this category. Public areas taken over by groups are known as home territories. (Robert Sommer, 1969, p.4) The public street infront of the senior citizen housing development or a public park next to the development can become home territiories. An interactional territory is usually not public, has clearly marked boundaries, and rules for entering or leaving the territory. (Robert Sommer, 1969, p.44). These areas are often used for communal social functions. The semiprivate yard surrounding the senior citizen development would fit into this category.

Primary territory is defined as "owned and used exclusively by individuals or groups, are clearly identified as theirs by others, are controlled on a relatively permanent basis and are central to the day to day lives of the occupants." (Irwin Altman, 1975, p.112). Private yards and balconies and individually claimed benches or areas within an interactional territory would fall under this category.

The family Networks Theory explains how the family structure and the form of the family has taken within a culture, affects the understanding of aging. It acknowledges cultural differences in social interactions of the aging person.

The life cycle theory compares itself to the seasons, the analogy most commonly used in old age

> The life course is neither simple nor rigidly pre-scribed. This approach is helpful in viewing ag-ing because it incorporates various subcultures (whether based on sex, social class, ethnicity, race, or region of the country) that develop unu-que ideas concerning the timing of the life course.[50]

Two other common social theories not mentioned by Neuhaus and Neuhaus are the disengagement theory and the activity theory. The first is an explanation to why elderly people disengage from society and why society disengages from them. The theory is intended to be viewed as a positive under-standing that the older person realizes he has limitations and can expect the consequences of decline. Alex Comfort critizises this theory.

> Disengagement in our culture is often, alas, sludge language for being ejected, excluded or de-meaned, and liking it - an attribute wished on the newly created old to plaster our guilt and provide a piece of jargon to excuse our conduct. Age-proof people will have none of it.

> If "disengagement" were real, it would have to be optional. In that case it would have to be neccessary to define it with a special name - at any age you can opt out of what you have been do-ing, often because it is not seen to be not worth-while.[51]

The activity theory encourages the elderly to retain the life style and interests they formulated in their middle years. It can be critisized for ignoring the health and en-ergy limitations that occur in old age.

---

[50] R.H.Neuhaus and R.H.Neuhaus _Successful Aging_, (Toronto: John Wiley and Sons, Inc., 1982) p.12.

[51] Alex Comfort _A Good Age_, (New York: Crown Publishers, Inc.,1976). p.65.

It is at once apparent that no one theory mentioned here is applicable to all the elderly. It is most likely that combinations and degrees of various theories would apply to individual elderly people.

EXAMPLE EVALUATION SHEET

<u>SAMPLE SENIOR CITIZEN HOUSING EVALUATION SHEET</u>

Street address _____

Number of units _____

Number of storys _____

Total building area _____

Ground floor area _____

Site area _____

Land left for yard _____

CONTACT
PHOTOGRAGH

CONTACT
PHOTOGRAGH

1. Is there any private outdoor space?

    small yard   balcony   other,name   none

2. Is there any semi-private outdoor space?

    none   yes a.closed off so that no one can see in

                  b.open so one can see in, but well demarked

                  c.open but little or no demarkation

                  d.token piece at entrance

3. Is there any street / dwelling access.   yes   no

4. What type of amenities are in semi-private outdoor space?

    a. Any physical leisure opportunities. Name

    b. Trees   shrubs   flowers   gardens   grass

    c. fixed benches   picnic tables   other,name

    d. opportunities for shade and sun

    e. What type of parking facilities?   #tenants   # of visitors

    f. Is there a bus stop nearby?   yes   no

5. How is the entrance designed?

   a. Are there any benches?

   b. stairs and ramp   stairs only   ramp only   at grade

   c. What kind of lighting is provided?

   d. Is there a security system?

   e. Are there handrails? At the stairs?   At the sidewalks?

   f. What is the sidewalk material?

   g. Is the entrance covered?

6. Neighborhood amenities? grocery store   drug store   others

Appendix D

SUMMARY OF SURVEY INFORMATION

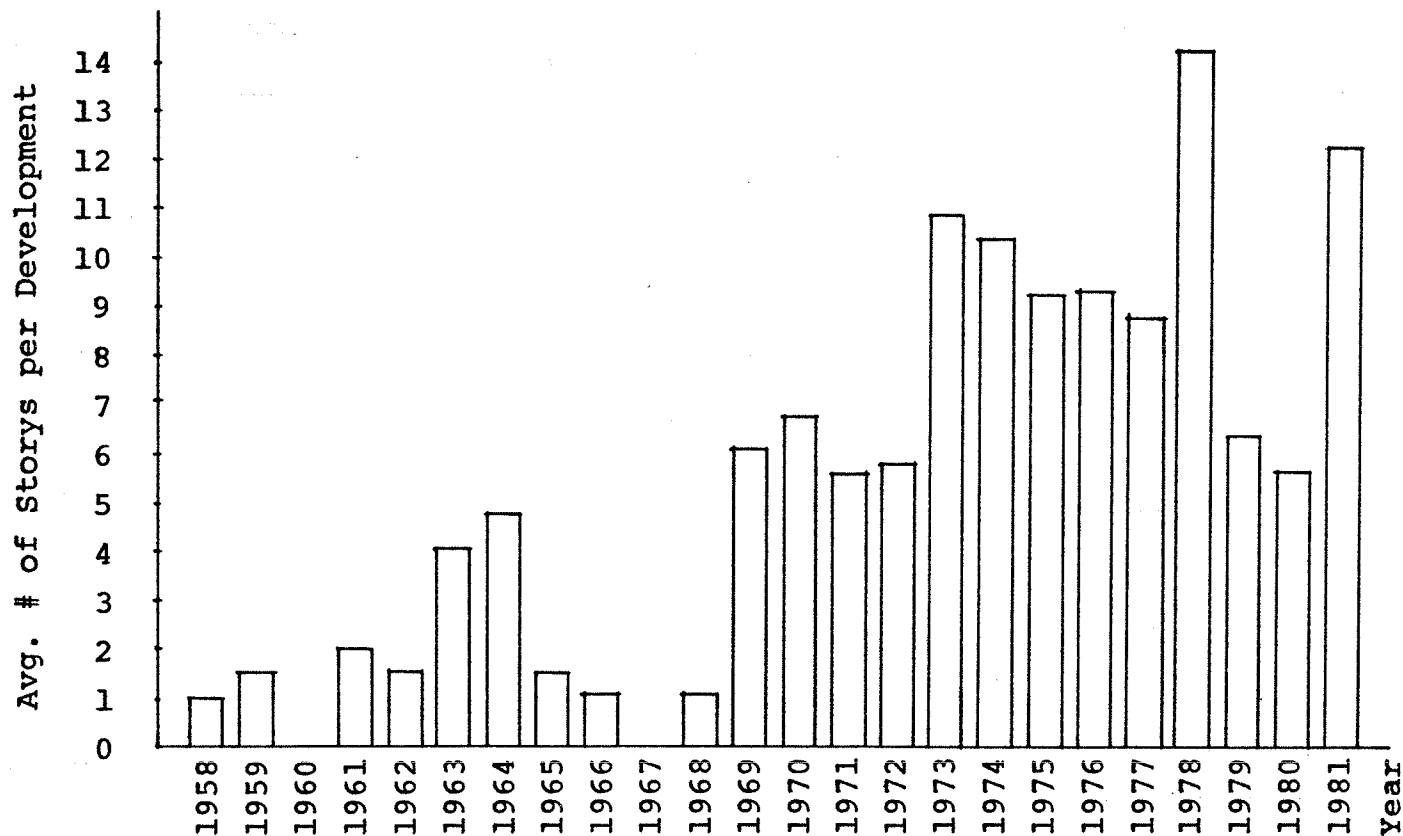Housing for the Elderly, Winnipeg

SUMMARY OF SENIOR CITIZEN HOUSING SURVEY

| YEAR	TOTAL NUMBER BUILT	TOTAL NUMBER OF UNITS	AVERAGE NUMBER OF UNITS	AVERAGE NUMBER OF STORIES	AVERAGE GROUND FLOOR AREA (sq.ft.)	AVERAGE SITE AREA (sq.ft.)	AVERAGE DENSITY UNITS/ACRE
1981	3	315	105.0	12.3	8,680.0*	27,762.0	164.8
1980	2	240	120.0	5.5	19,196.5	84,855.0	61.6
1979	5	524	104.8	6.4	12,124.7	47,272.8*	96.6
1978	3	555	185.0	14.3	9,652.0	32,194.5	250.3
1977	5	608	121.6	8.8	9,039.1	47,462.4	111.7
1976	4	475	118.8	9.5	13,469.8	62,668.0	82.6
1975	3	288	96.0	9.3	7,861.4	38,014.3	110.1
1974	5	611	122.2	10.4	8,063.4	28,407.0	187.4
1973	14	2077	148.4	10.8	8,644.4	37,055.3	174.6
1972	5	349	69.8	5.8	11,321.6	62,326.2	48.8
1971	3	263	87.7	5.6	13,778.8	37,619.7	101.6
1970	5	386	77.2	6.8	9,148.3	42,197.6	79.6
1969	2	115	57.5	6.0	4,949.0	18,265.5	137.2
1968	1	26	26.0	1.0	13,492.0	28,802.0	39.3
1967	none	-	-	-	-	-	-
1966	2	51	25.5	1.0	14,477.5	137,847.0	8.1
1965	1	246	246.0	1.5	155,795.0	234,906.0	45.6
1964	4	538	134.5	4.8	14,831.5	49,527.5	118.3
1963	1	88	88.0	4.0	10,884.5	35,890.0	106.8
1962	1	86	86.0	1.5	25,353.0	119,446.0	31.4
1961	2	51	25.5	2.0	4,610.0	25,780.0	43.1
1960	none	-	-	-	-	-	-
1959‡	1	124	124.0	1.5	52,657.5	175,324.0	30.8
1958	1	88	88.0	1.0	41,354.0	212,514.0	18.0

* - one figure missing in calculation

‡ - built in 1959, 1969 and 1970
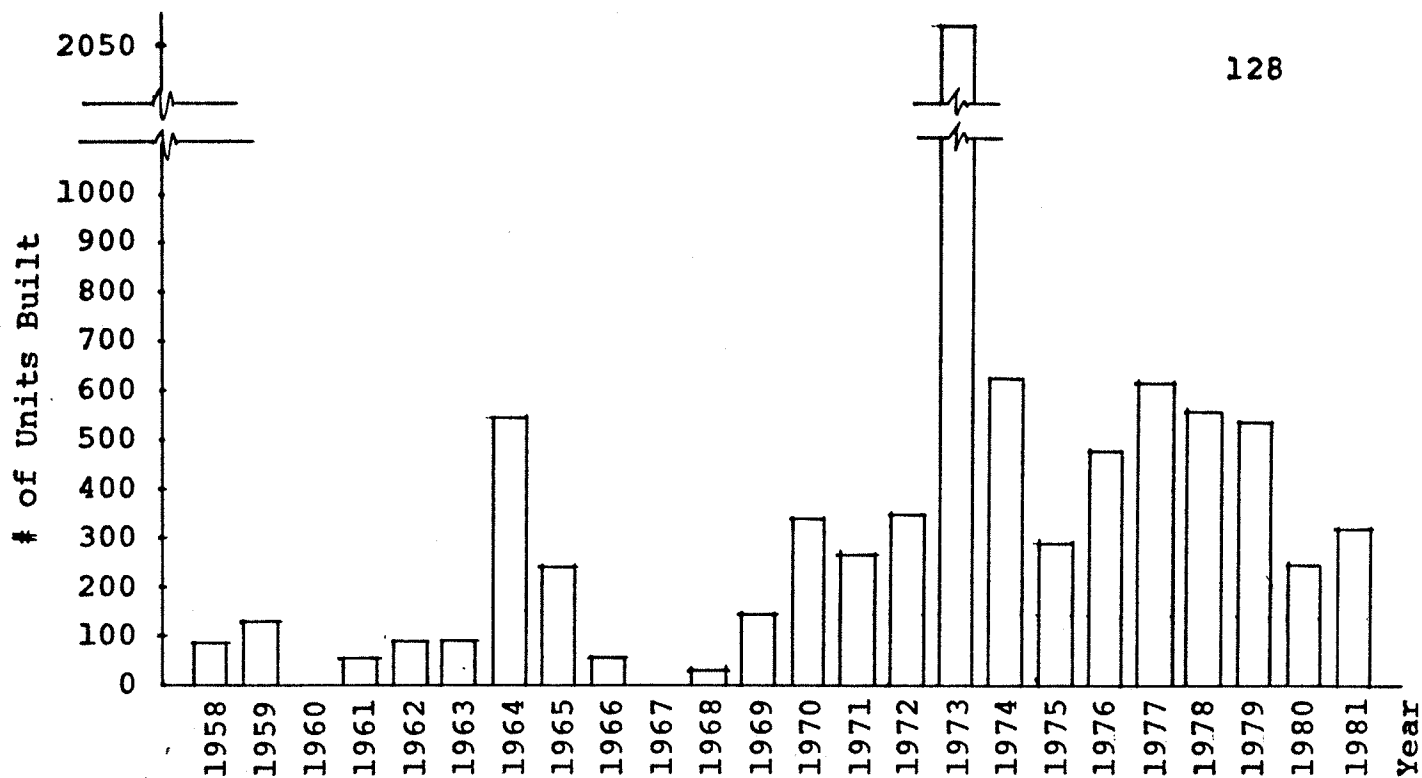
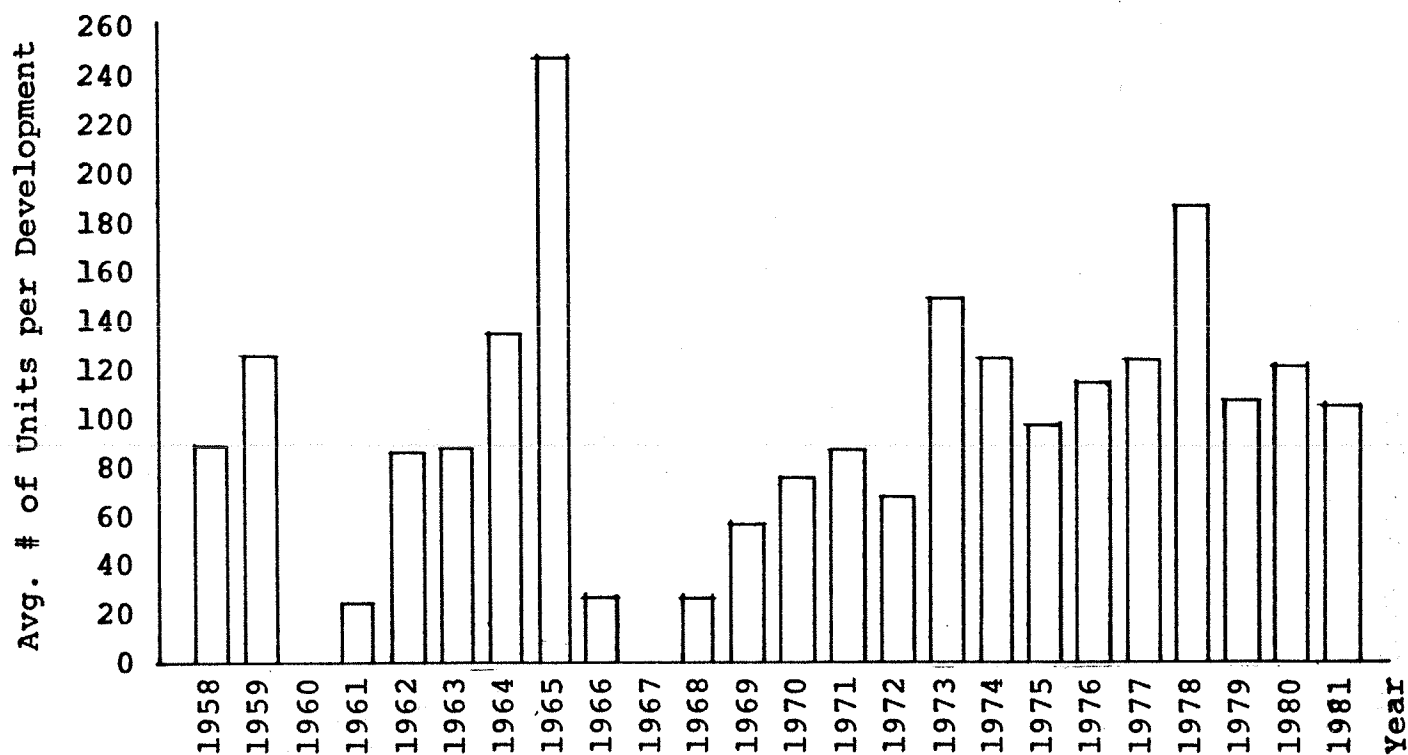The Number of Units Built per Year

Housing for the Elderly, Winnipeg

Average Number of Storys per Development per Year
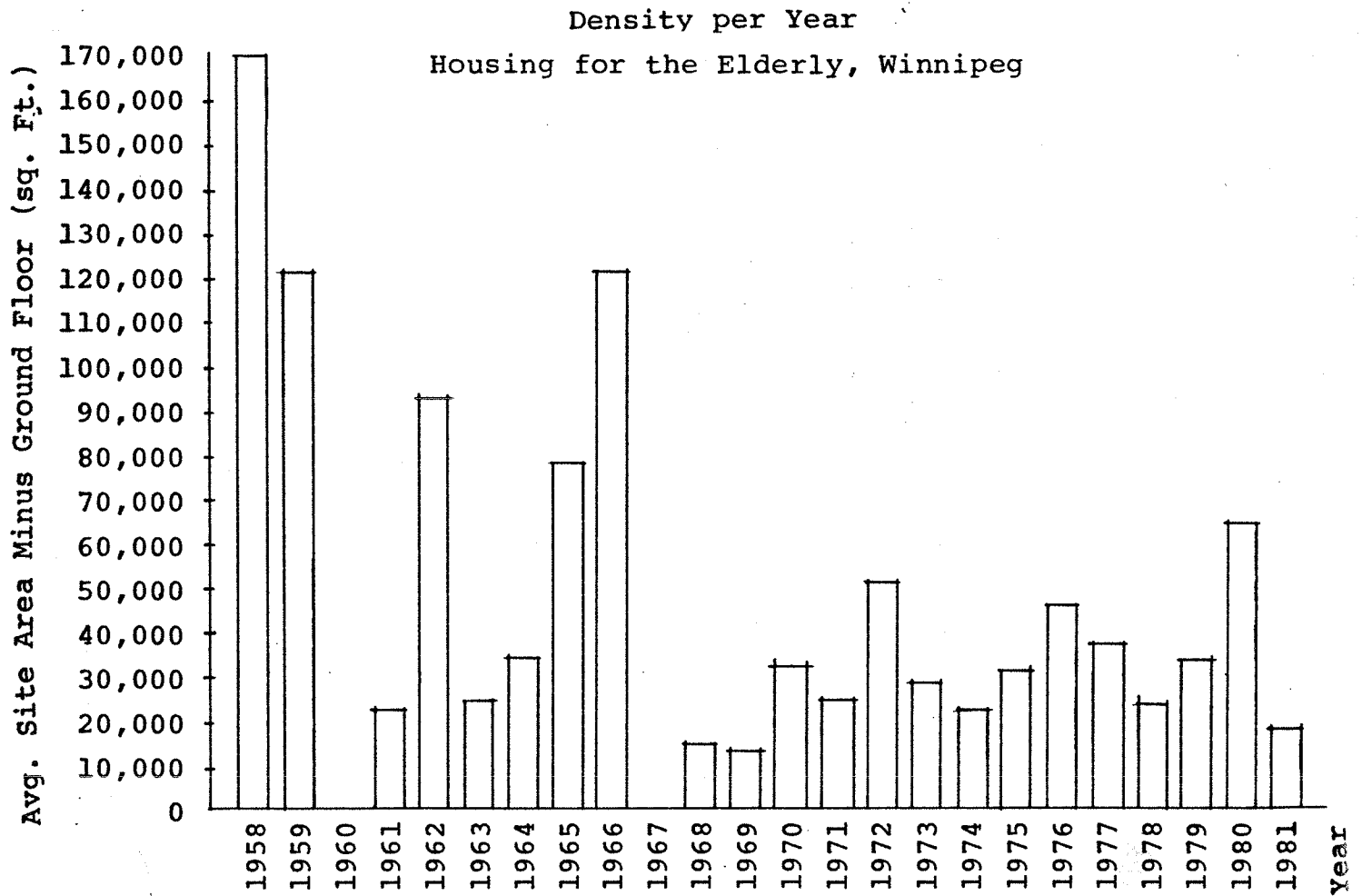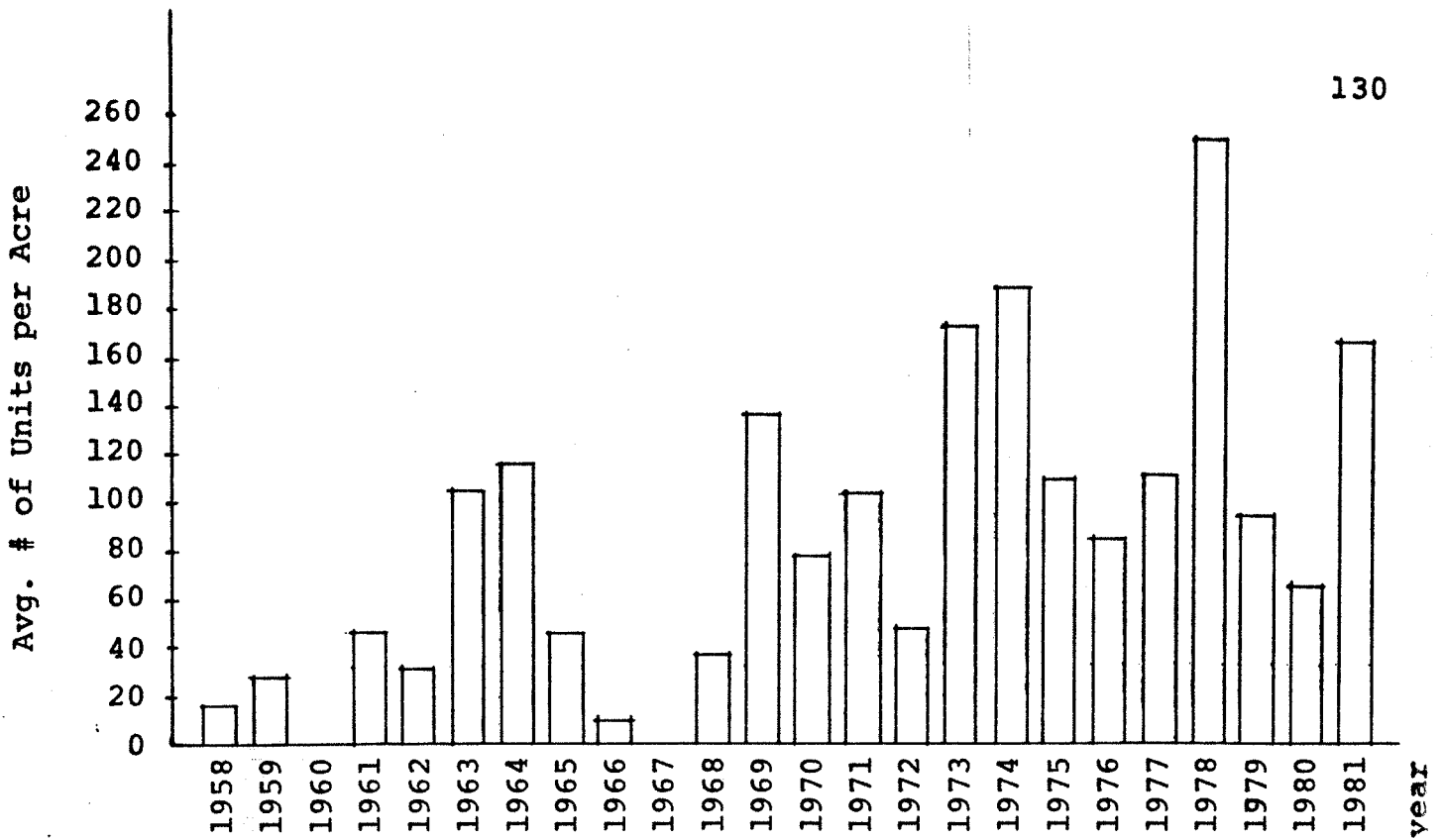
Housing for the Elderly, Winnipeg

# of Developments Built

Legend:
- M.H.R.C. Housing
- Privately Owned
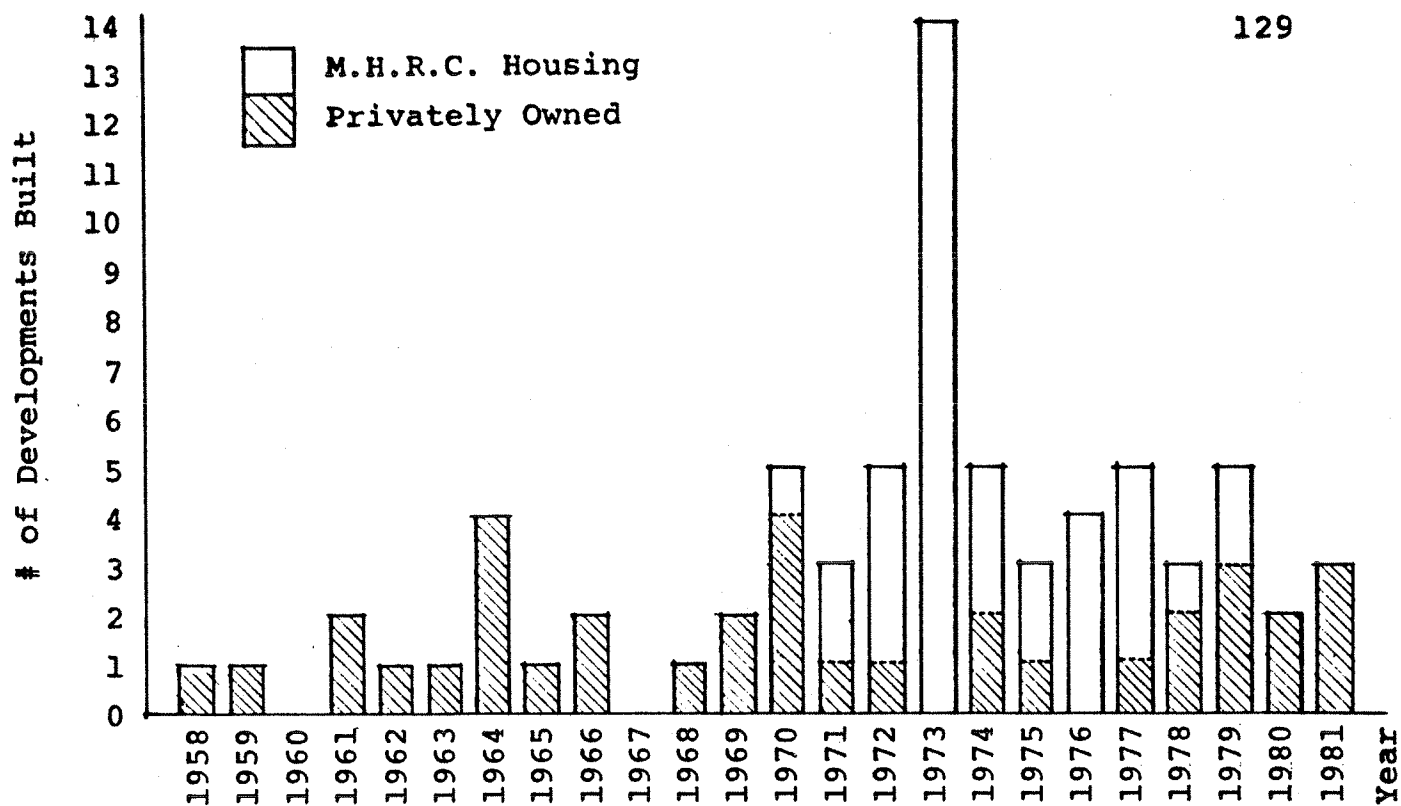
Number of Developments Built per Year (1958 - 1981)

Housing for the Elderly, Winnipeg

Avg. # of Units per Development

Average Number of Units per Development per Year

Housing for the Elderly, Winnipeg

Density per Year
Housing for the Elderly, Winnipeg

Average Land Left for Servicing & Amenity Purposes per Year

Housing for the Elderly, Winnipeg