Elderly Housing and Neighborhood Planning

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INTRODUCTION

As mixed-use neighborhoods integrating dwelling, commercial and civic capacities decline and disappear, so too do the particular advantages of everyday life that they embody. The popular acclaim bestowed on housing developments such as Seaside, Florida is some indication of how truly rare the practice of integrated living is today. For the elderly however, mixed-use neighborhoods may prove to be an essential support structure, one that could affect the rates at which they need to be institutionalized.

This paper examines the implications of neighborhood design on care for the elderly, and asks: does neighborhood planning have an implied role in the current debate on health care for the elderly? This question may have particular relevance in the next few decades given the enormous growth projected in the elderly population, and the continued escalation of expenditures on health care in the US. Before we look at statistics that set the background for the 'graying of America' we should examine what we mean by the notion of neighborhood living.

NEIGHBORHOODS

It is useful from the outset to distinguish the special traits of neighborhoods from those of other realms of public activity. According to Jane Jacobs, a vital neighborhood is primarily characterized by a spirit of active ownership and mutual stewardship of the environment by its residents. It is really the everyday interaction and mutual supports and supervision that makes them especially valuable, comforting and important. Neighborhood settings, Jacobs continues, though physically discernible, may have few distinct geographical boundaries. Neither are they necessarily public in the full sense where they afford equal amenities to all and sundry. True, neighborhoods offer a public dimension in the lives of their residents but they also represent a kind of extended home territory, one where groups of families and individuals interact on an everyday basis in a public yet somewhat defined environment.

The 'everyday', in fact, is one of the special features of neighborhoods, and it is that aspect together with the mutual support engendered through community sharing that is most pertinent to a discussion of the elderly in neighborhood settings, whre it is everyday survivasl that makes the difference. The neighborhood is an environment where everyday necessities for community dwelling are available. For our purposes then a shopping mall adjacent to suburban housing, or a downtown Manhattan mixed-use street could equally function as a viable neighborhood setting, provided that they offer the correct mix of everyday functions and - for the elderly living alone - some simple supports from the community. The increasing importance of these functions and supports may become apparent when we examine certain demographic projections for the elderly population into the next century.

THE GRAYING OF AMERICA

The development of supportive elderly housing environments is propelled by twin forces of extraordinary growth in the 65+ population combined with an increased aging profile within this elderly group - forces which together will likely contribute to an increased incidence of infirmity in the total population. According to figures released by the US National Center for Health Statistics, the elderly are the fastest growing population group in most industrialized countries. For example, the proportion of US population aged 65 years and over increased by 13% between 1976 and 1986. (Table 1) In Japan and Sweden the increases were 30% and 20% respectively over the same period. The increase in the US elderly population however has continued to gather pace increasing by 17% from 1980 to 1987 - more than double the rate of the population increase as a whole.

Furthermore, population projections by the US Bureau of

Table 1: Percent of population 65 years and over

	1972-76	1983-86	% Increase
Denmark	12.9	15.3	19
Japan	7.9	10.3	30
Sweden	15.1	18.1	20
United States	10.7	12.1	13

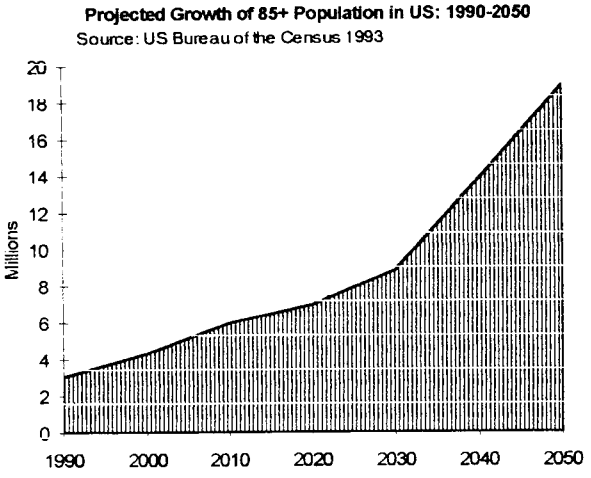

Figure 1. Projected Growth of 85+ Population in the US: 1990-2050

the Census predict that the numbers of elderly in the US will continue to increase so that by 2050 almost one in four Americans will be over the age of 65, Of the elderly, the population aged 85+ is predicted to show the greatest increase, a figure that will significantly alter the health profile of the elderly. (Figure 1)

Thus for an expanding and increasing elderly population the numbers of people making demands on health care resources is likely to increase considerably, an increase which will inevitably have financial implications for the nation.

HEALTH CARE EXPENDITURES

Increases in health care expenditures in the US over past decades have proved to be even more pronounced than those in population growth. According to the US Department of Health and Social Services, the portion of the US gross domestic product spent on health care increased 2.5 times between 1960 and 1991, from 5.3 to 13.2 percent. Over the same time period the amount of these expenditures devoted to nursing home care more than doubled from 3.6% to 8%, while the percentage devoted to home health care (though comparatively small) increased from 0.1% to 1.3% of the total health expenditures. This growth in health expenditures is likely to be sustained as the elderly population increases and grows more infirm, putting added pressure on the financial structures that pay for medical care. The Medicare program, introduced by the Federal government in 1965, paid 16% of the nation's health expenditures in 1991, and the number of people eligible for Medicare enrollment increased by 1.9% per year in the last decade, an increase that is likely to be maintained into the next century.

No wonder then that recent congressional debate has predicted that the Medicare system will go broke as early as 2002 if present expenditures growths continue. Clearly we are facing a crisis of resource availability versus services and recent moves to balance the federal budget have naturally singled out Medicare and Medicaid programs as a major source of possible cuts. Before we begin cutting programs for elderly care however, we would do well to look quite broadly at the range of issues that contribute to our aging population's need for care and health services.

HOUSING AND DISABILITY

To begin, we should step back and look at how housing situations for the elderly are presently chosen. The elderly are commonly assessed with respect to their ability to look after themselves on an everyday basis. There are two sets of procedures used to gauge this capacity: i) Activities of Daily Living (ADL) such as eating, toileting, dressing, bathing, walking, and transferring (getting in and out of bed), and (ii) Instrumental Activities of Daily Living (IADL) such as preparing meals, shopping, managing money, using the telephone, and doing basic housework. ADL's basically indicate a person's capacity for personal care, while IADL's assess their capacity for self management.

According to their performance in these criteria, elderly residents are placed in one of three categories; a) functionally independent, b) functionally impaired, or c) frail. There are a variety of corresponding housing options available ranging from independent living for the functionally independent to full nursing care for the frail elderly. In between these two extremes, we find congregate housing, (where independent apartment living is supplemented by group services such as meals), and Assisted Living housing (where an individual's physical impairments are compensated by the provision of services as needed, such as supervision). In each of these options the housing responds by gauging a person's level of impairment in personal care, and escalating disability is compensated by increased provision of services - often costly services - in the environment.

RESIDENT SATISFACTION

However, gauging environmental difficulties according to ADL's and IADL's may not be the most reliable means to choose housing environments for the elderly, as the usual responses tend to focus attention at the building itself at the expense of considering the larger milieu. In fact in planning housing environments for the elderly researchers propose three factors that together contribute to resident satisfaction; i) housing quality, ii) neighborhood quality, and iii) management policies.(Regnier) The role of neighborhood factors in overall satisfaction is confirmed by a survey of 8 elderly housing schemes in New Jersey where three-quarters of the residents were observed to make frequent use of outdoor spaces.(Cranz) That survey concluded that the most popular sitting areas for residents of these buildings were those that provided a view of on-site or neighborhood activity, and that the front of the building - that is the side that addressed the neighborhood activity - was the most popular orientation. Similarly the impact of management policies in resident satisfaction and continuing independence is borne out by the

approach of one elderly housing program in Boston, Massachusetts. In these homes which house close to 1100 residents with an average age of 80, management policy actively promotes the view that *"competence is enhanced by providing residents with genuine control over their lives and through access to real choices in necessities, in social contacts, in services and facilities."*(Feingold) Thus, in both these instances satisfaction with one's living environment is linked to factors beyond those limited to personal care - aspects not necessarily measured by ADL's and IADLS's.

LIFESTYLE THINKING

This broader look at factors affecting residential satisfaction is consistent with ideas by Wachs and others that in order to plan effectively for the diverse abilities of the elderly population one would more profitably think in terms of each individual's "lifestyle". (Wachs) Lifestyle thinking concedes the significance of supportive housing in a person's life, but also includes a variety of factors such as neighborhood quality, social contacts, transportation and other environmental amenities. Lifestyle considerations effectively broaden the way we look at supportive housing environments for the elderly and opens the door to a more holistic approach to elderly care. Wachs, for example, studied transportation accessibility in the Los Angeles area, and proposes that transportation availability is a major determinant of lifestyle as it affects a person's everyday mobility. Thus a person living next to a public transportation system retains some degree of mobility if they lose their capacity to drive, while a typical suburban resident similarly afflicted will experience serious disruption in their ability to perform everyday activities involving travel. Thus the lifestyle approach to aging affirms the assumption that environmental factors are implied in the perception of infirmity. But what is the 'direction' of the relationship between infirmity and the physical environment?. In other words, does physical disability lead to problems with the environment, or do environmental conditions in fact contribute to an individual's assessment of physical impairment?

ENVIRONMENTAL VULNERABILITY

The authors of one study have examined the direction of this relationship.(Soldo + Longino) Studying ADL's and IADL's in isolation they admit, there is a proportionate increase in the incidence of infirmity with age. (Table 2)

Table 2: Percentage of persons 65 years and older living in the community with functionaly disabilities

	Type of Dependency				
Age	*IADL only*	*1 or 2 ADL*	*3 or 4 ADL*	*5 or 6 ADL*	*Total*
65-74	4.5	4.2	1.8	2.1	13
75-84	7.9	9.1	3.6	4.5	25
85+	10.2	17.4	7.8	10.4	46
Total 65+	6.1	6.6	2.8	3.5	19

5 Quality-of-Life categories:	**Responses**
1. Affordability: *Monthly income < 25th percentile of income distribution*	(25.2%)
2. Care Services: *At least one IADL or ADL care need is currently neglected*	(7.8%)
3. Housing Design: *Perceived need for housing modifications - ramps, raised toilets, etc.*	(32.9%)
4. Social Contact: *Contact with family and friends is not maintained at desired level*	(49.2%)
5. Neighborhood Milieu: *Perceived problem with local crime, or location of food or drug stores*	(58.1%)

Figure 2: Five quality-of-life factors affecting environmental vulnerability.

Rather than accepting personal care impairments as the sole determinant of environmental difficulties however, the authors chose to broaden the scope of factors under consideration and proposed 5 quality-of-life factors that contribute to an individual's "environmental vulnerability". (Figure 2) Respondents to the survey were asked to rate deficiencies in their environment according to these 5 quality-of-life issues. In this way the survey hoped to assess the vulnerability of the elderly population to a range of environmental factors.

The survey results reveal that of older disabled people with some disabilities living in the community 58% had perceived problems with their neighborhood, and that almost half felt they could not maintain adequate social contact with family and friends. (Note that the percentage who had affordability problems - i.e. monthly income less than 25% of income distribution - was fixed by definition.) Moreover, further analysis of these quality-of-life deficiencies according to age and level of disability revealed some remarkable insights, especially when viewed in the light of the previous survey on disability alone. Table 5 reveals no significant variation in the environmental deficiencies experienced across age groups. Thus according to these 5 criteria, 65-74 year-olds were likely to experience the same degree of environmental difficulty as those 85 years and older, suggesting that environmental difficulties may well be independent of age, and in fact according to the authors, such deficiencies predate frailty.

Furthermore, according to the authors:

> *to the extent that such environmental problems are also markers of risk for the onset or rapid progression of chronic morbidity, improving the quality of the social and economic environment in which aging occurs may not only improve the quality of life for the already frail but may also retard rates of transition from the well to the disabled state.*

Thus in this study the causality between environmental difficulties and the onset of disability appears to be reversed

Table 3: Percentage distribution of the number of quality-of-life deficiencies among the functionally limited elderly by age and level of disability

Age and	*Number of Quality-of-Life Deficiencies*					
Disability Level	*0*	*1*	*2*	*3*	*4+*	*Total*
66-74						
IADL only	16.6	31.4	33.1	15.1	3.8	100
1-2 ADL	11.8	30.6	30.7	20.9	6.1	100
3-4 ADL	11.1	28.6	34.1	19.1	7.1	100
5-6 ADL	9.8	28.1	33.7	23.2	5.3	100
Total	**13.1**	**30.2**	**32.6**	**18.9**	**5.3**	**100**
75-84						
IADL only	19.1	28.7	34.1	15.6	2.8	100
1-2 ADL	12.1	31.6	32.8	18.1	5.4	100
3-4 ADL	11	27.6	38.1	16.5	6.9	100
5-6 ADL	9.1	33.1	32.6	20.3	5	100
Total	**13.6**	**30.3**	**33.9**	**17.5**	**4.7**	**100**
85+						
IADL only	11.6	32.3	38.3	14.1	3.7	100
1-2 ADL	11.7	34.3	30.4	17.1	6.6	100
3-4 ADL	11.8	30.3	31.3	23.1	3.5	100
5-6 ADL	10.2	30.3	31.5	24.2	3.6	100
Total	**11.3**	**32.3**	**32.6**	**19.1**	**4.7**	**100**
65+						
IADL only	16.9	30.4	34.2	15.2	3.4	100
1-2 ADL	11.9	31.8	31.5	19.1	5.9	100
3-4 ADL	11.2	28.6	35.1	19.1	6.3	100
5-6 ADL	9.6	30.5	32.8	22.4	4.8	100
Total	**13.1**	**30.6**	**33.1**	**18.4**	**4.9**	**100**

and the onset of impairment can be influenced by factors such as neighborhood quality, and social contact. This observation is consistent with findings from other elderly housing research where control over and active engagement with one's environment was found to promote increased levels of well-being in elderly residents. (Slivinske & Fitch)

Returning therefore to our original question about neighborhood planning and it's implied role in the current debate on health care for the elderly, the research would seem to support a finding that environmental amenities - or the lack thereof - influence an elderly population's physical vulnerabilities - vulnerabilities that may become serious only when some other disabilities creep in.

CONNECTION FROM A DISTANCE

Planners tempted to plunge elderly residents into neighborhood environments as a means to improve their well-being should proceed with caution however. Not all aspects of neighborhood life are equally desired by the elderly. For example in the New Jersey housing survey of 8 projects mentioned above, the everyday connection with neighborhood activity coveted by elderly residents was confounded by the fact that the presence of children was overwhelmingly rejected by that same group. In addition 24% of these residents perceived a lack of security in their neighborhood. Consequently, we can conclude that access to neighborhood activity without adequate attention to security concerns can lead to anxiety amongst residents. On the other hand, an equal number of elderly residents occasionally felt bored with their environment leading the author to speculate that the converse, i.e. security at the expense of access to neighborhood activity, resulted in boredom. A balanced approach to neighborhood design therefore would seek to avoid this dichotomy of anxiety and boredom by permitting the elderly to make controlled connections to their neighborhood.

ENVIRONMENTAL CAREERS

In designing environments for the elderly, it is crucial to avoid broad generalizations regarding the needs and wants of elderly residents. Their desires are as diverse as those of the general populace. Some gerontologists for example, suggest that the notion of lifestyle mentioned earlier can be understood to imply a process of "environmental careers." An environmental career is characterized by a series of "adjustments" made by each individual, or by "*a continuous series of choices and active behaviors that lead to the successful approximation of an ideal environment.*" (Campbell) Ideally, these adjustments would be prompted by the preferences of the individual, though it is inevitable that they are sometimes imposed on the person by environmental factors.

Nevertheless there are some common criteria used by persons in the choice of their environment. Table 4 compares responses from the American Housing Survey regarding neighborhood choice for two samples: the US population as a whole, and those aged 65 years or older. Interestingly, the elderly rated access to friends and relatives twice as highly in their reasons for choosing neighborhoods, a figure that appears to support the notion that human relationships become an increasingly important aspect of an individual's environmental career.

In addition, neglecting the "other" category for a moment, note that the three most important criteria for choice of neighborhood were 'house design', 'neighborhood design',

Table 4: Choice of present neighborhood (percentages)

Reasons	**Total Population**	**Elderly Population**
Convenient to job	23	3
Convenient to friends or relatives	10	36
Convenient to leisure activities	5	6
Convenient to public transportation	3	5
Good schools	8	0
Other public services	2	3
Looks/design of neighborhood	21	18
House was most important consideration	23	21
Other	36	38

From American Housing Survey 1993

and 'proximity to friends and relatives'. These choices are consistent with the 5 quality-of-life criteria used by Soldo and Longino earlier.

CONCLUSION

From the range of studies above then, it would appear that physical and social environmental factors do indeed relate to general well-being, with implications for the provision of healthcare services, and their associated costs. More importantly however, if we are all pursuing conscious or unconscious environmental career, then we may want to ask ourselves to what extent the environment we are creating today takes us further along that career path. For many elderly their environmental career reluctantly ends in a nursing home. For some - particularly the cognitively impaired - this is the inevitable result of the need for full-time care. For many however, it may well be the result of a neighborhood environment which has not positioned itself as a part of the health care continuum.

In his Los Angeles study mentioned earlier, Wachs maintains that for an increasingly frail elderly population who require driving as a basic necessity of community life "*the mobility problems of the elderly will arise later in life, as increasing numbers of them survive into their late seventies, eighties and nineties.*" Neighborhood design, meaning the arrangement of the everyday environment - a role not for doctors, but for architects and planners - may prove therefore to be a means by which we can relieve some of the pressure which is sure to come to bear on care-aid services in the next century.

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