Social Ecology and the Health of Older People

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The effects of health-engendering environments on the functional competence of the elderly are discussed.

Introduction

I should like to present today the basically simple-minded idea that the context in which older people behave is a significant determinant of how they perform. I shall suggest that some apparent "effects of aging" are in fact the result of the environments our society creates for the elderly segment of our population. On the one hand, performance levels are lowered by the necessity of dealing with environments built for younger people. On the other, there is a major potential for the massive use of "environmental therapy," with good prospect of payoff. Attention to the design of health-engendering environments may either significantly raise the functional competence of the individual ("therapy") or elevate his functioning without altering his basic competence ("prosthesis").

It is not difficult to document the differential richness of the environment for young and old. The young and middle-aged receive far more stimuli of all kinds requiring the exercise of learning capacities. Social demands for the everyday performance of student, worker, family, and community roles drop radically as official retirement nears. Even more importantly, reinforcement for the successful performance of these roles decreases. One ceases to advance on his job, to be sought after for advice, to be reacted to as if sexually attractive, to be considered worthy of sharing the news with. The negative reinforcement of portraying senility as the normal course of aging is deeply embedded into our culture, as is the dirty old man syndrome, and the cluster of negative personality traits attributed to old age. Baltes has pointed out that the larger social environment of today is far less stable than it was in earlier historical periods. In earlier times the learning accomplished in early life remained relevant for a lifetime of coping with the same environment, whereas today much of a person's physical, social, and resource environment is totally replaced in less than a generation. Yet, society has headed the opposite direction in allowing opportunities for learning new coping styles relevant to this pace of environmental change. People retire earlier, three-generation households are out, we build new communities that are learnable only with the use of a car, and old communities are psychologically walled by the fear of crime.

Attenuated Performance

Thus, the older person may well have many abilities that never reach full performance potential because of the way we deprive our environments and program their rewards and punishments for the otherwise competent older person. However, there are some real deficits that become more frequent during old age. Health as measured by any index does become poorer with age. If one controls properly for health, as has been done in several landmark studies,\textsuperscript{2,3} it becomes clear that much of the decline that has been wrongly attributed to age is, in fact, associated with chronic disease. The incidence of alcoholism, suicide, and several varieties of chronic brain disease does increase during old age. Thus, while we can say confidently that old age alone does not inevitably result in negative psychological changes, there is a statistically greater incidence of many such changes. These changes lead to an increased state of dependency of some older people on resources other than their own.

I have described two sources of lowered performance: environmental deprivation and decline in biological efficiency, both of which appear to leave the older person in a state of vulnerability. That is, the person deprived of the clearly stated environmental contingencies of youth, and
the person with a health-related incapacity to learn new tasks are both less capable of finding adaptive ways of responding to new environmental situations. I have stated this in "the environmental docility hypothesis": the less competent the individual in terms of personal disability or deprived status, the more susceptible is his behavior to the influence of immediate environmental situations. Evidence supporting this hypothesis came from research done at the Philadelphia Geriatric Center on friendships among older people in age-segregated housing\(^4\) and in research reported by Rosow.\(^5\) In our research, older people who were in poor health and those who were foreign-born were more closely bound to proximate neighbors in choosing friends than were those born in this country and in better health. Rosow found that working class elderly were more dependent on local friends than were middle class elderly. Thus, the deprived groups' social behavior was more constrained by the environmental variable, physical distance between neighbors. Many other examples come to mind. Economically independent younger people have the option of moving to the suburbs; the older person in poverty remains in the high crime area. The person in good health adapts to the nuisance of climbing steps; the person in poor health fails to continue earlier tasks, such as shopping or organization membership.

The environmental docility hypothesis thus first caution us regarding the assumption that the adaptations of earlier life will be appropriate in later life. An aspect of the environment may be neutral, or even a facilitator of self-fulfillment in earlier life, but may constitute a veto over some kinds of satisfaction in later life.

Ecological Change Model

Conversely, an implication of the hypothesis is that desirable behavior may be elicited, or elevated in quality, by the provision of a favorable environment. Finally, the hypothesis suggests that methods which directly increase the competence of the individual will give him greater control over his environment. My co-worker Lucille Nahemow and I have developed an ecological change model which looks at treatment in terms of whether the measures are applied to the individual or to the environment, and whether the individual initiates the treatment or responds to the external application of a treatment. Thus, the four possible treatments are:

1. The individual initiates; the point of application is the individual. This is the normal way that individuals grow, where they actively seek stimulation, strive toward self-determined goals, and are alert to the need for change in themselves. Where personal competence is high and the social milieu friendly, the older person continues to behave uninterruptedly in this mode.

2. The individual initiates; the point of application is the environment. Another positive change mechanism is the attempt to redesign one's own environment in such a way as to maximize the congruity between one's own needs and the offerings of the environment. It is easy to be pessimistic about the possibility of such active creation in a society that appears to be thrusting the individual further and further into anonymity and powerlessness. However, migration to a pleasant climate or to a community where health care is more readily available are ways of producing a new environment. The strongly activist Gray Panther organization is determinedly seeking ways to change the behavioral environment of older people: more accessible transportation, better designed banking facilities, and so on. For every level of competence there are appropriate ways of controlling one's environment. Some tenants of our housing sites for the elderly whose behavioral range was greatly restricted leave their apartment doors open during the day; not at all by chance they are the people who are most often chosen as friends in a sociometric survey.

3. The individual responds to a treatment that is applied individually. This is the change model to which the helping professions are most accustomed, best exemplified by individual therapy. While some may object that good psychotherapy involves the patient's being a true co-therapist, the essential factor distinguishing this type of change from growth is the activity of a professional in the change system. Over much of the half-century where individual therapy was the change method of choice, the environment has been assumed to be a constant, and consequently unfortunately ignored as an agent for change. However, during the heyday of psychotherapy the older person was totally excluded from the company of those thought to be suitable for individual therapy, and things are no better today. The NIMH, for example, has reported that only 2 per cent of all patients treated in outpatient clinics are 65 and over. Now that there does seem to be some hope of mobilizing interest among therapists in treating the elderly, one can hope that the possibilities inherent in the creative use of environmental intervention will be recognized as well. This, of course, is the fourth change type.

4. The individual responds to a change applied to the environment. Planners, designers, and architects have long had some control over behavior by virtue of their determination of the shapes of the physical environment, but have only recently begun consciously to give equal time to human needs along with esthetic values. Social designers similarly have tried, with varying success, to construct need-fulfilling environments. Prospects for change are theoretically greatest in this quadrant, since designing one environment may direct the behavior of a large number of people. However, we all are aware of how resourceful people are in doing as they wish (or as they are forced to) in spite of "ideal" environments, and this easy intervention scheme has not been as effective as might have been hoped—urban renewal, for example.

I suggest that disillusionment with the environmental design approach to behavior change should be reserved for its inappropriate application, but that encouragement be taken for its judicious use. Any instance of reduced status or competence, such as those that are more frequent in old age, is potentially changeable through environmental intervention. In psychological jargon, a change in environment will be most effective in changing behavior when the
Examples of Change

Let us look very briefly at a few examples of change instituted through environmental design. Lindsey has referred to the "prosthetic environment," meaning a treatment environment programmed so that behavior-elevating responses are reinforced. Our Philadelphia Geriatric Center conducted a pilot study involving the redesign of two large rooms for mentally impaired aged into a suite consisting of six small private rooms opening onto a small social space, which in turn was separated from the main hallway by a half-wall. Our hypothesis was that behavioral range would be increased by opening up the area visually and that social interaction would be enhanced by providing an area designated as social space and containing the environmental props consistent with this purpose. The first hypothesis was confirmed strongly. (Postalteration observations showed a 7.1 per cent increase in the number of residents in the hallway or beyond, as compared with the prealteration occasion). The second hypothesis was not borne out, although the number of patient-patient interactions remained the same despite the fact that on about 20 per cent of the occasions, residents exercised their newly available option to remain in their private rooms. Findings such as these have been incorporated into the design of a treatment institution for mentally impaired aged patients now under construction at the Philadelphia Geriatric Center.

Perhaps the best documented change broadly related to mental health is found in the case of age-segregated housing for the elderly. Several impact studies by Carp, Lipman, and our center show that to varying degrees a favorable change is experienced by elderly people during the year following such a move, particularly in the areas of organizational activity, social interaction, and perceived change in life satisfaction. Finer detailed examination of some of the processes involved in such an increase in well-being seems to indicate that the physical proximity of age peers and the establishment of a normative system appropriate to the level of competence of the average elderly tenant are major factors in the beneficial effect.

Involuntary Relocation and Stress Tolerance

On the negative effect side of the ledger, evidence is rapidly accumulating to indicate that the involuntary relocation of physically and mentally vulnerable older people may have a catastrophic effect. At least half a dozen studies, done with appropriate controls, on naturally occurring closings of institutions, requiring the mass transfer of residents to new institutions, indicate higher than expected mortality and morbidity in the relocated populations.

The contrast between the findings of the planned housing and the institutional types of relocation may be examined in light of the environmental docility hypothesis. Both conditions involve a major environmental change. There is a major difference in degree of competence of the two relocated groups, however. The rehoused are quite independent, while the institutionalized have no choice. In both cases, the environmental change is major, but in the case of the housing group, the change generally means growth, while for the institutionalized it means decline. Thus, the concept of stress tolerance level became necessary to make this differential prediction: the amount of change demanded of an individual by an environmental intervention has an upper limit determined by the individual's level of competence beyond which the change exceeds his ability to handle in an adaptive manner. In our model of adaptation, either a drop in competence or an increase in environmental pressure may elicit nonadaptive behavior or negative affect. As discussed in greater detail elsewhere, environmental pressure may be reduced through the application of supportive services. An essential element in making medical and other services available under conditions of low environmental pressure is transportation. Functional equivalents of adequate transportation might be the easement of barriers through an ombudsman, a move to a location more proximate to medical services, or if competence is very low, institutionalization.

Adaptation Level

In any case, our model suggests that when environmental demands are slightly above the individual's accustomed level of responsiveness ("adaptation level"), his maximum performance may be elicited. When demands are slightly below his adaptation level, he tends to become complacent—the "zone of maximum comfort." Raising environmental demands too far beyond adaptation level (overloading) or too far below (deprivation) both risk maladaptive responses. Our model also suggests that the range of tolerable response is far smaller for the less competent person. A corollary of this assertion is that small changes in environment may produce substantial changes in the adaptiveness of behavior. This is another way of saying that the payoff for effective environmental intervention is very high for older people in poor mental or physical health. Thus, there seems to me to be good reason to encourage the joint participation of social planners, health professionals, behavior scientists, and designers in the task of producing health-engendering environments for older people. Such effort may be effective on any scale, from prosthetic furniture to household design to health facility to areawide service program.

References


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