SELECTED READINGS IN AGING

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FIRST

STAFF TRAINING INSTITUTE REGION VI

STATE AGENCIES IN AGING

INSTITUTE OF GERONTOLOGY -- UNIVERSITY OF IOWA

Iowa City, Iowa

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SOME BIOLOGICAL, PSYCHOLOGICAL AND SOCIAL CONSIDERATIONS IN AGING

A WORK TO THE READER

This is a Working Draft and is to be revised. The contents of this volume were selected from the materials developed by or made available to the Gerontological Society for its curriculum project, performed under contract of the Gerontology Branch of the United States Public Health Service.

In the course of the Gerontological Society's "You Tell Us" seminars, scores of practitioners in a wide range of disciplines were asked what they knew about aging as a process. From the responses, one would have to assume that old people did not arrive at their aged state by a process -- they were always old! Obviously, these practitioners understand that we get older and that this process of getting older is called aging. But in very few instances had it occurred to them to examine the process, to query in their own minds what took place in this process of aging.

We should understand what makes one aged individual different from another, what one aged individual has in common with another. We should understand what goes into making an aged person individually what he is, what goes into making aged persons collectively what they are. We must understand these issues in terms of what the individual brings into the world with him in the way of physical and other genetic characteristics, how the impact of the world-the environment - impinges upon the individual as he ages. Therefore, we discuss biological aspects of aging.

We must understand what changes take place in the "tools" and functions the individual uses to adapt to his environment and his other fellow human beings: his senses and perception, his ability to learn and remember, the impact of these changes on that aspect of his individualness that we call personality. Therefore, we discuss psychological aspects of aging.

We must understand the nature of his adjustments and adaptations to other human beings, the impact of aging on his relationships with the large and the small collectivities - family, friends, community, organizations, mankind - which make up what we call society. Therefore, we discuss sociological aspects of aging.

We remind you again that this is a working draft and is to be revised. We earnestly solicit your comments and criticisms so that, when revised and published in final form, this manual will have maximum usefulness and effectiveness.

Please communicate your comments to:

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6-28-66

SELECTED READINGS IN AGING

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BIOLOGICAL ASPECTS OF AGING

INTRODUCTION

It is true that there is a gradually increasing attraction of competent research biochemists, biophysicists, physiologists and anatomists to the young, but growing, field of biological gerontology. Nevertheless, as this brief introduction will indicate, the gerontologist has many more questions still remaining to be answered than past efforts have permitted.

The statements which follow are considerably condensed summaries, each by an outstanding expert in his own right, of the major areas of scientific investigation into the nature of the aging process. It is hoped that this body of information may serve, first, as a background starting point and (again and again) as a source of reference at later times in your treatment of the senior citizen who comes to you for help.

AGING AND SENESCENCE

Aging may be defined in its broadest meaning as the sum total of the changes in an individual from birth to very old age, in relation to time. In these biological papers, senescence specifically refers to the deleterious or harmful changes occurring with the passage of time in the lifetime of an individual, which result in the gradual failure of the individual to survive, and ultimately in the passing of the individual, due to "natural causes."

It is true that the average human being rarely dies from natural causes. Nevertheless, climactic death (as from disease) in the oldest segment of a population, usually does occur as the direct result of the failure of one or more regulatory or nutritive systems to meet the assaults of his environment, at a particular point in one's lifetime.

There are a number of theories of aging, some fanciful, others sound, but all still in the formative, hypothetical stages. That is because the total body of information which is available to the scientist is relatively meager and scattered, but growing all the time as (government and private) support of basic biological studies in gerontology continues to mount.

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THEORIES OF AGING

If one had to summarize the substance of the many theories of aging, they would fall naturally into two groups based on the causative factors or mechanisims, namely:

1. the inherent or genetic factors which determine the time of onset, the course and direction, and the time-sequence of the various aging processes; and

2. those insults and assaults of the environment upon the individual which tend to reduce his probability of surviving with the passage of time.

The facts about aging, in its biological sense, as presented in this total section on the biological manifestations of aging, are therefore organized along these lines.

First, however, we should look at what is known about aging and death, as it can be described in an orderly mathematical fashion. That is because statistics about population changes, as they are summarized in the form of "life tables" or mortality (or survival) curves, give us important information as to the average and maximum duration of life for a given population, on one hand, as well as clues to the peak periods when individuals in such population fail to survive. Moreover, by pointing to the peak periods of mortality of a population, life tables give us important clues as to the times in the lives of the individuals when particular systems are failing (i.e., the time of predominant occurrence of such conditions as heart failure, cancer, diabetes and cerebral vascular accidents).

Conversely, life tables can be utilized in a practical way to evaluate quantitatively the efficacy of new and modified therapeutic procedures in social or clinical medicine. Thus, seeing when modifications in the rate of dying off, shifts in time of high death rate and, finally, shifts in average and maximum life spans occur, mean that life tables can be used as criteria for the effectiveness of such innovations in the treatment and handling of the aging population, both from the sociological and clinical standpoints.

The reproducibility of life table figures for various animals, under controlled laboratory conditions, emphasizes the underlying genetic control of aging and, therefore, of life span. However, one still must not ignore the fact that longevity, aging, and finally death from old age are the result of the interaction of the inherited factors for survival on one hand and the adverse environmental factors on the other.

FACTORS IN AGING

Although a firmly-based theory of aging is still far from being possible, one can nevertheless describe the process of aging in terms of the many observable changes which occur more or less consistently, from individual to individual, with advancing time.

We can thus subdivide the two major groups of theories of aging as follows:

A. The genetic basis for aging in terms of:

1. Cessation of growth and the failure to replace cells as they are destroyed or "die off."

2. Gradual failure of production of a juvenescent or growth substance.

3. Increasing production of an aging factor or hormone.

4. Depletion of essential cell or tissue components necessary for the maintenance of normal structure and function.

5. Accumulation within cells or tissues of substances which may be chemically or mechanically harmful.

The above are events which can be termed genetically programmed; that is, they occur progressively and inexorably as time progresses in the life of the organism, more or less independently of the environment.

B. The extrinsic or environmental factors which may contribute to or accelerate the process of aging, such as:

1. Disease in its broadest sense including bacterial, fungal, animal parasite, and viral infections.

2. Physical trauma or injury including mechanical, chemical and thermal changes.

3. Radiation effects of a cumulative and dramatic nature.

4. The adverse influences of other animals; in the case of man his interaction with other humans.

What makes so difficult the interpretation of the known data concerning the biology of aging which follow below, is the fact that even within one species or race of animals or humans, there are individuals with different genetic constitution, each likely to respond differently to different environmental conditions according to his particular genetic make-up. Moreover, it is quite unlikely that a single factor or process may be operating in the overall process of aging from birth to old age,

but rather that a number of factors, either juvenescent or senescent in nature, may be so operating, to a greater or lesser extent at different times in the individual's life, as to achieve ultimately his particular pattern of aging and ultimately death in old age.

SIGNS OF AGING

It is a well accepted fact that an aged human being can be recognized by the appearance of his skin and hair, as well as the degree of loss of his vigor and vitality. Nevertheless, these are only the reflection of a number of inner changes in structure, in chemical make-up, and in functional effectiveness of various organs of the body and their component parts. All of this may likewise be true for and has indeed been observed in lower animals as well. Thus, the loss in the ability of the limb muscles in older humans to respond quickly and vigorously is paralleled by the failure in flying ability of some aging insects.

Yet underlying such gross functional failure are certain known structural changes which have been described to a limited extent in man, but much more so in animals, which in their basic make-up are none the less not much different from humans. Animal studies have the advantage over those in humans inasmuch as animals can be studied under controlled conditions of diet, known temperatures, and humidities. Different humans, on the other hand, live under such a diversity of conditions from temperature to diet, health care and sanitation, so that clinical findings, family records, and even recorded vital statistics give us at best a poor picture of the fundamental nature of the aging process in humans.

This is even further complicated by the fact that the genetic make-up of each human is not known, and moreover, each human being usually represents the descendant of a continued "outbreeding." That is, practically every human is bound to be a complex, genetically heterogeneous hybrid individual, whereas in animal studies this can be and has been obviated by the availability of highly homogeneous, often genetically pure lines of animals like rats, mice, and even insects, through years of imbreeding. Moreover, because these lower animals possess much shorter life spans than humans, comparatively rapid screening is possible of systemsor variables which may be under the scrutiny of the gerontologist's eye.

That is why much of the information which the biologist has obtained about the aging process has been for lower animals. Nevertheless, the similarity to humans in composition and the identical nature of most animal cells and many tissues makes this information meaningful, when we are concerned with the process of aging in humans.

STRUCTURAL CHANGES IN AGING

Both in humans and in lower animals it has been shown that there is a gradual reduction in the number of nerve cells which are incapable of self-duplication. Accompanying aging of the nervous system at the total body level are less marked, observed changes within the surviving nerve

cells. The striped muscle of our skeletal system similarly is said to diminish in mass with advancing age, for the same reason. However, even less is known about the intracellular changes in aging muscles.

Nevertheless, rather universally observed has been the accumulation of specific ("lipofuscin") pigments with age in the nerve cells of senile mice and rats and in humans, as well as in other cells such as liver cells and in the human myocardium.

As for actual cell function, there is a decrease in the metabolism of cells of a number of animals, a decrease in the concentration of each of certain enzymes for human aortas and for rat and mouse liver, in rat kidney, in human and female rat plasma, and in the flight muscles of aging insects. Other important enzyme systems on the other hand, remain unaltered in activity even in the liver of senescent mammals and in the brain of senescent honey bees.

Thus, at present there are still known only a few points of significant correlation of a failing enzyme with declining function of a particular organ or structure in aging lower animals, as well as in humans.

More recently, especially since certain degenerative age-dependent diseases like atherosclerosis involve structural changes, research attention has been paid to the physical aspects of aging tissues, particularly supportive (connective) tissue.

Thus, the elasticity of skin decreases with age in humans. This appears to be an outward reflection of deterioration of collagen fibers of the underlying supportive tissues of the skin which imparts to the skin a wrinkled and flaccid appearance.

A similar loss in elasticity of the walls of the large arteries has been observed in humans. This has been related to the increasing accumulation of collagen in the arterial wall as well as calcification of the elastin itself.

Structural changes also occur in the skeletal system where stiffness and inflexibility of joints have been observed, with water loss by cartilage and fusion of joints at the cartilage surface. One theory of aging, at least as regards this particular aspect of structural aging, suggests that there is an increasing accumulation of metabolic by-products with age, which by-products serve to effect increasing cross-linkages especially in connective tissue collagen.

AGING IN HUMANS

As has been indicated above in passing, there are known for humans a number of typical manifestations of aging at all functional and structural levels. Nevertheless, it would be remiss for the biologist not to summarize briefly what is truly known about the biology (and not the clinical pathology) of human aging. A distinct section by a pioneer biological gerontologist, author of a number of books on the

subject and a world-renowned expert in the field, is therefore included. Needless to say, aside from the greater incidence of certain diseases like heart disease and cancer which appear to occur more frequently at certain age levels of adult populations, there are acceptedly recognized physiological changes well-known to investigators of the biology of human aging, which accompany advancing age in men and women.

PHYSIOLOGICAL CHANGES IN AGING HUMANS

By and large, the composition of the blood of aging humans is maintained within normal ranges both as to salt content, protein and acidity, and even as regards total blood volume. Blood cholesterol, however, actually begins to fall substantially after age 60, despite a rise throughout adulthood to a maximum level at about 55-60 years of age. On the downhill side of aging, there is a progressive, linear increase in resistance by the blood vessels to blood flow and a rise in average blood pressure values with advancing age has been found to accompany these changes. Decreases in renal blood flow, per se, and in cardiac output, basal metabolism, vital capacity and even conduction of nerve impulse are also known to occur in older humans.

However, despite many of the above-mentioned instances of constancies of function in the resting individual of advanced age, the ability of the aged human to withstand challenges of the environment to these same functions may be quite diminished. For example, alterations in the sugar content and acidity of the blood in old people are overcome more slowly and less completely than in younger humans.

Similarly, changes in pulse rate and in respiratory minute volume in older humans are much more pronounced (and recovery to normal much slower) following exercise than in younger persons.

Lowered muscular strength and reduced reaction time are similarly well-known concomitants of senescence as is lowering in the maximum breathing capacity and the reduced capacity to adjust to changes in temperature of the environment. Nevertheless, there is considerable variability from individual to individual of the same age group, for each of the functions described. That is to say, the biological or physiological age of the heart, the kidney or the lungs, or even the nerves of one individual of age 60, for example, may differ by as much as 50% from that of the same structure in another person of the same age. It is an equally well-known observation that in the same individual, one organ may age at quite a different rate from that of another. For example, the kidneys of a 70-year old man may be functioning as well as those of an 80-year old person, whereas his heart may be functioning as well as that of a 60-year old individual.

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PSYCHOLOGICAL ASPECTS OF AGING

II. PSYCHOLOGICAL ASPECTS OF AGING

Introduction

We shall explore here a variety of things which affect how well a person adjusts to his life circumstances. In part, personal adjustment is a matter of actually doing the necessary things of daily life and actually handling little and big problems as they arise. It is also, in part, a matter of how a person feels about the way he manages himself.

In order to achieve what can be called "good" or satisfactory adjustment, we must be able to do the following:

1. Find out what is going on in our environment, that is, get information about the world about us.

2. Evaluate and use information that we get, particularly make decisions and plans.

3. Execute decisions and plans we make, that is, engage in those activities that we need to or want to.

4. Feel satisfied with our decisions and actions, that is, feel competent and content.

In the following sections we shall look at types of factors which affect how well informed a person is, how effectively he can make decisions, how well he can carry out plans, and how self-confident and satisfied he feels. In each case, we shall call attention to specific adjustment-related conditions which are commonly found in the lives of older persons. Practitioners will need to understand the implication of these conditions if they are to help aged persons cope effectively with changing life circumstances.

Getting Information About the World About Us

At the base of personal adjustment is information -- information about things that are important to us -- what is available, where things are, what other people are doing or saying. The senses, (sight, hearing, taste, touch, pain, and balance), are the avenues by which the outside world gets into our lives. If a person's senses do not function properly, important and valuable information potentially cannot get to him.

In general, the senses become less sharp with advancing age. Disease and the repeated injuries of ordinary living (such as repeated blows on the fingertips, environmental and work noises), account for part of the loss. To the extent that it is associated with changes in the nervous system, the aging process itself accounts for much of the decline of the senses.

Some of the major age-related trends in sensory functioning can be summarized as follows:

1. Hearing loss is likely to become more marked in persons over 75 years of age. In this age group, at least 20% of the men and 10% of the women show noticeable deafness.

2. Sight tends to change little between ages 15 and approximately 50. However, after age 50 the power of sight tends to decline.

3. Touch begins to be dulled in the 50's with the feet seeming to lose their sensitivity to touch and vibration faster than hands.

4. Balance disturbances tend to increase with age.

Keep in mind that these are trends. Not every aged person will show a decline in sensory functioning. Furthermore, while the trends become more pronounced with advancing age, the loss of sensory powers at any age has consequences for the person's information-getting ability.

Sensory deficiencies can lead to poor adjustment on the part of the aged. It can lead to accidents, produce misunderstanding, generate anxiety, and push the aged into his own little world.

An impaired sense of balance readily lends itself to accidents, as does reduced vision. Elderly persons who are accident-prone or who continually bump into objects (especially in strange settings) probably have a defect in one of these senses. Where poor or defective eyesight cannot be corrected (by prescription or medical treatment), it becomes increasingly important to create a stable physical environment for the person (a place for everything and everything in its place). Any major alteration of the environment, including moving the elderly poorly-sighted person to a new place (such as hospital, home for aged, to live with relatives), can produce emotional discomfort. Reduced vision does not permit him to get information as to what is in his environment or where things are.

Our sense of hearing can be thought of as our social sense. In the course of daily living, it is the principal means by which we get information from others. Any loss of hearing reduces the ease with which visiting and conversations can be carried on, increases the likelihood of misunderstanding, and may effectively isolate the person from others.

It is often difficult to detect hearing disabilities, especially among older persons. Since hearing loss, where it exists, usually occurs gradually over the years, the affected person himself may not be aware he has a sensory problem. Whether the person is or is not aware, this particular problem can have major personality repercussions. For a person who knows he cannot hear well, it is potentially disturbing for a number of reasons. It means the person has to work extra hard to pay attention to what others are saying. It also means that the individual's freedom to engage in social activities is constricted.

The person who is not conscious of his hearing loss, may notice peculiarity in the way others act toward him. Partial deafness can lead that person to act in a way that makes him appear stupid, incoherent, or indifferent. The hard-of-hearing person, in turn, is likely to get

reactions from others which he sees as inappropriate or indifferent. The net effect often is that a high degree of suspiciousness or strong feelings of being rejected develop in the older person.

Practitioners must be especially sensitive to symptoms of hearing problems. The elderly man or woman who gives odd answers to questions, or who fails to pay attention to others except when talking face-to-face, or seems withdrawn from social contacts may suffer from a hearing loss.

Speaking louder, more slowly, and in direct view of the older person can help in any given situation. However, over the long haul, this way of accommodating the problem is burdensome for both the aged individual and others and is not satisfactory. It reduces the spontenaity of conversation which makes social life pleasant. Persons who have frequent conversations with older persons should be as aware of the need for comprehensive hearing examinations (audiometer tests) as for the need for examinations of heart, lungs, muscles, etc. It is no fun to be physically alive but socially dead.

Using Information

Effective use of information (to carry on daily life, to make plans and decisions, and to solve special problems), is dependent in part on so-called "native mental ability" but in greater part upon training and past experiences. There is no evidence to lead us to believe that mental ability declines with age. There are cases of major deterioration of the nervous system, however these are rare. Therefore, practitioners can expect that as far as mental abilities are concerned, there are proportionately as many bright, average, and dull persons in the older population as in the younger population.

The amount of formal education and the variety of experiences a person has had in his lifetime is more centrally associated with how information is used than is "native ability."

Effective use of information we get through our senses is predicated upon the ability to evaluate the accuracy and relevance of information. It also depends upon the ability to see connections between bits and pieces of information. To the extent that we can trust our senses, we do not worry about the accuracy of physical facts. However, having eyes and ears in good working order, is not enough to help him to interpret social facts. By social facts is meant such things as political and economic events, what other people say and the way they behave, and technological innovations. Evaluating social facts cannot be done in the same way that physical events are evaluated. For example we can test whether a plate is breakable or not, whether or not a Ford can beat a Chevy in a race, whether one medicine is a more effective cure than another.

Evaluating social facts depends additionally upon basic beliefs the person holds. For example, how do you decide whether or not short skirts are good, whether space travel is good, whether a legislative program is right or not. Such decisions depend upon the circumstances, upon one's

point of view, and upon the way basic beliefs are currently expressed.

Formal schooling, other educative opportunities such as reading, and a broad base of experience increase the possibility that an individual can see many connections among events he knows about and can understand the events in their context. In the absence of varied educative experience, a person will tend to be rather rigid in his thinking and prone to reject new ideas and practices.

In general, the older the population the lower the educational level. Approximately 50% of persons over 65 years have had less than eight years of formal schooling, while over 50% of persons 25 to 35 years old have had over eleven years of schooling. Furthermore, trends in residential mobility (moving from one community to another) is more pronounced among younger than older populations, and occurs more frequently today than when elderly people were young. Residential mobility trends and similar trends tend to require greater flexibility and adaptability. The fewer the aged persons years of schooling, the less he has travelled or moved about, the less varied his social contacts in the past, the more conservative he will be when faced with novel experiences. Although it is usually "safe" to capitalize upon the familiar when working with older persons, it is not safe to assume that this is true of all aged individuals nor that the elderly cannot be educated.

Engaging in Activities

One of the most noticeable characteristics associated with aging is the slowing down of response rate and a general slowness of behavior. It manifests itself in a reduced ability to handle complex activities, to do several things at once, or to engage in activities that require deft, speedy action.

These behavioral changes are due largely to age-related change in the human organism. Muscle tone, respiratory and circulatory rates and reflexes tend to decline with age. It is also possible general slowness of behavior is due to factors which have nothing to do with the person's physical ability to act. Loss of hearing or other conditions may lead to psychologically withdrawing from the world of reality, which in turn may be manifested by inactivity.

In a very real sense, a major reduction in one's repertoire of behavior imposes a serious constriction of one's life. The range of a person's familiar activities that he can engage in becomes narrowed, thus potentially reducing the range of interests and wants that he can satisfy. A valuable function that practitioners can perform for elderly persons is to assist them to find alternative activities that the person can engage in.

Vocational shift is another category of behavioral change that goes with aging, and that is usually a matter of great concern for the aged individual. Aside from the reduction or loss of income, retirement from

a job is also leaving a domain of activity that customarily consumes 1/3 to 1/2 of a person's waking hours each week. A familiar environment, familiar associates, and comfortable habits are removed upon retirement. It leaves a large block of hours to be filled with activity.

Learning, Memory, Performance and Achievement

In this increasingly complex world of ours, the factor of age does not relieve us of the pressures to learn, to perform, to achieve. New gadgets, new procedures and methods of organization of people and materials, new concepts and with them new language (the Space Age, for example), even new ways to be ill and new ways to be treated -- all of these call upon the older adult to learn and remember and do. And the complexities and distress and the needs and opportunities for service call upon the older adult to contribute knowledge and experience and understanding, because society needs his contribution, and the older adult has an even greater need to make it.

There is no doubt that the ability to learn does not change basically to any substantial degree with aging. To be sure, the oft-cited reduction in sensory acuity and behavioral potential will make it more difficult for the older adult to learn certain procedures involving dexterity and sensory perception. Basically, however, the healthy older adult with unimpaired intellectual capacities will hold his own with younger adults when it comes to learning. And where the use of written material is involved, he may even surpass his younger colleague.

We know much less about memory than we would like. We do know that the aged person tends to remember recent events less vividly than past events. This may be related to recall of a happier period of life, for it is here that memory performs a useful and important service for the older adult. Certainly, disturbances in memory need not be diagnosed in terms of aging, except possibly in the very old, for disease can be a major cause.

In the case of both learning and memory, initial motivation and the interest felt by the older adult is likely to be much more significant than aging per se. Older people learn much better if they have a substantial interest in the subject, if they are strongly motivated, especially if they can use familiar methods of organizing their ideas. This last factor is manifest again in the ease with which the elderly are able to learn associated facts. As has already been pointed out, in training older people for a new task, it is important to proceed slowly so that each step can be assimilated correctly.

In general, the manner of performance and achievement in older people tends to shift from speed to accuracy. Consequently, less work is done by the older person, but what is achieved is likely to be more accurate than similar work done by a younger person.

When we think of achievement in broader terms than the performance of an individual task, aging is not only not a retarding factor but in many

instances may actually enhance the individual's ability to achieve. Certainly in those fields wehre life experience, maturity of judgment, accumulation of knowledge and education are the factors, the older adult has the advantage over the young adult. Thus, we take for granted the achievements of older adults in such areas as musical creativity, medicine, philosophy, politics, national and international leadership.

Birren suggests a useful classification of changes in capacity as a basis for considering achievement: "There seems some basis for accepting the general view that physical capacities develop and decline earliest, while psychological capacities develop later and permit high-level achievements over most of the employed life span. Social skills mature latest and, in individuals in good health and in a favorable environment, are maintained at a high level throughout the life span."

Self-Feelings and Adjustment

Personal adjustment has two sides. On the one hand, are the objective abilities to get information, to reason with it, and to act upon it. On the other hand are the subjective feelings a person has about himself, particularly feelings of competence, confidence and contentment. Many of the organic, environmental and social changes associated with aging affect the elderly person's sense of well being.

A sense of well being begins with feelings of competence, feelings of competence to perform useful and interesting tasks, to engage others in conversation, to express one's self. The part that others play in gaining feelings of competence are exceedingly great. Although there are some kinds of behavior that we can evaluate for ourselves, our sense of how well we can do things rests largely upon how others evaluate or react to our performance. Practitioners and others who play significant roles in the lives of older people are the primary sources of information the elderly need to acquire and maintain realistic feelings of being more or less competent.

In addition to feeling competent, a person needs assurance that his information and understanding are accurate. Being uncertain can arouse anxiety and frustration, and even disable a person. A person needs confidence that he is knowledgeable, and without that confidence one must be prepared to take risks. By and large aged persons are less likely to be in a position to take risks than are younger persons. Constrictions of resources and behavioral alternatives that are associated with advancing age, do not afford older persons many opportunities to be risky.

Playing things safe is one solution. Older persons are often characterized as taking especial comfort in the familiar. This certainly is not true of all, but it can be expected to the degree that one's life opportunities are reduced. If the rejection of new and different experiences is carried to an extreme, the person gives the appearance of being rigid, inflexible. Such traits are often deeply ingrained and are difficult to change. However, anxiety which usually accompanies the

rigidity symptom, can be reduced by practitioners to some extent by providing support and facilitating a sense of success.

A Note on the Psychological Aspects of Being a Practitioner

In another section of these Manuals, American society was characterized as an impersonal society. The size of our society's population, its regional variations, its variety of cultural heritages, and the intricacies of its economic and political institutions yields a complex array of social facts. Anonymity and impersonality in social contacts are necessary. In place of personal knowledge about others, we use labels and stereotypes. The term "aged" is often used to designate something other than how old a person is. The term "aged" includes notions about how older persons behave, the traits they possess, and the attitudes they exhibit. Unless we as practitioners who deal with the elderly have prolonged contact with them, we too may find ourselves dealing with them as if they were a type. Individuality at age 70 is as evident as it is at age 35. Thinking of older people as a type of person usually leads to dealing with them in a stereotypic fashion.

There are no doubt many traits and conditions that are prevalent among the aged, such as conservatism, caution, sensory difficulties, health problems, economic and social deprivations, and general reduction of opportunities to be active. The adjustment demands in old age can be great and trying, and the success of the older person's attempts to adjust rest in the competence and confidence that you, the practitioner, have in performing your role. The aged and their needs are central parts of the practitioner's life situation to which he must adjust.

SOCIOLOGICAL ASPECTS OF AGING

III. SOCIOLOGICAL ASPECTS OF AGING

The usual concern with aging as a social phenomena emphasizes the material implications of aging--that is: the problems of the older consumer with a reduced income of fixed purchasing power in an expanding economy. The question most often asked: How are the aging to maintain an adequate standard of living and a satisfactory level of health? Less often asked but equally important: What are the social implications of growing old? Such a question has become the crucial one, for as Natalie Cabot so touchingly entitled her book on The Dilemma of the Aged, You Can't Count On Dying.

The Economically Related Changes of Later Life.

Occupational retirement and the accompanying reduction in income does pose problems for the aged. In fact, 52% of the heads of households age sixty-five and older had incomes of $3,000 or less (Consumer Incomes, U.S. Bureau of Census, 1960), but a variety of circumstances act to diminish the difference between a reduced income and the cash needed by older people to meet current expenditures. Older people, for example, need make fewer capital expenditures for such items as furnishings, automobiles, etc., and incur less debt, including mortgages, as well as being in a more favorable tax position than the younger worker. The retired worker is more or less the beneficiary of an industrial policy for old age which provides pensions, housing, and medical care, when, due to advanced years, he is no longer required to trade time in labor for the necessities of subsistence. The incomes of 75% of the people over 65 are supplemented by one or the other of a number of public assistance programs, particularly old Age Survivors and Disability Insurance (OASDI) which makes adjustments in benefits to correspond with changes in the Consumer Price Index. Also, Old Age Assistance (OAA) provides additional support for more than 2 million people whose OASDI benefits do not allow them to maintain a reasonably adequate standard of living. Social welfare advances of the past year (Medicare) will also provide assistance which should reduce further the financial demands made on the reduced incomes of older people. The implementation of this recent legislation amending the Social Security Act is still to be accomplished and evaluation of its program of medical assistance will require the future efforts of all those interested in the problems of the aging.

All of this is not to say that the aging do not have money problems. A reasonable income level is needed but not always available to purchase consumables such as food, personal services, and medical care. Rather it is to say that these programs of assistance make the problems of aging less economic and more sociological than they are usually considered to be. For example, interesting many of the eligible aged in voluntary participation in the program of Supplementary Medical Insurance was as much the result of sociological factors like source and type of information as of economic factors such as cost ($ 3.00 a month) and financial advantage (no private program could provide the benefits at so low a per person cost).

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The loss of income is but one aspect of aging and the place of the old in the United States. Work not only provided income but a meaningful group of people with which to identify and a reason for playing all the other conventional roles demanded of people. A working "husband" has prestige and a great deal of support for his role in the family but it would be difficult to remain "head of the family" if he were not working. The work people do establishes their position in society, allowing us to evaluate their status and provide a context within which we are able to interpret their social activity. For women, though there are increasing numbers working in business, industry, and the professions, the major role is still the family one, being mother and wife, and both these roles are altered during the latter part of the life cycle. A woman in the home must deal with the unaccustomed constant presence of her retired husband; a situation described most forcefully by the wife of a retired man: "I married him for better or worse, not for lunch!" She is no longer busy as a mother, except as a sometime babysitter, since her children have long since married and left home--leaving her with time of her own.

There is a further change in status which accompanies the change in roles: being a non-worker and limited breadwinner also has implications for the male's authority as a father; thus, it becomes obvious that it is not only his "work-related" knowledge which is felt to be out-of-date and thus capable of being ignored. Also, changes in self-concept take place as roles and status change. With reduced status, the older adult may begin to see himself as the members of his family and as society see him, out-of-date and socially irrelevant. This social irrelevance is compounded further by the fact that retirement has reduced the opportunities for a meaningful role for the older person involved. He is deprived of the companionship of the work situation. If he was active in his union or professionsl association, retirement has probably taken from him another area of social relationships and meaningful activity. (Nor is he always welcome on an all-day basis at home, as has already been pointed out.) Furthermore, the active businessman who was an asset to the church building committee because of his business associations and contacts, is often passed over after retirement because he can no longer bring to the committee the benefits of his former associations. If the individual has been active in a church, for example, and accustomed to "hold his own" in fund-raising activities, even though these involved nothing more than the purchase of tickets for a church affair, he will often withdraw from church activities because he is ashamed not to be able to buy tickets with his reduced income, or possibly, because he can't afford the regular cost of transportation. This, however, is changing somewhat and more and more people are continuing to be active in civic matters after they retire.

We imply by our policy and programs for the aging that by lengthy labor people earn the right to rewards which will make their later years comfortable. But it is tacitly understood that we allow people to retire and receive the accompanying benefits in order to facilitate their removal from roles which we consider them no longer capable of playing. The older people who are so removed from their work roles suffer a social loss--the loss of an occupational identity and functional role in society. This loss of role because of age is involuntary retirement and does not reflect

favorably upon the ability of a person to play his work and other social roles. Society defines the aging as people who are most likely to fail and retirement is the mechanism by which we reduce the chances of their failing.

The Social and Living Arrangements of the Aged

According to a staff report to the Congressional Special Committee on Aging (1960), of those aged 65 to 74, 77 per cent lived in families, 21 per cent lived with unrelated individuals and 2 per cent were inmates of institutions. However, of those at the more advanced age of 75 and over, only 69 per cent lived in families, and the number living with unrelated individuals and in institutions increased to 27 per cent and 4 per cent respectively. Thus few of the aged are as completely isolated as commonly thought. It is often felt that the intergenerational household is a thing of the past and its social life, which the aged have enjoyed in the past, has deteriorated badly. There have been studies, however, which indicate that the decline of family life may have been exaggerated or, if family life did deteriorate, the family may now be reviving as a social group. The family relationships of the aging are not as lacking as were earlier thought and the type and frequency of social contact between adult children and their aged parents does not support the stereotype of older people abandoned by their children. Social contact between parents and children are not necessarily reduced by the parents growing old and may increase as children settle after marriage or the retired man has more time for his family.

The housing arrangements of young adults may exclude elderly parents but older people with living adult children live in close proximity to at least one child and visit that child on a regular basis--for example: in addition to the 1 out of 3 that live in the home of an adult child, 1 out of 4 live on the same block or within walking distance of a child and an additional 1 out of 4 live within commuting distance (by public conveyance) of a child. The family may not be housed under the same roof but separate households do not adversely affect the family unless there are other factors which complicate or make it difficult to maintain a relationship between a parent and child. The deterioration of the family and the isolation of the aging cannot be assumed because the older person is not living under the same roof as a child; in fact, older people prefer to live apart from children but do make an effort to live near a child. A survey of the aging (1965) who had changed residences indicated that the reason for the change in housing was most often personal convenience (including economy and climate) but many admitted moving for no other reason than to be where the children are and, thereby, maintain social contact within the family. Children may also be more accomodating than they were once thought to be--for example: planning and purchase of housing with facilities (usually a bedroom and bath with private entrance) for an in-law suite.

Older people do not always have children or may choose not to stay in a particular locale just to be near a child. Many people are free of entangling relationships and an increasing number of workers when they

retire have no attachment to the locality or area in which they had been working. These people may seek a homogeneous community where older people are accepted and where services are oriented to their needs and problems. The "retirement community" is created by plan or by circumstances to meet the needs of these people--however, not all older people prefer this type of living arrangement and describe them as "cemetery cities" (1965). There are advantages to be had from a "retirement community," for example, standardization, centralization, and specialization of services, but such arrangements are nothing more than a sophisticated variation of "separate but equal" facilities for older people. Older people are again set apart from society.

The Associational and Leisure Time Activities

Without work, too often the problem of filling one's time becomes a burden rather than a pleasure. People, first, often turn to a general expansion of former activities--to friends, church, and civic affairs. The visit to a friend or neighbor plays an important part in the day to day social life of the aging--these visits may, in fact, be more important to social adjustment by the older person than his relationships with adult children. Social contacts between friends are satisfying but those of the aging who wish to make new friends, compared to those who are satisfied with the friends they have, may have less problems in adjusting to the changes of old age. Needless to say, good health and no mobility handicaps facilitate the making of new friends and the visiting of old friends and neighbors.

Church membership and other religious interests have been found to be related to personal and social adjustment by the aging. Studies usually find that non-members have lower levels of adjustment than do members of a church. The church is a social system with a variety of roles and range of participation (in addition to the personal religious experience) for the older person which afford him a social group in which to continue a social life.

The political arena and the civic life of the community provide two of the few areas in which age may be an asset rather than a liability. With all the accent on youth in politics, there continue to be ample opportunities for status and functions for the older citizen, whether as the "old pro" in a leadership capacity or as ward and precinct workers. The fact of two ex-presidents continuing to play active national roles--one in his late 70's, the other past 80--is symbolic: these are but two "aged" persons. However, in the Senate, in the House of Representatives, in the Supreme Court (traditionally known as the "nine old men"), on the state and local level of our political life, chronologically old people are active and have become a collective symbol which offers hope and status--however vicarious--to other old people.

In the civic life of the community, to a lesser but now growing extent, older persons are beginning to find a role. They are asked to serve on

commissions; many community agencies are taking advantage of specific skills and experience of older citizens for special jobs--as advisors to school drop-outs, to fill personnel gaps in vocational and other education programs, as counselors to small businesses. The importance of this growing development cannot be underestimated, for civic activity and the opportunity to serve give to older persons a role and a sense of worth which would be hard to find in other areas of their lives.

It is, however, in the addition of new activities, that the hope of an escape from daily drudgery exist. Thus, in anticipation of the day when the worker will retire, the day he will lose his occupational identity, he is encouraged by his family, friends, and even employer, to adjust by spending his leisure time in some activity which holds meaning for him. In place of work the retired worker is offered leisure and encouraged to remain active and, by so doing, adjust to his retirement and loss of role (a role we have just noted is difficult to fulfill because of his very separation from the work sphere).

A problem with leisure is that people who have time free from work are hard put to find some activity with which to fill this time. The people met on the job were potential friends and companions with whom, if one wanted, it was possible to do things--for examples, company bowling teams, car pools, and other such work related activity which brings people together. When people lose their work role they no longer have these opportunities for social contacts and find it more difficult to meet the social needs of life.

Social adjustment to this crucial life change is not made by simply filling time with busy work. For example, solitary leisure will not provide a person with the opportunity for social contacts and might well only increase withdrawal from social participation. Older people who are no longer working have high morale and personal satisfaction when they voluntarily participate in activity which affords them status, recognition, and achievement. (See Five Hundred Over Sixty, N.Y.: Russell Sage Foundation, 1956). Even activity which provides a social group with which to replace former co-workers may not be enough--people must be able to express themselves in ways which have meaning for others as well as the members of their recreational group.

The "American" way of work and leisure values activity of any sort over non-activity and emphasizes efficiency, functionalism, and productivity. "While (leisure) has a definite value, to make a career of recreation, hobbies, and the like, goes against deeply instilled values." (See Human Behavior and Social Processes, Boston: Houghton-Mifflin Co., 1962). Leisure with the following characteristics apparently does reduce the social loss of the aging and facilitate their social adjustment:

(1) A recurrent activity organized by an agency, practitioner and/or members of a group which is visible to a social audience and permits a range of participation which may be employed as a new role;

(2) Activity which may be created for and possibly engaged in only by older people but is in some way appropriate in terms of traditional and contemporary social values which do not apply specifically to the aging but the American population in general;

(3) Activity into which aspects of work may be introduced--this is explained in the following way by the wife of an aging leisure participant: "Hobbies are eccentric when you never make anything (useful) out of them or get anything (monetary) out of them." (See The Dilemma of a Social Role for the Aging, Brandeis University, Papers in Social Welfare, No. 8, 1965).

It is for such reasons that the use of the aged and retired in such activities as Vista, The Peace Corps and the War on Poverty hold such promise. For as the slogan so often used for Big Brother Programs so it is for the aged,--no one stands so tall as when they stoop to help another.

Health and Illness in the Old

A great deal of what is done for or to the aged is defended on the basis of their health and their consequent lack of ability to take care of themselves. It is to this area that we now turn.

The Physical Health of the Old

Declining health is a characteristic of aging which forbodes death and reminds a person in numerous ways that he is old and growing older. There are four groups among the aging, each with its own level of health:

(1) A number of older people suffer little decline in health and no serious disability.

(2) Other people are subject to a gradual and expected decline in health but have no serious disability.

(3) For still others, there is a serious decline in health which involves disability and the expectation of approaching death.

(4) For a very few people, increased age is associated with better health.

No matter what the level of health, medical science has made it possible for people to grow older and, thereby, be subject to chronic health

problems requiring long term medical care. The proportions of patients suffering from chronic illness have dramatically increased over the past years; for example, in 1900, 25% of deaths were attributable to heart disease, cancer, and cerebrovascular accidents but, by 1965, 70% were due to these same disease entities (Bureau of the Census, 1960). The American population is living longer and as life expectancy increases so will the problems of providing care and service to people suffering chronic medical problems and poor health.

Thus, at least 75 per cent of the 65+ group have one or more chronic conditions, the proportion being closer to 85 per cent in the 75+ group. As a result the aging usually require "long term care" which, by definition, is a duration of services longer than usual--for example: hospitalization for more than 30 days rather than the average length of stay in hospital. The social forces and changes which influence the social organization of American activity have also rendered inadequate the traditional reliance on individual and family responsibility for the care of the old. The "working mother" has little time to stay at home and the devoted daughter caring for elderly parents is fast being replaced by the career woman. Family personnel are no longer available and, even if they were, the technology and cost of long-term care prohibits its provision in the home.

The sociological characteristics of long-term care are:

(1) Long-term care has not completely emerged as a type of care but is becoming a particular area of medical concern and expertise.

(2) Long-term care has largely been unplanned on a community basis and has resulted in a trial and error approach to the provision of these services.

(3) A large number of long-term patients are medically indigent and the approach has been to consider their care usually in terms of institutionalization.

(4) Long-term care makes both social and economic demands on the family and special attention must be paid to a redefinition of the indigent to include people who by today's standards are not indigent.

(5) Long-term care should involve the provision of multiple services, a situation which parallels the development of medical teams in the health field.

(6) And, until medicare, long-term care was disproportionately provided to an aged population, a fact which continued the "separate but equal" policy of services for the elderly.

A number of studies have been conducted of retirees who are comparatively economically sound and eligible for liberal health benefits. The advantage

of such studies is that they result in data about groups of people who are in many ways the prototype of the future aging population of the United States; that is: they enjoy now the economic and medical care advantages that increased social security benefits, liberalized industrial and union pensions, and minimal economic barriers to health services will confer in the immediate future upon all older people. The following generalizations may be made about the relationship between sociological factors and the utilization of medical facilities by the aging:

(1) A health care system could become a typical source of care for older ambulatory patients as well as the traditional hospitalized patient requiring long-term care.

(2) A system of medical care that is to some degree innovative will be utilized--the attempts of health planners to develop medical care programs on the model of the traditional solo medical practice because this type of system is preferred by the potential consumer may be an erroneous planning assumption.

(3) Location and type of facility, for example, small decentralized (neighborhood) health service units as opposed to large centrally located medical centers, influence the utilization of the facility--the aging may prefer the smaller unit convenient to transportation and other facilities.

(4) Studies in the past have demonstrated a relationship between utilization of medical services and a variety of sociological variables; whether or not such variables are important in determining utilization of the aging consumer of health services remains a matter for further study.

Most important,however, is what are the sociological implications of "being sick". For in the minds of many people, the sick role is associated with age. One marvels at an old man who is nevertheless in excellent health and one shakes his head at the sick man who is "yet so young". Because the aged are considered to be exempt or deserving of exemption from the responsibilities of the productive adult, illness and hospitalization only climaxes in a dramatic way the loss of roles by the aged. The requirements of patienthood are (1) more easily met because they continue the process of loss already begun and (2) they are made more difficult because of the dramatic and public acknowledgement of these very losses.

Mental Health and Functioning

Older people who have had a tendency toward psychosis throughout life and those people who degenerate physiologically into senility have personal problems, but the majority of emotional disturbance is less severe and is the result of the loss of social roles and the search for a new life role. The aging are not only coping with the demands of a major

life change but face the possibility of further changes, particularly changes in health. The coping and axiety result in minor forms of ill health and mental states which pose problems for those who care or have the responsibility for older people. Two of the most common coping mechanisms of the aged are:

(1) Hypochondriasis, the aging person becomes aware of an increasing number of health problems and a general state of bad health which results in complaining, frequent visits to physicians, self-doctoring with patent medicines, etc.

(2) Denial of changes in health, the older person may refuse to recognize the signs of failing health and resist medical care and advice about his state of health.

No matter how hard people try, a decline in physical powers will result in some recognition of the fact that the incapacities of old age are part of the future of all those growing old. For some, the physical decline may be gradual and wanting good health so much a personal need, that the recognition is a traumatic shock, resulting in depression and social disorganization of self and roles. For most, the realization may be unpleasant but is of no sudden shock. Whatever the problems of health, adjusting to a decline of physical power and ability requires a lot of effort in order to be accepted with a minimum of social and emotional disturbance.

A number of studies have based their research efforts on the assumed relationship between social isolation and mental health or the lack of mental health. The data is not conclusive but, all things considered, it would be safe to say that social isolation is a factor which acts with various types of personality characteristics predisposing a person toward mental illness or health. The loss of a social role by retirement or widowhood does not always result in a mental state of disturbance--it may well be that social loss and isolation are not matters of quantity but quality of social contact and participation. People will have varying social needs, a reflection of their characteristic social style (personality), and their problems and adjustment must be gauged in terms of past style as well as current social life.

There is little doubt, however, that the form of mental illness from which the elderly might suffer often reflects the sad reality which they face. How "unreal" was the following paranoid episode of an institutionalized patient? He would not sleep because he felt someone was stealing all his possessions--clothes, pictures, mementos-and, when everything had been stolen, then he (the patient) would die. The murderer, however, would never be caught because there would be no evidence that he (the patient) ever lived.

As for general mental functioning, it is becoming apparent that the old more often reflect what the environment expects of them than the objective capacities of those who are old. In general it appears that the aged are less efficient than the young in regard to certain very

select memory tasks. Even more enlightening is their capacity to learn new tasks. Motivation appears to be the key variable. James Birren (1964) has recently stated, "The evidence that has been accumulating on both animal and human aging suggests that changes with age in the primary ability to learn are small under most circumstances."

The Social Implications of Death and Dying

The personal and social importance of "death" for older people has been, in most part, the result of speculation rather than scientific or social research. There is little doubt that the decisions and acts of older persons take into account both the facts of life and eventual death--all health precaution and insurance programs reflect the degree to which death is a real matter. What might for others be normal interests, for examples, genealogy, the writing of a family history or autobiography,etc., are often considered to be interests peculiar to the aging. The assumption is that such interests by people nearing the end of life are reflections of a concern with perpetuating life in some way or with death. There is no data supporting a conclusion that older people do engage significantly more often in activity which reflects a preoccupation with death and dying.

A fear of death and a conscious concern with dying is the result of an attitude toward the process of dying and may not be related to the actual fact of death. Older people may recognize they are further along in the process but they as a group do not appear to more death oriented than younger people--both young and old apparantly share a fear of losing a physical self in much the same way that people about to retire fear the loss of an occupational self. There is the possibility, however, that the medical advances which result in our growing older may also increase the anxiety of the old that they will fall victim to a chronic disease and suffer a lingering death. The degree to which this is true will pose the aging with a dilemma: accept the immediate benefits of medical technique and technology for the old and prolong life to a point where it may be debilitated by a disease peculiar to the very old or chance an early death? The implications of this dilemma are more apparent than the reality of "death"--for example: Will the fear of a prolonged process of dying result in a reduced demand on medical facilities and utilization of services?

What we would most like to forget is that dying is a process. Although the events surrounding death are often perceived as automatic, inevitable, or beyond our control, in actuality they are constantly affected by cultural traditions and human decision- makers. The decisions "who", "where", "when", and "how" are part of the dying process of each individual. The irony is that at a time when mourning rituals and other such "preparations for dying" are on the way out, the proportion of people who "die" over a period of months and years is increasing. As a result the personal encounter with the aged and dying particularly where medical personnel are concerned, still seems highly upsetting and is most commonly avoided. Thus as Kalish (1965) has stated "the increasing need to examine

our decisions regarding the dying process has outdistanced our willingness to do so. As a result, many decisions involving the dying process are ignored, avoided, postponed, or not seen as occurrences which involve decisions in the first place."

The Current and Future Perspective on Aging

So far we have delineated some of the objective conditions facing the aged in our society, now we turn to some of the more general social outcomes of this situation.

The American Subculture of the Aging

A subculture develops within a society when the members of any one group of people interact with each other more than they interact with other people. There are three reasons for this happening: (1) the group members have a great number of interests in common or share common problems, and (2) the members are excluded from interacting with other people, (3) the formation of such a social group will provide the aged with a meaningful social audience and a ragne of participation and opportunity within which they can create new roles.

Older people have common generational experiences and are subject to the same role change demanded by a rapidly changing society--also, the following conditions of our society act to create a special group of the aging:

(1) The growing number and proportion of people who live beyond age sixty-five, from 4% in 1900 to more than 9% in 1960, approximately 18,000,000 people who could become members of a special social group of the aging.

(2) Advances in preventive medicine, physical medicine (rehabilitation), and the control of acute and communicable disease as well as other public health achievements which result in a larger number of people reaching age sixty-five in good physical condition and health--a condition which allows the aging the stamina to participate socially.

(3) Because of medical advances, more people are growing old and, therefore, more people are subject to the debilitating effects of chronic illness (46% of deaths in 1900 were caused by chronic illnesses but 81% were so caused by 1955)--a condition which required political action and federal legislation to provide a program of medical care for the aging which, in its turn, gave older people a sense of common need and purpose as a group.

(4) Increases in the standard of living and level of education have resulted in people reaching retirement age with funds, knowledge, and skill with which to engage in organized activity.

(5) A deline in the number of self-employed who could work as long

as they wanted as well as increased compulsory retirement removes people from general society which obliged them to interact with others of all ages.

(6) Social welfare services have brought the aging together (group work) and increased the opportunities for older people to identify with each other--increasing numbers of retirement homes, nursing homes, housing projects, etc., sponsored by public and private agencies have acted to separate older people from the rest of society.

(7) The aging have acted to segregate themselves from the general population by living in retirement communities or preferring specific locations with mild climates, for example, Florida, or by joining special interest groups such as Golden Age Clubs, Senior Citizens, etc., participation in which reinforces the stereotype of the aging as people to be set apart from those who are not old.

The Aging as a Minority Group

The conditions which create a special group of the aging not only give older people a new and distinct position in society, apart from those under sixty-five, but also create new problems:

(1) Older people may become a part of an aging subculture, belong to a variety of groups, and find a new role, but the way in which they were removed from old roles does not reflect favorably upon their ability to perform social roles--that is, older people must continue to operate in an age-graded social system which defines them as people who are socially superannuated and of less value than people under sixty-five.

(2) The aging as a group are subject to what amounts to prejudice and segregation--for examples: job discrimination against the older worker results in only 1 out of 3 men over 65 working and of that number most are self-employed or working for local, state, and federal agencies; our policy for old age provides special facilities and programs for older people or, so to say, "separate but equal" facilities.

(3) The aging are a growing minority to whom negative characteristics have been attributed but they are developing group pride and identity (becoming an in group) as well as reacting to younger generation (the outgroup) by manifesting resentment and contemplating social action to remove the sources of that resentment.

Older people have been complaining for some time about a lack of money, poor housing, the difficulty in obtaining medical care, and general social neglect. The aging are aware that these problems are not only

individual but are the problems of a social group. The aging have begun to talk in terms of social action and, as a minority group, have supported certain government actions. (Their support of Congressional bills for financing health care and opposition to groups not in favor of such legislation is a significant example of the aging on their way to becoming a voting bloc, political pressure group, and lobby for benefits for the aging.)

The research data are not conclusive and it is possible that a negative opinion of the aging and their place in society may not necessarily be incompatible with a personal sense of well-being and social worth. If this is the case, then the aging may not develop an age-group identification and set themselves in opposition to those under sixty-five. Sociologists need to conduct systematic studies of the formation of the aging group in American society in the same way that they have studied ethnic, regional, and occupational groups. One reason that the aging have been neglected by sociological researchers is that the aging have until recently been a social problem of low priority and of interest only to those in social reform or welfare (see Rose, The Gerontologist, 2: pp. 123-27, 1962). The White House Conference on Aging (1961) and the subsequent interest of governmental agencies, particularly the Public Health Service, in the conditions, needs, and use of facilities for older people made funds available and stimulated research interest in aging.

Aging and Stigmatization- Terminable or Interminable

There is little doubt that future gerontological thinking on the problem of aging will itself have an important influence on the more general societal reaction. For it will make an enormous difference in our response depending on whether aging is conceived of as a pathological diesease process, a reversible or maintainable hormonal process or a more "normal" maturational process. Biologists have tended to regard aging as a generally unfavorable sequence of events with some disagreement confined to which of the symptoms are most basic or fundamental. The notion that it might be a normal process not entirely or necessarily detrimental to the individual is more likely to be found in the theories of behavioral scientists. (Some of the most stimulating work on this subject is to be found in the work of Cumming and Henry Growing Old and the several excellent writings and editings of Kastenbaum, Contributions to the Psychology of Aging,1965, New Thoughts on Old Age, 1964, and Old Age as a Social Issue, special issue of the Journal of Social Issues 1965). On the latter notion, two different approaches are noteworthy. The first conceives of normal aging as predicated upon the image of a long life without growing old. Thus the prescription to imbibe a soft drink and "think young" represents an acceptance of aging people who manage to retain their youthful characteristics. A quite different orientation is seen in the "disengagement" theorists who postulate a mutual withdrawal between the aging person and the rest of society as initiated by the individual himself or by others in his immediate social network.

While the stigmatization of the aged in our society almost seems a natural outgrowth of our technological and industrial living, this process need not continue interminably, in fact some of the very social forces producing this problem may yet lead to its demise (more quickly perhaps if we are aware of it). Medical science, while prolonging life and thereby giving rise to many of the problems cited here, is thereby guaranteeing them a more vocal social and political force if only by the sheer numbers. With birth control measures becoming increasingly widespread, the aged will increase in proportion to the rest of the population. Thus it might soon be patently ridiculous to have a group treated as a minority and deviant when it may well constitute a majority of the population.

The knowledge and skills of the elderly, accumulated by long training -- often into their 30's and 40's, is presently dispensed with after only 25 or 30 years because of compulsory retirment at age 65. To be sure, much of this "disenfranchisement" of the aged is due to the out dating of their technical manual skills. However, there is little reason to believe that this situation would persist when a significant portion of the population -- and so the aged -- is college-educated. One social gerontologist has been even more explicit in this contention (Kaplan 1964):

"I am inclined to believe that the field of education offers unlimited opportunities for people who have been relieved of work and family responsibilities. It seems to me that the complexities of our industrial civilization require that youth limit their education primarily to technical and scientific training. They emerge from our schools and universities as well-trained technicians, but rarely as educated people. It is my contention that only the retired person can become the truly educated person of tomorrow."

The full implications of this mutual interdependence of the generations is traced most explicitly in the work of Erik Erickson (Insight and Responsibility 1964) for there he points out that the denegration of old age is directly related to much of the current identity crisis of youth.

"As we come to the last stage we become aware of the fact that our civilization really does not harbor a concept of the whole life, as do the civilizations of the East: 'In office, a Confucian, in retirement a Taoist.' ... If the cycle in many ways turns back on its own beginnings, so that the very old become again like children, the question is whether the return is to a child likeness seasoned with wisdom -- or to a finite childishness. This is not only important within that of generations, for it can only weaken the vital fiber of the younger generation if the evidence of daily living verifies man's prolonged last phase as a sanctioned period of childishness. Any span of the cycle lived without vigorous meaning, at the beginning, in the middle, or at the end, endangers the sense of life and the meaning of death in all whose life stages are intertwined."

Epilogue

In the section on concepts of aging, it was pointed out that the term "aged" is more often than not the device of an "impersonal society" which uses a fixed point in time -- usually 65 years of age -- as a "convenient social and legal basis for determining status." In other words, without taking any particular cognizance of differences in the physical capacities, social relationships or environments among the chronologically older group, society has designated this group as aged, thereby tending to place older persons into socially stereotyped categories.

In this section we have discussed the objective reality of such steretoyping, the changes which take place with reference to the aging person's place and role in society and how the fact of being designated 'old' does in fact generate differential behavior not only on the part of the aged person but also on the part of his surrounding society.

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SUPPLEMENTARY READINGS

June 3, 1965

FOR THE CURRICULUM PROJECT OF THE
GERONTOLOGICAL SOCIETY

HISTORY OF GERONTOLOGY

With the advent of modern medicine the life expectancy of the individual in the United States has been extended. This phenomena along with the drastically reduced immigration of younger people into the country accounts for the growth in the porportion of older citizens in our country. Conditions are anticipated which will further increase the number of older people here for sometime in the future, if not the proportion of total population. In response to what has been a relatively sudden growth in the number of individuals entering the later years, the field of gerontology[1] is coming of age.

For centuries throughout the world there have been individuals who were concerned in various ways with aging of the human, but never before have so many professions and professionals been as actively involved in questions, problems, and practices concerned with aging as today.

Following is a glance at the history of gerontology.[2]

Many influences flowed out of the eastern Mediterranean basin, along both shores and particularly in Greece, to find a focus in Spain from the eighth to the twelfth century. Western Europe accepted and projected the ideas in momentous scientific moves. In both static and dynamic cultures, the aging became a matter of special issue because of the attainment of an increase in average individual life span and expanded expectancies of survival.

Despite a number of contributions to the clinical science, in geriatrics, it was not until the late nineteenth century that the spread between genetic and ecological potentials began to be closed. Prior to that time most reflections on aging had been summarized in Renaissance man's views as part of his humanistic inheritance. Later, specificity in the studies of aging produced a different type of literature.

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[1]Used here to include geriatrics.

[2]This is based on the following materials: "Perspectives in Aging" Part II of The Gerontologist, Vol. 5, Number 1, March 1965, published by Gerontological Society, 660 South Euclid Avenue, St. Louis, Missouri 63110. Edited and compiled by Joseph T. Freeman and Irving L. Webber; contributions by Alfred H. Lawton, Walter R. Miles and Ollie A. Randall. "A Brief History of the Psychology of Aging," an article in two parts appearing in The Gerontologist, Vol. 1, Number 2, Vol. 1, Number 3, June 1961 and September 1961 respectively, by James E. Birren.

While biologists struggled with theories with regard to the causation of aging, physicians endeavored to bring order into clinical management. Both approaches tended to be tampered with by emotions and uncritical material. Clinical clarity appeared in a number of works from the middle of the nineteenth century. By 1867 Charcot had been able to demonstrate in his ward and autopsy studies certain conclusions about senescence of which physicians were beginning to become informed. Concurrently, an occasional definitive study of physiological mechanisms in contrasting age groups began to appear. Annotations and documentation followed the lead of von Ranke into the twentieth century. A dazzling list of great students pointed to this time and gave impetus to forces which are still in acceleration.

The changing economic and social structures added their share. By the time of the second World War, all of the accumulated needs for objective understanding of aging as a biological process, and of its clinical counterparts which required identification and proper management, came to the fore. This modern era in gerontology dates to 1940. This was not a fully matured goddess sprung from the head of a geriatric Zeus. It was the culmination of a great deal of effort which was novel only to those who did not bother to investigate the gathering lines of influence which led to this point of departure.

Current History of Gerontology in the Discipline of Biology can be focused by starting in 1930, when Edward J. Stieglitz became the first chairman of the U. S. Public Health Service Section of Aging.

Early in 1937 there was a conference on aging, at Woods Hole. And because the subject of aging was becoming popular, a year later it was necessary to convene a conference of committee on the Biological Process of Aging. At the same time the medical Societies began to consider the subject.

In 1940 various federal committees and council divisions of aging were established. It was then that Drs. Korenchevsky and MacNider were working to organize an American branch of the institution for research on Aging.

In 1942, the American Geriatrics Society had been founded. Shortly thereafter the Gerontological Society was incorporated as a successor to the Club for Research in Aging.

Early in 1945, the current Period of Expansion was evident. Dr. Edward J. Stieglitz (1945) had published the first edition of his Geriatric Medicine. Dr. Nathan Shock was steering the National Advisory Committee on Gerontology. Within a few months, staffing of the Gerontological Unit of the National Institutes of Health began, although it was not until 1948 that this unit became a full branch of the National Heart Institute.

That same year, 1952, Oscar R. Ewing, Federal Security Administrator, appointed a Committee on Geriatrics and Gerontology with Clark Tibbitts as Chairman. This committee was charged with the responsibility of integrating the activities in the field of aging which had developed in various branches of the Federal Government as well as under various non-Federal sponsorships. The next year, the Section on Aging was established in the National Institute of Mental Health; it is in this section that Birren had been so productive. Meanwhile, symposia and local, national and international meetings devoted to reports from studies in aging, such as those underwritten by the Josiah Macy Foundation, became almost commonplace.

In 1952, Lansing reviewed the theories of the causes of aging which had been propounded during the first half of the twentieth century. Cell intoxication, changing relationships between cell volume and cell surface area, cellular ultradifferentiation, and colloid aging were those which were receiving the most research attention. Ten years later, another review article indicated that there was still no unanimity among scientists as to the biological factors of aging (Anon, 1963). It was stated that there were at least 120 theories of the cause of aging receiving serious study. Cellular changes primarily were suspected, but there was virtually no agreement as to what specifically produces the cellular changes observed. Today, the only unanimities are that no one ever dies from aging, although it increases the chance that an individual may die, and that aging dulls the excitement of existence at the end of a long life.

Beginning in 1946, in the discipline of psychology as it relates to the subject of aging, a rapid series of developments occured which merit (1946-1960) being described as the period of expansion.

Aging was clearly a problem touching many disciplines, yet many investigators felt uncomfortable when talking across disciplines rather than within a small homogeneous group. A happy solution evolved for psychology. In 1945, a group headed by Pressey began to organize a Division on Maturity and Old Age of the American Psychological Association. In 1946, its first officers were elected and Pressey was the first president at its first meeting in Detroit in September 1947 (Pressey, 1948).

The multidisciplinary contacts for psychologists were provided through the meeting of the Gerontological Society, which was founded in 1945, and the Council and Corporation held its first meeting in June of that year in New York (Adler, 1958). The first issue of the Journal of Gerontology, sponsored by the Society, appeared in early 1946. Psychological research began to expand in the encouraging atmosphere. Perhaps it advanced more rapidly than even some of its closely associated disciplines, because it had both an independent organization as well as representation in a multidisciplinary society. Some emphasis of course had already been placed on psychological problems and research on aging by the Public Health Service's Conference on Mental Health in Later Maturity, May 1941 (U.S.A., 1942).

In 1946, two developments occurred which significantly affected the course of events. Staffing was started of the Gerontological Unit of the National Institute of Health and of the Nuffield Unit for Research into Problems of Aging at the Laboratory of Psychology at the University of Cambridge. The Unit on Gerontology had already been officially established in the National Institute of Health, Baltimore, as part of the division of physiology in July, 1940. However, because of the war, the chief of the unit, Shock, had to delay major staffing of the unit until 1946. Birren joined this group in May 1947 to initiate the psychological research.

The Gerontology Unit of the National Institute of Health had broad responsibilities. Psychology was and is currently part of a wide basic biological and medical research program. With the establishment of the National Heart Institute in 1948, the Gerontology Unit was transferred to it, and for an interval the Unit was designated as the Unit on Cardiovascular Diseases and Gerontology. In 1958, it was established as the Gerontology Branch of the National Heart Institute. The Branch has an impressive productivity; and will supply a publication list on request (see also Shock, 1957).

In 1953, the Section on Aging was formed in the National Institute of Mental Health with Birren as head. After a year it was transferred from the office of the Associate Director in Charge of Research to the newly formed Laboratory of Psychology for administrative reasons. Members of this Section collaborated with the Research Committee of the Division of Maturity and Old Age in planning and carrying out the Conference on the Psychological Aspects of Aging held in Bethesda in April, 1955. Anderson (1956), Committee Chairman, edited the proceedings of this conference, which had a significant effect by bringing together diverse interests and points of view about the psychology of aging.

In 1950, Welford and Birren met for the first time at the meeting of the American Psychological Association. It was at this meeting that Birren advanced the idea of a handbook on aging which would organize the scattered literature. A few years later, Anderson also lent encouragement to the evolution of a handbook on aging by pointing to the desirable effects of the first Handbook of Child Psychology. In 1956, an opportunity was provided to develop the handbook through a research subcommittee of the Gerontological Society, under the Chairmanship of Kleemeier, which took an interest in training. This interest in training was partly a natural outgrowth of current thinking in the Society and of ideas circulating at the National Institutes of Health and through which a training program for researchers in physiology had been instituted the previous year. The committee's activities were supported by a grant from the National Institutes of Health. Details of this background are given in the preface of the Volume, Handbook of the Aging and the Individual (Birren, 1959).

Training of students has to some extent been facilitated in recent years by conference proceedings, handbooks (Birren, 1959; Tibbitts, 1960) and annual reviews (e.g. Birren, 1960) and also by

the appearance of new journals and textbooks. Introductory textbooks are appearing which give a rather comprehensive view of the psychology of the lifespan. By the end of 1960, psychologists were coming to agree that the psychology of aging should be included in the teaching of a developmental psychology sequence.

While the period between 1946 and 1960 was particularly distinguished by the establishment of special research units of aging, there was much individual research effort in the U.S.A. and abroad. Certain names recur in the literature: McFarland, Lorge, Tuckman, Korchin, Braun, Kleemeier, Lehman, and many others, as primarily representative of individual research effort, as does the name of Donahue in connection with the organizations of the University of Michigan Conferences on Aging to discuss research. Some of the most active contributors to social-psychological research have been Havighurst and his colleagues of the Committee on Human Development of the University of Chicago.

Despite the difficulties of development a comprehensive geriatric psychiatry, the names of certain investigators are widely known for their contributions. In Great Britain, there are Post at the Maudsley Hospital and Roth at the University of Durham. In Italy, there is Cesa-Bianchi. In the U.S.A. there are also several: Rothschild, Simon, Weinberg, Goldfarb, and Busse.

Implications of research on the psychology of aging are so extensive that encouragement of research has come from 3 rather different sources, industrial (occupational aspects of aging), medical (clinical problems), and educational (adult education and training). These 3 areas of application have formed a tripod of practical interest in research and provided the research worker with an audience eager for results. The noise level of public interest in the psychology of aging has risen in recent years, reflecting perhaps, a change in society which has come to recognize that science may not only offer descriptions of aging but also eventual clues about how individuals can live better, if not longer as well. Not only the scholar and scientist but society has changed from 1835, when Quetelet first published, to 1961 when the White House Conference on Aging was held.

In the Field of Social Welfare, concern with aging becomes apparent and translated into program and action around 1925.

In 1922, Abraham Epstein's book, "Facing Old Age", A Study of Old Age Dependency in the United States and Old Age Pensions (1922), followed by another in 1928, The Challenge of the Aged, were an irrefutable call for action by people who admitted a responsibility for their fellows, regardless of citizenship or age status. The main hurdles were those of estimating costs and the development of sound finding; with increasing longevity the casual estimates of the Iron Chancellor,

Bismarck, were shown to be completely erroneous. The placement of management of these social issues posed further problems in a nation with unbounded faith in the capacity of private enterprise to deal compentently with such issues.

In New York state, to use one example, several social agencies (including an informal association of homes for the aged) organized a group concerned with the social welfare of the aged in its Welfare Council in 1925-1926. Mr. Henry G. Barbey planned and built one of the first, if not the first, specially designed rental apartment house for elderly people as an experiment and a demonstration that this type of living was practical and desirable. Serious concern was expressed by many that such housing, with a relief or pension system that would enable people to live in it, would empty almshouses and make homes for the aged unnecessary. Experience has proved the fallacy of this thinking.

The Commission's report (Old Age Security, 1930) recommended a program of public assistance for the elderly, persons 70 or over, and, favorable legislative action was taken in 1930. That this enactment coincided with the beginnings of a catastrophic economic depression of overwhelming national proportion had much to do with the "crisis" or "emergency" nature of policy development and the stringent restrictions imposed on the administration of old age assistance at the local, state and ultimately the national level from which public welfare never recovered in the succeeding 30 or more years. The depression economy brought into being the Social Security program of the federal government with its financial participation in state programs.

With unemployment the precipitating factor of the depression, the immediate effect of old age assistance was to remove persons 70 or over from the labor market. When this plan proved to be an ineffective measure, the eligibility age for assistance was reduced in 1937 to 65 the age established as the "normal" retirement age. Its normality was determined by the economic requirements of the day, rather than individual qualifications for leaving the active labor market. The problems of employment and retirement of the older worker (defined more or less precisely as being a person 45 or over) were emerging even in the 20's. They still constitute an almost insoluble element in the hugh unemployment situation of the 60's with the consequent movement to lower the normal retirement age from 65 to 62 or 60. This has been regarded as a solution not for the elderly but for the young workers coming into the labor market.

In the 20's and the 30's there was limited experimentation by both voluntary and public agencies in New York City and Cleveland. As public housing for low income families became a federal as well as a state and local program, a few elderly persons were included, although it was not until the 1956 amendments to the Federal Housing Act that single persons were eligible for accommodation, despite the fact that they far outnumbered the elderly couples. A decade after the slow

start of the 30's and 40's builders and realtors discovered a growing market for housing among retired elderly people. By the 60's, provision of "housing for the elderly" by private enterprise became a major activity in most communities, large or small. The true cooperative, the simulated co-operative finance by founders' fees, the condominium, the houses for sale in "retirement towns" increased phenomenally after the passage of the 1956 housing amendments.

Institutional care, public and private, also has undergone radical change since 1940. From being well-intentioned custodial homes poorly equipped or staffed to meet the new types of situations that greater longevity has created, institutions have found themselves unable to continue the kind of independent operation and social isolation they once enjoyed.

Visiting nurse programs, visiting housekeeper services, and subsequent home care programs were invented and organized in the 30's and 40's, with the patients home, when suitable, as the base for care.

Nursing homes under proprietary auspices sprang into being almost overnight to house for pay those whose own homes were not appropriate or for whom visiting services did not exist or were not availalbe. Patients who could afford to do so paid, and the public agencies paid for those who could not, with federal, state, and local tax funds. The inability to build hospital beds during World War II contributed much to the development of home visiting services, but even more so to the extraordinary growth in the number of profit-making nursing homes. This has become a big business. While waiting for the establishment of standards of quality of service and responsible agencies to enforce those in existence, there has been created a real standard setting and enforcement program for both official and voluntary agencies concerned with quality of care and with what happens to older people, already an integer of nursing home care. How this will be solved by the several national and state bodies involved is being debated in the hope that a plan satisfactory to all can be delineated.

Nationally, centers across the country, under all types of sponsorships, voluntary, religious, and public, have sensed a need for a means of exchanging experience in order to improve standards and to make programs effective outlets for the skills and abilities of the older person who comprise their membership.

The leadership in all faiths has been giving much closer attention than ever to the social and health needs of their members and their non-member neighbors. They are renewing active relationships with secular social service agencies and also are organizing their own services with professionally trained leadership. They have urged their institutions to examine their programs and to raise standards to meet modern requirements. There is more provision in the curricula of seminaries for training in pastoral counseling of the elderly, for

chaplaincy especially related to homes and hospitals. All this, which is rooted in the past, augurs well for older people of tomorrow.

Schools officials, faculties, and universities in several departments are experimenting with courses, seminars and institutes designed to explore the special aspects of the process of aging and of its results, the aging and the aged. Many universities are undertaking applied research in the field. Social research, which is still regarded as "unpure" has received abundant support from private and governmental resources. The fundamental factor which makes this explosive situation possible is that there is no phase of personal or organized living which is not in some way affected by the processes of aging. Historically speaking, the record of education for social welfare activities and action in aging has been very disappointing, although the outlook is now brighter.

Organizational Developments

From 1925-1926, which saw the first Division for the Aged in a Welfare Council, to 1964, developments in many types of organizations have been constant, although extremely spotty and variable in effectiveness. Organization of programs for the elderly in community councils, by whatever name known, has been very slow. As has been noted, usually this has been at the behest of lay leaders rather than members of the professions. However, as public programs in insurance, assistance, housing and health of the aging grew in size and importance the degree of participation by councils in planning policies was regrettably small. The results of this habit of non-participation are plaguing both public and voluntary groups at the present time.

State developments, especially in New York, under the energetic and able leadership of Senator Thomas Desmond, Chairman of New York State's Joint Legislative Committee on Problems of the Aging, and his Committee's Director, Albert J. Abrahms, from 1948 on, gave a steady stimulus to support of improving and of initiating programs in employment, insurance, health, housing, education, recreation, and institutional device. Some other states followed suit.

The organization of the American Geriatrics Society, of the Gerontological Society with its interdisciplinary research approach to aging, and the first "White House Conference on Aging" in 1960 was a series of important historical events. Creation of the National Committee on Aging as a standing committee of the National Social Welfare Assembly, and, since 1960, as the autonomous National Council on Aging, occurred in 1949 and 1950. At this time the topic of the aging and the aged became a particular phenomenon in programs of national, state, and local forums of a number of professional groups. Since 1950, the proliferation of publications on the many aspects of the topic has become marked. Thus from very limited bibliographies there are now many volumes of references. The most important are those prepared and edited by Dr. Nathan Shock of the U. S. Public Health Service in the quarterly issues of the Journal of Gerontology, since 1946, one of the official

publications of the Gerontological Society. From time to time Dr. Shock published these as bound volumes. There are also the quarterly listings published by the National Council on the Aging.

Some offices or commissions on aging have been established under federal, state, and municipal governments. Governors and mayors have had conferences on the topic. The American Public Welfare Association established a standing committee on aging. The American Association of Retired Persons under the leadership of Dr. Ethel Andrus, the American Association of Senior Citizens dedicated to the development of a sound national medical care program for the elderly and its support, and numerous others came into being on the national scene. In 1951, the Philadelphia County Medical Society established a Committee on Geriatrics under the chairmanship of Dr. Joseph T. Freeman. In the following year, the Pennsylvania Medical Society initiated its Commission on Geriatrics which proposed to the American Medical Association what was to be its Committee on Aging under the current direction of Dr. Frederick C. Swartz of Lansing, Michigan.

Influential unions, such as the UAW-AFL-CIO and the United Steel Workers, set up staffs and departments to work with retirees and older workers. All of these and many more joined with the staff on aging of the Department of Health, Education and Welfare to hold the 1961 President's Conference on Aging of several thousand participants. This was organized through the adoption of Congressional legislation introduced by the Hon. John Fogarty, Rhode Island member of the House of Representatives, who was unflagging in his concern and work in behalf of the elderly. The U. S. Senate has its Special Committee on Aging under the Chairmanship of Senator George A. Smathers of Florida, in 1964.

The organization of the Department of Health, Education and Welfare, with Mr. Robert Ball as Social Security Commissioner (a constant friend of the elderly) and Dr. Ellen Winston as Social Welfare Commissioner and Executive Chairman of the President's Council on Aging, has in it the promise of active relationship between voluntary and public programs. The panel of advisors to the Secretary of Health, Education, and Welfare on the aging from across the nation and a well balanced group of disciplines has a potential for service not yet fully realized.

While it is evident, glancing at the history of gerontology, that the development of the body of knowledge on aging and the older person has been based on the separate endeavors of several disciplines, the more recent history indicates a change in approach. Today, to a greater extent than in the past the approach to understanding older people is being stated in terms of a truly integrated knowledge. Research and practice are developing in the total concept of biological, psychological and sociological aspects of life, and the indications are that they will continue and grow in that direction.

WHO ARE THE ELDERLY

Amelia Wahl

Recognizing that the elderly are a heterogeneous group, with probably greater differences among them than among any other age group, the author proceeds to discuss certain characteristics of the population aged 65 and over. Information is given on: population characteristics; income; health; family and living arrangements; housing; and social roles.

WHO ARE THE ELDERLY?

by
Amelia Wahl

(Reproduced by the Gerontological Society, Projects Division, with permission, from a paper presented at the Annual Meeting and Conference of the Missouri Health Council, Jefferson City, Missouri, by Amelia Wahl, Regional Representative on Aging, Office of Aging, Department of Health, Education and Welfare, Kansas City Regional Office, September 21, 1965.)

To ask the question - Who is an elderly person, would be like asking the question, What is retirement? In a study of retirement patterns of aged men, there were eight different measurements of retirement which could have been used, and all useful for different purposes. So it is in a description of the elderly. Any number of definitions could be used, since the elderly are a heterogeneous group, probably more so than the younger age groups. For purposes of this paper, we shall describe the elderly by taking a chronological age group, those 65 years of age and over, keeping in mind that individuals may be old at 40 and there are those in this selected group who may be young at 80. But once having selected the 65 and over age group, I shall briefly discuss population characteristics; income; health; family and living arrangements; housing; and social roles. We hope this will give you a broad picture of "who the elderly are."

Population Characteristics

Compared to the turn of the century when there were 3,000,000 persons 65 and over in the population and a life expectancy at birth of 47.3 years, in 1965 we find over 18,000,000 persons 65 and over and a life expectancy of almost 70 years. For women, the life expectancy is 73.4 years and for men 66.6 years. The United Nations Demographic Yearbook for 1964 revealed that men had a longer life expectancy than women in only four countries - Ceylon, Cambodia, India and Upper Volta. By 1970, numbers of persons 65 and over will approximate 19.6 million persons in the United States; by 1985 it is estimated there will be 25 million; and by the year 2000 - 28 million. Projections indicate little change in the median age for the total 65 and over population in the next 20 years. The median age for men is expected to remain at 72.3 years but for women the median age is expected to increase slightly from 72.8 to more than 73 years by 1985. By this time, women will represent 60% of all older people.[1] The 65 and over population is growing older, already half are more than 72.6 years of age.

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[1] 56% in 1964.

In the 65-69 age group, there are 119 women per 100 men; and for those 85 and over there are 163 women per 100 men, or a ratio of 3 to 2. Nevertheless, the pace of increase is not so rapid as it was in 1955 for instance. Then, the net increase in the 65 and over population was 1,300 persons per day, more than 50% higher than it is for today. Presently, each day the net increase of persons 65 and over is 800 persons; for example, each day 3,760 persons reach their 65th birthday and 2,960 persons 65 and over die, leaving a net increase of 800 persons.[2] Over the past two decades, the 75 and over age groups have been increasing at a rate over twice that of the population as a whole. To date, more than 12,000 persons have passed their 100th birthday!

States with the largest percentage of their population 65 and over are:[3]

Iowa
Florida
Missouri
Nebraska
Kansas
Maine
Massachusetts
New Hampshire
Vermont -

with Iowans having 12.4 percent of their population 65 and over.

Income

While the money income of our older persons is much too low for even a modest living, there has been some improvement in this area even in this past two-year period. In a 1962 Income Survey of the Aged, the median income of married couples (i.e., households with one member age 65 and over) was $2,875.00 and for single persons the median income was $1,130.00.[4] However, in 1964 this median income has increased for married couples to $3,376.00 and for individuals living alone to $1,297.00. Even yet, this is less than 1/2

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[2] Brotman, Herman H., Facts on Aging, Office of Aging, Department of Health, Education and Welfare, No. 9, OA No. 409, June, 1965.

[3] _____, Background and Provisions, The Older Americans Act, U.S. Department of Health, Education and Welfare, Administration on Aging, Washington, July, 1965.

[4] Epstein, Lenore A., Income of the Aged in 1962: First Findings of the 1963 Survey of the Aged, Social Security Bulletin, March, 1964, U.S. Dept. of Health, Education and Welfare.

the median income of families with a younger head, and 2/5 of the median income of younger individuals living alone.[5]

A modest but adequate budget prepared by the Bureau of Labor Statistics, in 1959, for an older couple was estimated at $2,500.00 and for single individuals estimated at $1,800.00. Using this modest budget as a measuring device, more than 1/3 of all aged couples and about 2/3 of aged individuals would still have insufficient incomes to reach these minimum standards of this budget. It is shocking, indeed, to find in an affluent society such as ours that almost 30% of the older married couples in 1962 had incomes of less than $2,000.00 a year and almost 66% of the older individuals had incomes of less than $1,500.00 a year. Translating these percentages into numbers, we are talking about 1.6 million older couples and 6 million individual men and women.[6]

Brief mention should perhaps be made here of the sources of this income. The Income Survey of the Aged beneficiaries and nonbeneficiaries conducted by the Social Security Administration in 1962 showed that retirement benefits were reported by 84 percent of the older couples and 67 percent of older single individuals. The second source of income which older persons reported was that of earnings from employment. Here we find that 55 percent of the older couples reported earnings and 27 percent of the older individuals reported earnings from employment. While it can be said that a large source of income for older persons is still coming from employment, we do find that the proportion of older men who are employed or seeking work has been declining for the past century. Today, 7 out of every 10 men 65 years of age and over are no longer in the work force. Many of the remaining 3 out of 10 who are in the work force are employed only part-time. With women, there are only 1 in 10 in the work force.[7] The next important source of income to OASI benefits and earnings from employment is income from assets such as interest, dividends and rents, making up more than 15 percent of the money income for couples. Sixty-three percent of the couples reported income from assets and 43 percent of the individuals reported this income. For about half of them the income was less than $150.00 per year. Generally, the asset holdings were equity in a home, but when this

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[5] _____, Background and Provisions, The Older Americans Act, U.S. Department of Health, Education and Welfare, Administration on Aging, Washington, July, 1965.

[6] Tibbitts, Clark, Middle-Aged and Older People in American Society, prepared for the Training Institute for Public Welfare Specialists in Aging, Cleveland, Ohio, June, 1965.

[7] Ibid.

was excluded, the median value of their assets was reduced to $2,950.00.[8] Personal debts were very small in relation to assets - about 1 percent. Approximately 75 percent of the married couples and 90 percent of the nonmarried men and women reported no personal debt. It is sometimes assumed that widows are a particularly disadvantaged group and one would think they should be more likely than other nonmarried women to have an inheritance - at least the proceeds of a life insurance policy. The 1962 survey data on total asset holdings show that widows 65 and over have less in assets than the younger widows, and that widows have less than nonwidows in the same age group whether or not they receive OASDI benefits.[9]

Health

Of the 65 and over population, less than 4% or approximately 615,000 persons are in institutions such as nursing homes, homes for the aged, mental hospitals and hospitals. The median age of these patients is 80 years and over half are on public assistance. A recent demonstration project in a semi-rural community attempted to find out the presence or lack of rehabilitation potential in patients in nursing homes and found that 51% of the patients seen in nursing homes needed neither skilled medical nor nursing care.[10] The Senate Hearings of the 86th Congress on the condition of our nursing homes stated, "Nationally, the evidence is that up to 50 percent of nursing home patients would not require institutional care following rehabilitation providing post-nursing home facilities are available."

According to Shanas' national health survey of the non-institutionalized 65 and over population, 10% of those interviewed were very sick and confined to the house because of some illness, and another 4% were too sick to be interviewed, which would mean that some 2.7 million had severe limitations.[11] These findings would correspond with the National Center for Health Statistics findings of

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[8] Epstein, Lenore A., Income of the Aged in 1962: First Findings of the 1963 Survey of the Aged, Social Security Bulletin, March, 1964, U.S. Dept. of Health, Education and Welfare.

[9] _____, Assets of the Aged in 1962: Findings of the 1963 Survey of the Aged, Social Security Bulletin, November and December, 1964, U.S. Dept. of Health, Education and Welfare, Social Security Administration.

[10] Willard, Harold N., M.D., Home Care Versus Institutional Care, The Gerontologist, Part II, Vol. 4, No. 2, June, 1964.

[11] Shanas, Ethel, The Very Sick in the Older Population, the Michigan State Medical Society Journal, May, 1960, Vol. 59, No.5.

14.3% having a major limitation of activity. Another 28% had partial limitation of activity due to chronic illness. It is interesting to note that of this group, i.e., those persons having partial and major limitations of activity, 58% were on family incomes of under $2,000.00 in 1963.[12] Yet, health costs of the elderly are two and one-half times those of younger persons and the total per capita expenditure for persons 65 and over was $315.00. The average for the under 65 person was $120.00.

Although less than half (42.3%) of the 65 and over population reported partial and major limitation of activity because of some chronic condition, 22.7% reported they had no chronic conditions.[13] One should bear in mind, however, that these reported chronic illnesses are not something which suddenly occurred at retirement age. On the contrary, one of the reversals in thinking produced by gerontological research is that retirement does not result in declining health. Rather declining health precedes retirement.[14] This fact is also borne out by health survey findings which show that 18% of the middle-aged or 4.9 million persons reported chronic conditions with some degree of limitation.

Family and Living Arrangements and Isolation

Contrary to popular belief as Ethel Shanas pointed out in her national survey, the majority of older people do not live alone. Only about 2 out of 10 older people live alone. Three-fourths of the old people who live alone in this country are women and this proportion is steadily increasing. Among the widowed and divorced persons who reported living children, 42.4% reported a child living in the same household, and 53.5% reported a child lived within 10 minutes distance or less than a day's distance from the parent. Shanas further reported that 6 out of 10 older people who live alone either had a visitor the day before they were interviewed or had been away from home visiting friends or relatives. If social isolation among the aged is defined as the older person having no visitors or doing no visiting either in person or on the phone the day before he was interviewed . . . at most only about 3 out of 10 people living alone in the United States, roughly 6 percent of the total older

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12 _____, U.S. National Health Survey, Medical Care, Health Status and Family Income, National Center for Health Statistics, Series 10, No. 9, May, 1964, p. 55.

13 Ibid.

14 Tibbitts, Clark, Middle-Aged and Older People in American Society, prepared for the Training Institute for Public Welfare Specialists in Aging, Cleveland, Ohio, June, 1965, Reference to Streib, C.F., and Thompson, W., Adjustment to Retirement, Journal of Social Issues, XIV, No. 2.

population, may be considered "socially isolated." Shanas further elaborates, "It is my belief that service agencies for the aged have put too much stress on 'social isolation' as a problem of the aged." The loneliest and most isolated group among the aged, about 4%, appears to be those widowed persons who have no children and live alone.[15] These findings do indicate that children assume greater parental responsibilities than has been formerly perceived. But even this 4-6% minority is a significant one and it is my belief something with which social agencies should be concerned.

Irving Rosow speaks of this as a significant minority by saying, "Only a minority of older people are lonely, varying up to 1/3 of different groups, depending on the particular sample and how the loneliness figure is derived. But it is a sizable minority. Significantly Townsend found the most loneliness among those with the most disrupted lives - the widowed, the infirm, and those living alone . . . . Hence, shrinking primary groups apparently intensify alienation and produce old people who are vulnerable to growing dependency and social needs."[16]

Housing

Nearly 80% of all older Americans live in households of their own. In an analysis of 1960 Census Data on Housing undertaken by the Housing and Home Finance Agency, it was found that 19% of the 16,000,000 housing units in which senior citizens lived were substandard in that they lacked private bath, toilet, or hot running water. In October, 1964, it was estimated that 1 out of 3 households headed by a person 65 and over were substandard or deficient.[17] In addition, many of the homes occupied by older persons are too large, too difficult to maintain, and too inappropriately designed for the infirmities of old age. In other instances, the rentals are too high for persons on reduced incomes.

Social Roles

A role, simply defined, is a pattern of actions and expectations

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[15] Shanas, Ethel, Ph.D., The Older Person At Home - A Potential Isolate or Participant, Research Utilization in Aging, Public Health Service Publication No. 1211, Dept. of Health, Education and Welfare.

[16] Rosow, Irving, Retirement Housing and Social Integration, The Gerontologist, Vol. 1, No. 2, June 1961.

[17] _____, Recent Legislative Action in Housing for Senior Citizens, Housing and Home Finance Agency, October 1964.

associated with a given position in society.[18] Any person may have several roles through which he functions. A man may be a worker, a father, a community leader, and he may have certain income and talents which give him status in life. By the same token a woman may be a housewife, a mother, a worker, and a prominent volunteer. Upon retirement, however, these roles change drastically or suddenly become nonexistent. Certainly the role of a worker is entirely lost to 7 out of 10 men 65 years of age and over and 1 out of 10 women in this age group. These roles which give a person in his youth and middle-life a status and place in society have suddenly been stripped from a person in later maturity and old age. Rosow in his provocative article, Old Age - One Moral Dilemma of Our Affluent Society, states: "Old people are still fairly well integrated in society if their major role characteristics remain unchanged -- if they are married and living with spouse, are still working, have adequate income and tolerable health. But, what are the purely statistical chances that a person over 65 will show up favorably in all four of these ways? For the moment, we can arbitrarily take $2,000.00 per year as a minimum adequate income. Then, if we combine the individual probabilities of a favorable rating on each of the four separate role factors - marital status, work, income and health - we find these results. The chances of a man over 65 having a favorable rating on all four items is only about 7%, and of a woman, 1%. This means that, on the average, only about 7 men in a hundred and less than 1 woman in a hundred have a good chance of preserving the major bases of their social integration. These chances get progressively worse with increasing age."[19] Obviously, the problem is a social one - the sheer numbers of 18,000,000 persons are not a problem. The problem is a social and cultural lag. A growing proportion of old persons continue to be excluded from interaction with other segments of the population. Arnold Rose theorizes that an aging subculture is developing.[20]

Conclusions

In conclusion, the following factors seem significant about the elderly:

1. are increasing in numbers by 800 persons per day;

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[18] Palmore, Erdman B., Ph.D., Differences in the Retirement Patterns of Men and Women, The Gerontologist, Vol.5, No.1, Part 1, March, 1965.

[19] Rosow, Irving, Old Age: One Moral Dilemma of our Affluent Society, The Gerontologist, Vol. 2, No. 4, December, 1962.

[20] Rose, Arnold M., and Warren A. Peterson, Older Persons and Their Social World, F. A. Davis Company, Philadelphia, 1965.

2. will number 28 million by the year 2000;

3. over one-half are women;

4. life expectancy is about 70 years, with women having a little longer life span;

5. median family income is $3,376.00 and median income for individuals living alone is $1,297.00;

6. about 1.6 million couples had incomes of less than $2,000.00 - and 6 million single persons had incomes of less than $1,500.00;

7. primary sources of income are:

    a. retirement benefits
    b. earnings from employment
    c. assets;

8. 3 out of 10 men and 1 out of 10 women are in the labor force;

9. approximately 14% are very sick and confined to the house;

10. 4% are in institutions;

11. 2 out of 10 live alone and 3/4 of these are women;

12. 42.4% of those having children reported a child living in the same household;

13. 6% may be considered "socially isolated";

14. 80% live in households of their own;

15. 1 out of 3 households headed by a person 65 and over is substandard;

16. only a small number have a chance of remaining socially integrated in our society if all four factors such as marital status, work, income and health are taken into consideration.

Advancements in medical science have conquered many of the ravages of disease. Our recent social legislation will ease the cost of hospitalization and medical care; therefore, one can safely say that strides have been made.

However, even though our social security benefits have been gradually increased throughout the years, social scientists and

economists still feel our social security benefits are grossly inadequate. In the United States approximately 3% of our national income goes for social security benefits for the aged - - compare this with 5.3% for Denmark; 5.1% for Italy; 4.4% for New Zealand; 4.6% for Sweden; 4.7% for Switzerland and over 8% -- almost three times the U.S. percentage -- for Germany.[21]

Herbert Striner, an economist formerly at Stanford University, stated in 1963 that every older person should have his Social Security benefits increased by $1,500.00 a year in order for him to maintain a minimum standard of living. This sum would have amounted to $24 billion in 1963 and now would be $27 billion, in addition to the Social Security benefit, an amount which Mr. Striner felt can be handled in our economy with our expanding Gross National Product[22] which is now $650 billion.

Both Striner and Charles Schottland of Brandeis University feel there should be increases in the OASI Tax and the Taxable Base in our Social Security System. Striner sees no reason why the Social Security System should not provide the same level of protection for the retired as the Civil Service Retirement Act provides for retired federal employees. In the Civil Service Program, employee-employer contributions total 13% of the total base pay, not up to a specified amount of salary as the $4,800.00 in the Social Security Program.[23]

Although there have been advancements noted in health care and some progress attained in social security benefits, our society cannot acclaim great strides in the social integration of older persons. Rosow, in his article, stated: "Old people progressively lose their group supports as networks of relatives, friends, and neighbors wither away through time." Rosow posed this question, "What possible substitutes exist for these deteriorating social ties?" and answered, "One is the formation of new friendships with younger people nearby. However, younger age groups tend to be indifferent to or reject the old . . . . It should be clear that the crucial people in the aging problem are not the old, but the younger age groups, for it is the rest of us who determine the status and position of the old person in the social order. What is at stake for the future is not only the alienation of the old from the young, but the alienation of the young from each other and of man from man. There is no real way out of

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21 Schottland, Charles I., National Developments in Aging: A Critique, paper presented at the Fifth National Conference of State Executives on Aging, Department of Health, Education and Welfare, May 3, 1965.

22 Striner, Herbert H., National Income, Wealth, and the Capacity of the Economy to Support Older People, 15th Annual University of Michigan Conference on Aging, June, 1962.

23 Ibid.

this dilemma for young or old (he says) without a basic reordering of our national aspirations and values, of which the aging problem is but a token. Anything less than this will see us concentrating only on superficial symptoms, especially tangible ones like housing the aged, and nibbling at the tattered edges of our problems without penetrating to the heart. But, unfortunately, at this point in our history, without almost catastrophic crisis, such pervasive changes in our national life seem most improbable in the foreseeable future."[24]

Obviously, our educational system is attuned to the education of youth toward making a living and a work role. Little thought is being given to the fact that a shorter and shorter work week will ensue. It is predicted that by 1980 there will be a 4-hour work day. As a result, retirement age will come earlier. We will no longer be talking about the 65 and over as the retired. With the retirement age coming earlier, the average retiree may have 25 years in retirement, the equivalent in free time to the length of an entire working life. Are we prepared for this abundance of time? Irwin Edman, a noted philosopher, once suggested that "The best test of the quality of a civilization is the quality of its leisure. Not what the citizens of a commonwealth do when they are obligated to do something by necessity, but what they do when they can do something by choice, is the criterion of a people's life."[25]

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[24] Rosow, Irving, Old Age: One Moral Dilemma of our Affluent Society, The Gerontologist, Vol. 2, No. 4, December, 1962.

[25] _____, Life After Sixty in Iowa, Iowa Commission for Senior Citizens, Institute of Gerontology, University of Iowa, Iowa City, p. 53.

APPENDIX A

TABLE 2. - SIZE OF MONEY INCOME FOR UNITS AGED 65 AND OVER
Percentage distribution by income interval, 1962

Total Money Income	Married Couples[1]	Nonmarried persons Total Men & Women
Number (in thousands):		
Total	5,445	8,731
Reporting on Income	4,719	7,709
Total percent	100	100
Less than $1,000	5	44
1,000 - 1,499	10	22
1,500 - 1,999	14	13
2,000 - 2,499	13	8
2,500 - 2,999	12	4
3,000 - 3,999	16	4
4,000 - 4,999	11	2
5,000 - 9,999	15	4
10,000 and over	5 (2)	
Median Income	$2,875	$1,130

[1] With at least 1 member aged 65 or over

[2] Less than 0.5 percent

Epstein, Lenore A., Income of the Aged in 1962: First Findings of the 1963 Survey of the Aged (Reprinted from the Social Security Bulletin, March 1964, U. S. Department of Health, Education and Welfare, Social Security Administration.

APPENDIX B

TABLE 1. - SOURCE OF MONEY INCOME FOR UNITS AGED 65 AND OVER: Percent having income from specified sources, 1962

Source of Money Income	Married Couples [1]	Nonmarried persons Total Men & Women
Number (in thousands):		
Total	5,445	8,731
Reporting on Sources	5,443	8,612
Earnings	55	24
Retirement benefits	84	67
OASDI	79	62
Other public	12	7
Private group pensions	16	5
Veterans' benefits	14	8
Interest, dividends, and rents	63	48
Private individual annuities	4	3
Unemployment insurance	3	1
Public assistance	8	17
Contributions by relatives[2]	3	5
Payments under any public program	89	80

[1] With at least 1 member aged 65 or over

[2] Relatives or friends not in households

Epstein, Lenore A., Income of the Aged in 1962: First Findings of the 1963 Survey of the Aged (Reprinted from the Social Security Bulletin, March 1964, U. S. Department of Health, Education and Welfare, Social Security Administration.

BIOMEDICAL FACTORS IN AGING

Anita Zorzoli

In man increasing age brings changes in physiological capacities and the increasing probaility of death. Not all physiological functions change to the same extent nor at the same time. Furthermore, not all individuals undergo the same physiological changes. The paper discusses the things scientists have been able to detect and describe which happen to an individual as he grows older, but admits we still do not know the basic causes of aging.

Biomedical Factors in Aging

Aging is a process which probably occurs during the entire human life span. However, it is not until the time of adult life that the phenomenon begins to be detectable. Starting in early adulthood, a gradual decrease in the functional capacity of many organs and organ-systems occurs and, with the passage of time, there is an increase in the probability of death.

The mathematical relationship between chronological age and human mortality was first noted by Benjamin Gompertz in 1825. He pointed out that there is a period in which logarithmic increase in death rate occurs. In a variety of different human populations this period extends from about age 35 to age 90. Following the so-called Gompertz period, the mortality rate increases more slowly than it did in the previous 50 years. In Fig. 1 are shown two ways of presenting human mortality statistics. If you look at curve B which shows the per cent of the original population dying per year, you will note that during infancy and childhood there is a rapid decline in the percent of the original population dying per year.

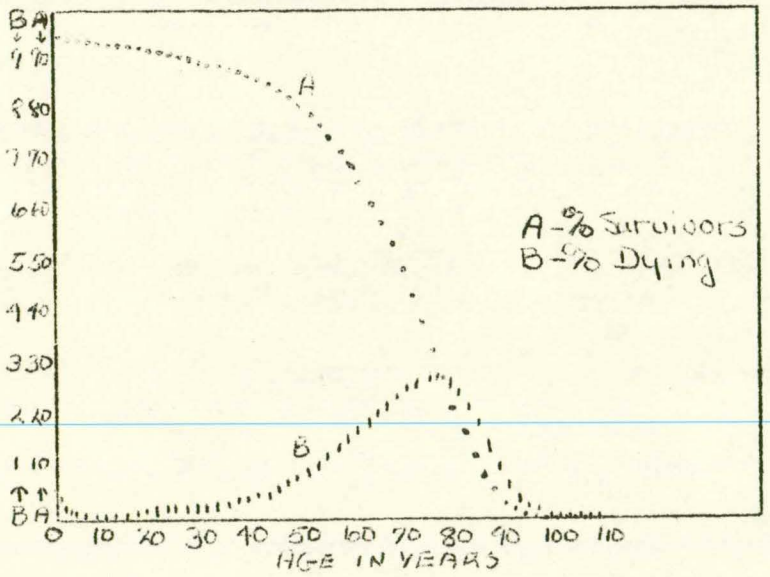

Fig. 1. Human Mortality Data

These curves are for United States white males, 1939-1941. 1965 curves would probably start a bit lower for, as you know, due to the introduction of antibiotics into medical practice there has been a decrease in infant mortality in the past 20 years. Between the ages of about 10 to about 35 years of age there is only a very slowly increasing mortality rate and in the Gompertzian period which

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we mentioned a few minutes ago, the rise is very dramatic. Curve A is another way of saying the same thing. It shows the percent of the original population which survives at each age. Thus, you notice that at about age 35 the number surviving begins to decline rapidly.

What are the factors involved in bringing about the decreased survival potential we have just been discussing? Unfortunately, the answer to this question is not known yet. However, as a result of research in gerontology being carried on in this country and abroad, we are learning more and more about what happens to living creatures as they age. Using this type of information we may some day be able to devise critical experiments which will reveal to us the underlying causes of the events associated with aging. During the remainder of the hour I would like to present to you some of the information on aging phenomena which is based on actual research data.

The present state of our knowledge does not permit us to conclude, however much we might want to do so, that there is a single or general aging process. The facts indicate that aging progresses much more rapidly in some traits than in others. Indeed, there seem to be distinctly different patterns of age-related phenomena. First of all, there are those traits which do not change at all with the passage of time. A good example in this category is the volume of the blood, which shows remarkable constancy over the years of the human span. Secondly, there are the traits which reach their maximum relatively late in life and then change. The blood level of cholesterol is a case in point. It has been shown that the average blood cholesterol levels in human males rise from age 20 to a maximum at age 55-60 and then begin to decline.

Another pattern of age changes is a rapid reduction in function during early adulthood with a minimum of change during later life. An example of this pattern of aging is the reduction in range of accommodation of the eye, which falls from about 13 diopters at age 8 to 1 diopter at age 55, with only a small change thereafter.

Finally, there is the most commonly occurring pattern of age changes in which there occurs a linear decrement in function beginning about the age of 30 and continuing throughout the remainder of life. Although one can observe decrements of function in many organs and organ-systems, the rates of regression of different functions vary considerably. This point is illustrated in Fig. 2. The figure shows curves of 6 different physiological functions measured in normal, supposedly disease-free human subjects. On the left, the ordinate, is given the percent of the property being studied which remains. And on the bottom, the abscissa, is given human age in years. At age 30 all of the physiological variables are at 100%. This is our point of reference.

The upper curve shows the data for maximum conduction velocity of the human ulnar nerve. You will note that the velocity of transmission of nerve impulses decreases slowly to about 85% of the

reference value at about age 85. It is not known if this is due to actual physical loss of the more rapidly conducting nerve fibers which constitute the nerve or if it is actually a decrease in the rate of transmission of nerve impulses by each nerve fiber. It is my impression, however, that most nerve physiologists feel that there is very little if any age-related decrease in the ability of individual peripheral nerve fibers to transmit impulses. On the other hand, there seems to be good agreement that marked age-related changes occur in the central nervous system (brain and spinal cord).

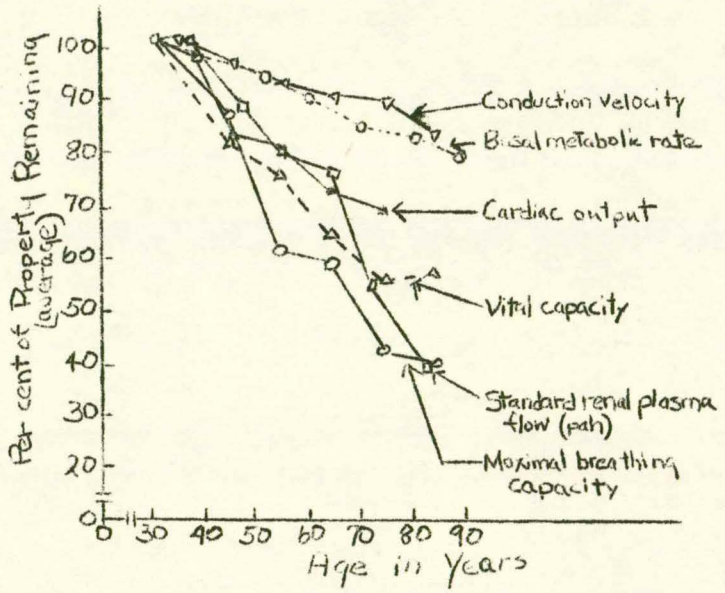

Fig. 2. Efficiency of human physiological mechanisms as a function of age.

Basal metabolic rate also declines very little. You know, of course, that basal metabolism is markedly affected by the activity of the thyroid gland and as far as we know there is no age-related change in the functioning of the thyroid gland.

Now, when we come to the functioning of the cardiovascular, respiratory and renal systems the picture begins to change. The declines in performance capacities are much greater than the ones we have just been discussing.

Cardiac output is a very important parameter of the integrity of the circulatory system. It is the rate at which the heart pumps blood. Since the function of the circulatory system is to supply adequate nutrition to the tissues of the body, you can readily appreciate how important this is to the integrity of the whole body. Cardiac output can be measured easily in the intact organism. In the early days of the study of cardiac physiology, scientists were forced to open the body cavity of the animal and expose the heart and major vessels. Nowadays there are several simple methods which can be employed. The dye-dilution method is one of the most

frequently used. All one does is inject a harmless, brightly colored dye such as T-1824 (Evans Blue) into a vein. After the substance passes through the heart and lungs and into the arterial system, its concentration in the arterial blood can be determined by taking periodic blood samples and analyzing these for their content of dye. The more rapidly the blood flows through the heart the more rapidly the dye appears in the arteries. From the recorded concentration curve of the dye as it passes through the arteries one can calculate quite accurately the cardiac output.

Cardiac output is measured at rest and you will notice (Fig. 2) that it declines with increasing age. In one study with human males screened to exclude individuals with clinical evidence of cardiovascular disease, there was a fall from averages of 6.5 to 3.8 liters per minute between the ages of 25 and 85.

Vital capacity and maximum breathing capacity are indices of the functional capacity of the respiratory system. Vital capacity is a measure of a person's overall ability to inspire and expire air and it is determined by two factors: (1) the strength of the respiratory muscles, and (2) the resistance of the thoracic cage and lungs to expansion and contraction. Anything which either weakens the muscles or decreases the expansibility of the lungs can decrease the vital capacity. For this reason vital capacity measurements are an invaluable tool in assessing the functional ability of the lungs. You will notice from the figure (2) that the decline is quite sharp. Going along with vital capacity is maximum breathing rate which is measured as the amount of air an individual can move through his lungs in 15 seconds. Only about 40% of this function remains by the ages of 70 to 80. The integrity of the respiratory system has a profound effect on the amount of physical work which can be accomplished by an individual. We will return to this a little later on.

Finally this figure shows that kidney blood flow, determined by the clearance of para-aminohippuric acid (pah) falls by about 60% between the ages indicated.

Thus, Fig. 2 shows 2 things quite clearly: (1) in aging there are gradual changes in the physiological functions of the body; (2) although decreases occur in a number of different functions, the rates at which they occur vary considerably.

We mentioned earlier that certain biologic functions appear to show little or no change with age. This is true if the functions are measured when the individual is in a resting state. However, when the individual is subjected to stress, certain age decrements are encountered. Let us take the example of blood glucose concentration. I am certain you know that blood glucose concentration can be affected by a sizeable number of factors, for example, dietary intake, the rate of removal of glucose by active tissues, the presence of hormones, e.g., insulin, and the release of glucose from the liver. However, the body plays one factor against another in such a skillful way that the glucose level remains essentially constant. We call this the maintenance of homeostasis. In the

young human subject (not the infant or child) the homeostatic mechanisms operate just as efficiently when the factors tending to change the glucose levels are of large order of magnitude as they do when the stresses are of small magnitude. Thus a young person can consume enormous quantities of food, candy, alcohol, soft drinks and anything else you can think of which raise blood sugar; he can play an entire game of basketball, dance the frug all night long or stay up night after night cramming for exams - all of which lower the blood sugar - without becoming hyperglycaemic or hypoglycemic. In older persons, on the other hand, the homeostatic mechanisms do not cope as efficiently with such stresses, and the rate of return to equilibrium is slower. It is interesting that the reduction in the capacity to readjust is particularly true for the removal of glucose from the blood. It has been repeatedly demonstrated that the rate at which the system removes extra glucose drops significantly in the aged person.

Although I have spoken here only about blood glucose, I believe that we can make the general statement without too much fear of contradiction that a very prominent characteristic of human aging is a reduction in the reserve capacities of the body - the capacities to return to normal rapidly after disturbance in the equilibrium.

Now I would like to speak for a few minutes about exercise, what it is and what effects it has in the young and the aging. It occurred to me that this might be of interest to you for in your work you associate with normal people, people who care for themselves, who work and play - in other words, who exercise.

The average individual usually thinks of exercise as something related to sports. The physiologist, on the other hand, uses the word to represent muscular activity of any sort and he recognizes that it can involve only small groups of muscles or virtually every skeletal muscle in the body. The physiologist recognizes that muscle activity, exercise, occurs voluntarily or it occurs reflexly. All of you are able to sit erect as you are now because the muscles of your back and neck are contracting and preventing your spinal column and head from sagging forward under the pull of gravity. All this is occurring reflexly, without any thought on your part.

Exercise is an activity carried on by almost all living creatures who belong to the animal kingdom. It is essential for survival of the individual and the species in that it is involved in such basic activities as feeding, escape from danger and reproduction. But more important from the point of view of the group here this morning, exercise is unique among all the activities carried on by man in that it involves the cooperation in highly integrated fashion of practically every organ-system in the body. Thus, it is of great interest to the gerontologist to consider the consequences of the passage of time on exercise or muscular activity.

A great deal of work has been carried out in this area in the laboratories of the Gerontology Branch of the Baltimore City Hospitals using as test subjects normal human males and females of different chronological ages. Appropos of the choice of experimental

material, it can be unequivocally stated that the ideal method of gathering data in gerontology is the longitudinal study in which one makes observations on an animal or a human being throughout its life span. However, like so many other ideals this is difficult to realize. For one thing, many observations require the sacrifice of the subject, a procedure which effectively terminates the study and which is not applicable to man. Or, in some instances, the subject may have a longer life span than the investigator, an occurrence not likely to be in the best interests of the study. In actual practice the approach used is the cross-sectional study in which different groups of subjects of different ages are selected for study. This is the type of work we'll be discussing here.

To return once more to the subject of exercise, it is perfectly obvious to even the untrained observer that human aging is accompanied by decline in the ability to perform muscular activity. What the Baltimore group, headed by Dr. Nathan Shock, has attempted to do is to supplement the qualitative observations such as we just made with good quantitative measurements.

One of the measurements of muscle activity which is made is that testing the subject's maximum work output. This is done with the subject lying supine and turning the crank of an ergometer. The work output is measured in kilogram-meters per minute. A kilogram is equal to 2.2 pounds. Thus an output of 100 kilogram-meters per minute would be equivalent to lifting 2200 pounds a distance of 1 meter (3.281 feet) in one minute. Figure 3 shows the changes in maximum work output which occur with age in both men and women.

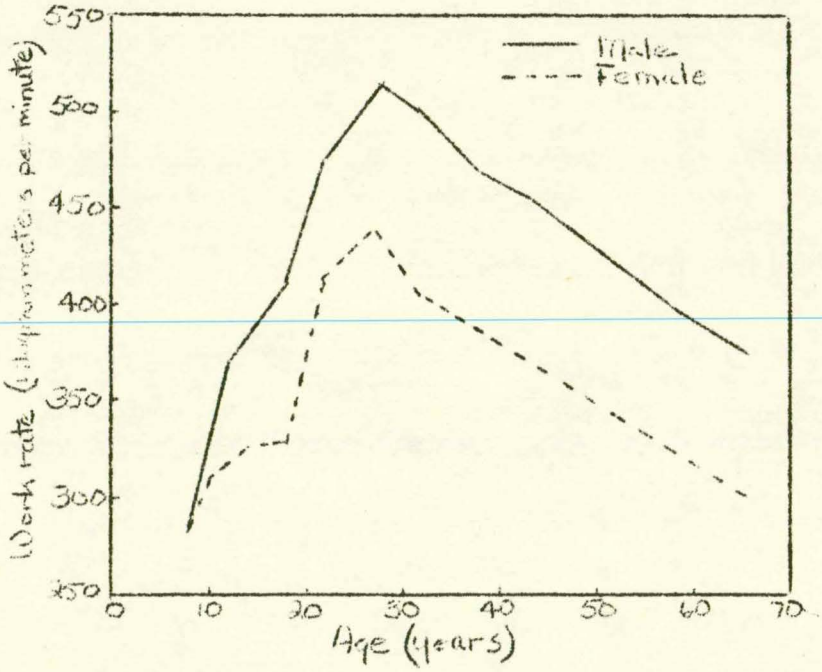

Fig. 3. Changes in work rate with age.

On the ordinate is maximum work in kilogram-meters per minute and on the abscissa is age in years. You will notice that work output is greater in males (upper curve) than it is in females. It rises in childhood and very early adult years, reaching a peak at an average age of 28. Then, it declines steadily thereafter. The maximum work rate for the human male at 28 years is a little more than 500 kilogram-meters per minute whereas at 70 years of age it has dropped to approximately 350 dilogram-meters per minute.

What is involved in determining the maximum work output which can be achieved by an individual? Obviously the strength of the skeletal muscles (which contract and move the bones) is a major factor. It has been possible to measure muscle strength by such simple means as testing the strength of the grip of the hand. The results of these tests are shown in the next figure (Fig. 4).

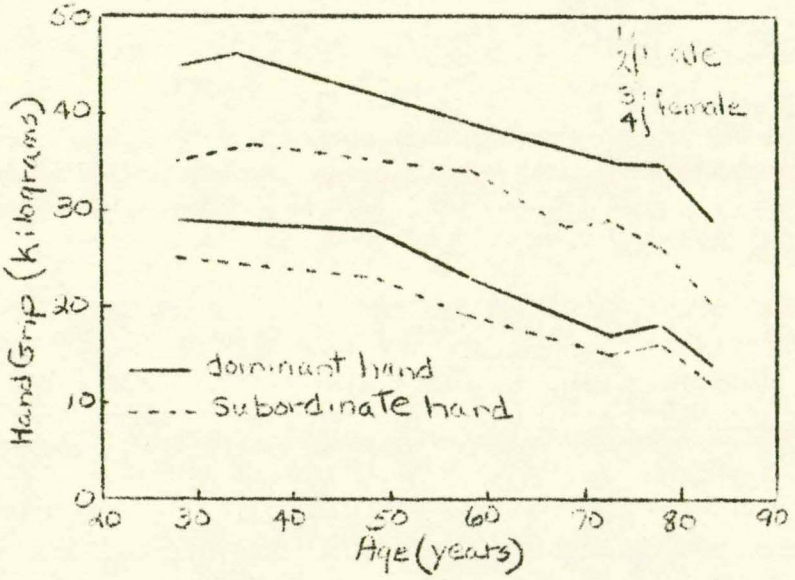

Fig. 4. Changes in muscular strength with age.

You will note that in both males (2 upper lines) and females (2 lower lines) there is a decline in muscle strength. The dominant hand, shown by the solid line, as well as the subordinate hand, shown by the broken line, show this behavior. However, and this is important, the decrease in muscle strength is <u>less</u> than the decrease in maximum work rate shown in Fig. 3. If you will look at the slope of the upper line in this figure and then compare it with the slope of the upper line in Fig. 3 you will note that they are different. What this indicates is that other factors besides decline in muscle strength are causing the decrement in maximum work output.

In considering what the other factors might be, one of the first which comes to mind is the nervous system. The skeletal muscles of our bodies are completely under the control of the nervous system. In order for these muscles to contract they must be stimulated to do so by the arrival of nerve impulses carried from the brain and spinal cord by the peripheral nerves. Furthermore, the nerve impulses must be transmitted in patterns which make possible coordinated activities.

It seems clear from a variety of studies that human aging is accompanied by changes in the performance of the nervous system. There is a slowing down of responses to stimuli of various sorts and a decline in the ability to carry out coordinated activities. Reflexes, which are a part of most muscular activities, are also depressed in the elderly. The reasons for these age-related events are still unknown. There is some evidence from studies of both animal and human brains taken at autopsy that there is a loss of brain cells with increasing age. However, there are such vast numbers of cells in the central nervous system that it is a moot question whether this can account for the performance declines. Nevertheless, the performance changes must be of central origin for, as we indicated earlier, there is little evidence for reduction in the rate of transmission of impulses along the peripheral nerve fibers.

In addition to the nervous system the ability to carry on muscular activity depends on the effectiveness of the heart in propelling blood from the lungs to the working muscles. One of the most striking characteristics of older people is the inability to adequately accelerate heart rate and thus to pump an adequate supply of nutrient carrying blood to the active muscles. It has been demonstrated that young men can increase their heart rates to 200 beats per minute, whereas older men show maximum increases to only 160 beats per minute with heavy exercise. With light exercise old subjects show greater displacements in heart rate and require a longer time for recovery than do young.

The amount of blood which is pumped out of the heart depends not only on the rate at which the heart beats but also the volume of blood which flows into the heart from the great veins. And both of these factors influence strongly the arterial blood pressure. Muscular activity of any sort increases the venous return of blood to the heart, accelerates the heart rate and consequently elevates the blood pressure. However, the homeostatic mechanisms prevent the pressure from rising to dangerous levels and insure a rapid return to the starting level within a very short time after cessation of the exercise. Although the resting blood pressure in healthy individua ls increases only slightly with age, a given amount of exercise will raise it more in elderly subjects than in young subjects. And a longer time is required for a return to normal. Thus we can draw two conclusions: (1) with light exercise, old subjects have larger displacements of cardiac function and blood pressure than young subjects; (2) old subjects do not achieve the same levels of maximal muscular work because they cannot accelerate the heart

enough to supply the very large demands of the muscles for blood.

The function of the blood and the circulatory system is to carry oxygen and other nutrients to the active tissues of the body and to remove from these areas the wasteproducts of metabolism - carbon dioxide, lactic acid, urea, etc. Active muscles require large quantities of oxygen and release corresponding amounts of carbon dioxide. These gasses gain entrance to and leave the body as a result of the operation of the respiratory system. Thus we have another system the functioning of which is important for physical activity.

It is well known that during exercise the body's requirement for oxygen increases - as much as 20 times during strenuous exercise. In the normal, young individual this is taken care of in the movement of air into and out of the lungs and in the increase in the rate at which oxygen diffuses from the air into the blood. The same things happen in older persons but to a lesser extent. We have evidence that with increasing age there is a decline in the maximum breathing capacity (measured as the largest volume of air a person can breath in a period of 15 seconds; see Fig. 2) and a decline in the amount of oxygen which will diffuse from the air into the blood (diffusing capacity; see Fig. 5).

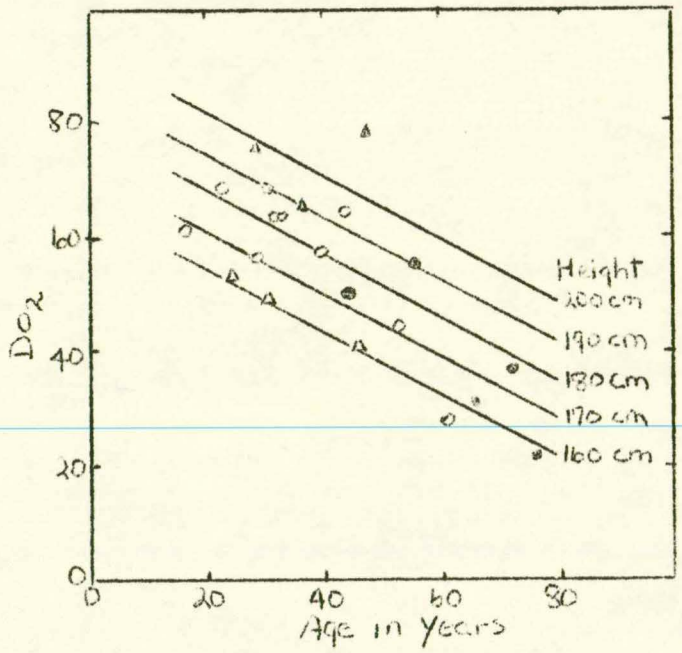

Fig. 5. Relationships between maximal lung diffusing capacity for oxygen and human age.

It is clear that these changes will impose limits on the amount of physical activity the elderly can carry on.

Along with the nervous, cardiovascular and respiratory systems

we must also consider the renal system. The role of the kidney in the excretion of the waste products of metabolism is well known. In addition, however, the kidney functions in the maintenance of water and salt balance. Physical activity tends to diminish the stores of both water and salt in the body and puts a stress on the body. In general, the homeostatic mechanisms operate in such a fashion that the amounts of water and salts which are lost through the kidney into the urine are reduced when the amounts lost through other avenues are increased. For example, when we sweat profusely much water and salt are lost and though we are not aware of the phenomenon our kidneys almost instantaneously alter their activity in order to conserve water and salt. Any form of muscle activity will increase the water vapor loss through the breath and the water and salt loss through sweat. In mild forms of activity the changes are small and are easily handled by both the young and the old person. In strenuous exercise the changes are marked and constitute a severe stress.

The evidence is quite clear that in aging there are reductions in the ability of the kidney to carry on certain normal functions. This is illustrated in the experiment in which normal human subjects of different ages received an injection of pitressin, a naturally occurring substance which causes the kidney to excrete less water. In Fig. 6 you will note that 3 curves are shown, one for each age group studied. During urine collection periods 1, 2 and 3 (before pitressin was administered) all three groups excreted the same amount of water. However, after pitressin administration the young group (ages 26-45) showed the greatest response, the middle age group (ages 46-65) showed an intermediate response and the old group (ages 66-86) showed the smallest response.

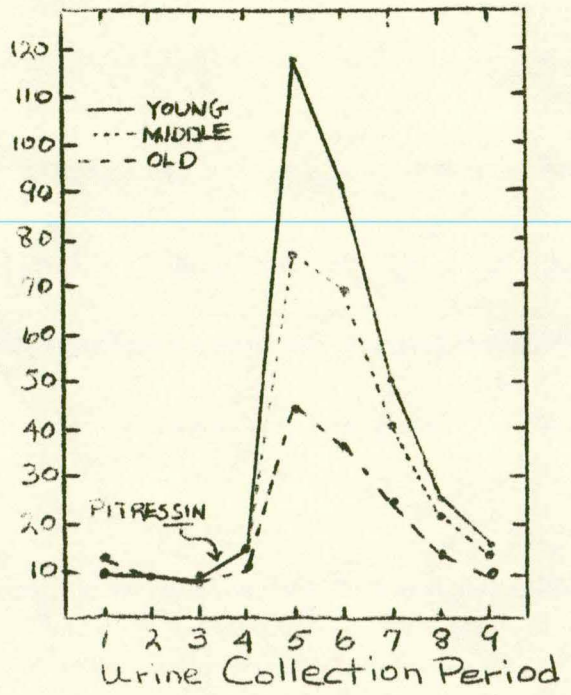

Fig. 6. Response of human kidney to injection of pitressin.

In other words, the kidney of old persons showed a reduction in the ability to respond to pitressin and thus a reduction in the ability to conserve water. Consequently it can be expected that in aging the kidney will not operate as efficiently to conserve salt and water in situations such as severe exercise where the loss of these substances is great through other avenues.

We can summarize this topic by repeating that one of the obvious manifestations of aging is the decline in the ability to carry on muscular activities. This is probably the result of changes in the performance capacities of a number of systems, e.g., nervous, cardiovascular, respiratory, whose integrated activities are essentia l for the successful operation of the muscular system. (N.B. Other systems which we have not had time to discuss are also involved.)

Up to now I have very carefully avoided mentioning disease and its relationship to aging. This is a subject which has provoked many spirited discussions among gerontologists. Every one recognizes that the aged individual is subject to disease and more often than not dies of disease. Many gerontologists believe that aging is an intrinsic process which will occur even under the most favorable of circumstances and that it is characteristic of the species as well as the individual. Superimposed on the intrinsic processes are extrinsic processes such as bacterial infections, or disease in general, extremes of environmental temperature, radiations, nutritional deficiencies, lack of oxygen, toxic substances, stress, all of which can contribute to the decreased survival capacity of the organism. The study of aging ideally should take into account what has happened to the organism in the preceeding phases of the life span.

Man is not the best subject for the study of mechanisms of aging because in man it is extremely difficult to distinguish between intrinsic and extrinsic factors. When groups of older subjects are studied they are examined for signs of disease or injury, but it is very difficult to really know what occurred in the preceeding years which might have affected the rate at which the basic process or processes of biological aging were occurring. Nevertheless we must continue our studies of human aging for it is of enormous value to know all that we can about man and what he is like physiologically and psychologically during all parts of his life span.

In conclusion we can reiterate that in man increasing age brings changes in physiological capacities and the increasing probability of death. Not all physiological functions change to the same extent nor at the same time. Furthermore, not all individuals undergo the same physiological changes. Although we have been able to detect and to describe many of the things which happen to an individual as he grows older, we still do not know the basic causes of aging. It is to be hoped that we will be able some day to design critical laboratory experiments which will yield this information.

A PROFILE OF AGING

A description of the biological and pathological changes that occur in late maturity of people. "...these changes come to so many old people, in one sense, they can hardly be called abnormalities."

A PROFILE OF AGING[1]

I. INTRODUCTION

Though change is associated with all periods of life, the period of late maturity is associated with more rapid changes, biologically and pathologically, in age-associated clinical diseases and in the socio-economic situation. A profile of aging, therefore, consists primarily of a description of the changes which come about with age. However, these changes come to so many old people that, in one sense, they can hardly be called abnormalities.

To think of aging in terms of biologic and pathologic aging implies a fairly sharp distinction, but in fact it is hardly clear-cut. Biologic phenomena associated with aging are generally considered to be those which occur inevitably with the passage of time in the life span of an individual. The problem is complicated, however, by the fact that environmental factors may produce effects which are often indistinguishable from intrinsic aging changes. The relation of biologic aging phenomena to clinical disease states is generally considered to be an indirect one. In this context, biologic degenerations are considered to confer a state of vulnerability to the occurrence of disease states, with the latter having an etiology which bears no direct relation to aging. Thus, the cause of pneumonia would be considered as bacterial or viral, as the case may be, and the increased prevalence of pneumonia would be attributed to an increased susceptibility resulting from an age-associated loss of resistance to infectious disease, a loss of the capacity to mount effective counteracting immune mechanisms, and possibly to certain age-associated changes in respiratory function.

But this kind of identification of primary etiology and secondary contributing factors is only rarely possible. Most age-related diseases are of degenerative type, lacking a distinct dominant etiologic factor, as can be seen from a review of those diseases which predominantly afflict old people. The most common are the sequelae of arteriosclerosis which involve a variety of organ systems; less common, but still frequent in old people, are cancer, diabetes, emphysema, arthritis and several others.

It is apparent from such meager data as are available that levels of various biologic activities which represent an average or mean for elderly individuals -- and might therefore be considered normal for them -- would be taken to indicate disease in younger individuals. Because of this it is possible that a more direct link may exist between biologic and pathologic aging. Stated in another way, the difference between certain age-related degenerative processes and definitive disease may be quantitative rather than qualitative. It is evident that the term "well" at age 40 has an entirely different meaning than "well" at age 80.

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[1] NOTE: This paper is one of a series written specifically for the Gerontological Society's curriculum project in applied gerontology (under Contracts PH86-63-184 and PH108-65-205 of the Gerontology Branch, U.S. Public Health Service). These papers are in draft form and are now being made available, prior to formal publication, to test their interest and usefulness to practitioners and others concerned with aging. We invite your comments and questions. Please call or write the GERONTOLOGICAL SOCIETY, 110 South Central Avenue, Saint Louis, Missouri 63105, Telephone: 314-VOlunteer 3-0570. 12/1/65

II. SOME GENERAL CONSIDERATIONS

Because of the great difficulty in formulating a definition of aging which would take into account all time-related phenomena, most gerontologists have adopted the attitude that aging represents the progressive and/or retrogressive changes which take place in an individual with the passage of time. Moreover, such changes may be intrinsic, in the sense that they would occur even if the individual remained in an ideal environment; as well as extrinsic, i.e. induced or accelerated by environmental factors operative during the life of the individual. Among the environmental factors which apply are climatic conditions, nutrition, disease states, trauma and others. Heredity, which may be considered an intrinsic factor, is also looked upon as important, usually in the sense that it determines the rate at which progressive and/or retrogressive changes occur. While chronological age is used in most studies, this is only because we lack sufficiently sensitive techniques for the determination of biologic aging; i.e. the summation of the level of aging changes in any particular individual. Even casual observation suffices to convince one that there are large variations among individuals of the same chronological age in respect to changes in such factors as vigor, speed of action, strength, behavior and mental capacity.

Moreover, studies on several biologic functions indicate that patterns of aging differ. Some processes show little or no significant change with the passage of time; others change relatively early in life, usually during the fifth or sixth decade, with later stabilization. Still others remain essentially unchanged until relatively late in life and then slowly decline. And finally some biologic processes begin to decline early (during the third and fourth decades) and continue the declination in imperceptible increments through the remainder of the life span. Certain functions important in a variety of athletic endeavors begin to decline relatively early, and this explains why athletes become "old" or have passed their peak by the time they are 35.

Certain biologic functions which appear to show little or no change with age when tested in a resting state show distinct decrements when subjected to stress. This applies particularly to homeostatic mechanisms. For example, fasting blood glucose tests often show no significant change with age; but when the homeostatic mechanism which maintains the stability of the blood glucose level is subjected to stress, as in the glucose tolerance test, aging effects become evident. Similarly, body temperature may show no change with age if the subject is tested within a relatively temperate range of environmental temperatures; but if old people are exposed to relatively cold temperatures, body temperature may fall to considerably below normal, and if they are placed in a hot environment body temperature may rise to considerably above normal. This principle applies to many other homeostatic mechanisms, although further documentation in respect to specific functions would be desirable.

III. AGING OF COMPONENT SYSTEMS

Here we shall attempt to present some of the more important age-related decrements in function of various organ systems. Some of this information could be covered under biologic aging and some under age-associated clinical disease states. The fact that this is so only serves again to emphasize the difficulty in distinguishing between biologic and pathologic aging. Also, it is often not possible to distinguish between intrinsic degenerative changes and alterations which are the consequences of vascular impairment, i.e., impactment of blood supply.

A. Skin and subcutaneous tissues

The obvious and outward signs of these changes represent the image an individual presents in his social relationships and also are a factor in his concept of self. Gray hair, wrinkles, warts and other manifestations, therefore, represent clearly a deteriorating or less attractive image for the individual himself as for others. Emotionally, they are one more stress or strain which the ego must grapple with in adapting to the aging process.

1. Changes in appearance

The stereotyped picture of an aged person is that he is small and lean; however, the range of variation in external appearance is probably as great as for younger groups. The changes that occur with aging in the skin and subcutaneous tissues are largely responsible for the alterations in external appearance:

a. General skin appearance - The skin becomes progressively more lax, inelastic, dry and wrinkled, and also becomes thinner (atrophic). Focal pigmentary discolorations (yellow and brown) occur.

b. Ecchymoses (Minute hemorrhages resulting in the familiar "black and blue" spots and markings) - Because of an increased fragility of the dermal and subcutaneous vessels ecchymoses result from relatively trivial trauma.

c. Angiomas and keratoses (types of warts) - Other frequent skin changes are senile angiomas and warts on the face, scalp and trunk.

d. Fissures - Fissures often develop about the mouth.

e. Hair - The graying and ultimate whitening of the hair is an almost universal change. Aside from inherited baldness, there is a progressive loss of hair from the frontal and vertical areas of the scalp in men, and a general thinning of the hair in women.

f. Sweating - Old people also sweat less than younger ones.

2. Structural changes

The structural changes responsible for the foregoing consist in an atrophy of the epidermal layer except for the focal areas of hyperkeratosis (excessive deposit of callus). The latter can be considered premalignant lesions in the sense that malignant tumors, most often basal cell carcinomas, develop at such sites. The dermis undergoes basophilic degeneration which involves degenerative changes in both collagen and elastic fibers. The skin adnexal structures, i.e., the sweat and sebaceous glands and the hair follicles, undergo atrophy, and there is also atrophy of the subcutaneous tissues.

It is not difficult, therefore, to match these structural changes with changes in the appearance of the skin:

a. The fissuring is due to atrophy of the epidermal layer.

b. The wrinkling and loss of resiliency can be related to the changes in collagen and elastic fiber, and the dryness to the loss of sweat glands.

c. The secretion of the sebaceous glands contains a factor which protects against hyperkeratotic changes, and loss of this substance, therefore, permits the development of these tumors.

d. Atrophy of the hair follicles accounts for the balding.

e. The loss of subcutaneous tissue is particularly important since this layer affords both an insulating layer and a cushioning against trauma. The former may be responsible, in part, for the inability of old people to regulate body temperature, and the latter to the development of decubitus ulcers (skin sores) at points of pressure.

3. Environmental factors versus intrinsic aging effects

It should be emphasized that many of these changes in the skin are most marked in the exposed portions of the skin because prolonged exposure to actinic rays can result in changes similar in many ways to those seen in aging. This, therefore, constitutes an example of the difficulty often encountered in distinguishing between intrinsic aging effects and environmental factors.

B. The skeletal system

The stooped posture, stiffened joints and porous bone structure represent not only a less attractive physical image but also a limitation in mobility and independent activities of daily living, both at home and in the community.

1. Changes in appearance and movements

The physical stereotype of the aged person is one of lean and bent appearance, and slow movements. Some of the changes that occur include the following:

a. Height - Old people are considered to have suffered some reduction in height.

b. Posture - The typical posture is usually described as consisting of partially bent hips and knees, stooping back and flexed neck.

c. Muscle power - Loss of muscle power is usually evident. Rapid voluntary movements become less easy to perform, but this is probably due to a combination of changes involving both muscle and the nervous system. Inactivity accelerates this process.

2. Relation to other organ systems and body activities

These changes in muscle have an important influence on a number of other organ systems and on many activities:

a. Daily tasks - They create difficulties in carrying out ordinary daily tasks.

b. Respiratory system - They impair the efficiency of the respiratory system because of impairment of the muscles of respiration.

c. Excretory functions - Since all voluntary muscles suffer equally, involvement of the muscles of the abdomen and pelvis creates problems in defacation and urination.

d. Energy stores - Muscle also provides a major site for glycogen storage, and loss of glycogen stores leads to a loss of reserve sugar from which the energy required for emergency activity is derived.

3. Structural changes

a. Muscle - The structural changes seen in muscle consist of thinning of the individual fibers, a loss of their cross striations so that they present a homogeneous (hyaline) appearance, and ultimately a disappearance of muscle fibers and their replacement by fibrous tissue (nonfunctional scar tissue) which does not have the ability to expand and contract at will.

b. Posture - The changes in posture noted above result from structural changes in ligaments, joints and bones. Ligaments and joints become stiffened.

1) The ligaments calcify progressively with advancing age and ultimately ossify; this mineralization involves primarily the elastic fibers.

2) The stiffening of the joints results from an erosion of the cartilagenous joint surfaces and their ossification, as well as from degenerative changes which occur in the soft tissues which line the joint cavities (synovium). Many investigators consider this as a manifestation of disease (osteoarthritis) despite the fact that it is almost universally present in some degree in old people.

3) The calcification and ossification of the ligaments of the vertebrae account for the so-called "lipping" of the vertebrae, a form of osteophyte formation.

4) The fibrocartilagenous discs which provide a cushion between vertebrae undergo atrophic changes and become thinner, thus accounting for changes in the curvature of the spine.

5) Surprisingly, however, all of these changes have little effect on motion.

6) On the other hand, comparable changes in rib cartilages and in the ligaments and joints which join the rib cage to the sternum and vertebrae may seriously impair movement of the rib cage and thereby seriously affect respiration.

7) With advancing age the bones become porous and lighter, losing much of their elasticity. This process is called osteoporosis, and is a definitive clinical disease of the elderly. As the bone cortex becomes thinner, a compensatory reaction occurs on the outer layer (periosteum), consisting of deposits of new bone. Some bones change shape. Thus the angle between the neck of the femur and the shaft changes from an obtuse to almost a right angle. Such changes alter structural characteristics designed to withstand stresses and predispose to fractures from trauma which they would be ordinarily capable of withstanding. Changes in the bony structure of the vertebrae as well as those in intervertebral discs and ligaments all combine to produce the kyphoscoliosis (hunched back) of the elderly, but there is often a component of poor posture which contributes to the stooped appearance.

C. Nervous system

In addition to the skin changes, loss of bulk, postural alteration and appearance of weakness which characterize old people, the external appearance also includes tremors, alterations in facial expression and mental reactions. These involve primarily the nervous system. Because of retarded reflexes and slower adjustments to stimuli of all kinds, considerable adaptation is necessary on the part of the older person in his daily habits and ways of doing things, to allow for the time lag.

1. Functional changes

Deficits referrable to the nervous system include the loss of some tendon reflexes, loss of efficiency of sensory organs as exemplified by a raised threshold for taste and smell.

a. Tactile discrimination and the appreciation of vibrations are diminished.

b. Least affected appears to be the appreciation of pain, although there is some indication that the pain threshold is raised in many aged persons.

c. Reflexes generally and adjustments to stimuli become slower and less efficient.

d. The recovery of balance from changes in position is retarded.

e. Susceptibility to shock is increased because of loss of efficiency of neural control of circulation.

f. There seems to be a decrement in speed and accuracy of a variety of cognitive and psychomotor functions which is roughly proportional to the extent of brain damage. There is also a decline in some intellectual abilities, at least in the very old. Impairment in short-term memory has been reported, but long-term memory seems to be preserved well into old age. On the other hand, there is an increase in factual knowledge with age (experience), and in its coordination and ordering, and this may offset some of the other mental decrements.

2. Personality changes

Many behavioral problems observed in the elderly appear to be related to changes in the cerebrovascular system (blood supply to the brain), as well as changes in the nervous system. Many symptoms resembling those of mental illness are perceived and present severe management problems for institutions or families caring for these patients.

These changes are most distressing to the adult children of these patients who find the personality differences frightening and disturbing and who often need counseling and help with their feelings in these areas.

a. Old people have been described as developing a narrowing of interest and a failure to accept new ideas.

b. They are often melancholy and pessimistic.

c. They are also believed to have a loss of intensity of emotional response, and a loss of adaptability.

d. Old people also exhibit an abnormal possessiveness.

e. Finally, in advanced senility, there is mental confusion with intervening lucid periods.

Some observers believe that many of these characteristics represent only an exaggeration of earlier traits.

3. Structural changes

There are both gross and microscopic changes which occur with advancing age and may to a considerable degree be associated with the foregoing manifestations. However, there is a considerable difference of opinion as to whether these structural changes represent intrinsic aging effects or are the consequences of vascular impairment.

a. With advancing age there is a progressive atrophy of the convolutions (gyri) of the brain surface and consequently widening and deepening of the spaces (sulci) between convolutions.

b. There is some loss of bulk of brain substances and some dilatation of the canals (ventricles) which contain cerebrospinal fluid.

c. Microscopically, a progressive loss of brain cells (neurones) can be detected and the remaining neurones acquire a brown pigment (lipofuscin). Corpora amylacea, small sand-like bodies, progressively increase in number within the brain substance.

d. Some of these changes are believed to be intensified in senile dementia, and are certainly intensified, at least in focal areas, following occlusion of cerebral vessels. Moreover, it is not unusual to encounter old people who exhibit very few of the behavioral changes noted above until they have suffered one or more strokes; following this there is a sudden and rapid deterioration in the direction of senile dementia.

D. The special senses

While relatively less attention has been paid to age-related impairment of the special senses, since even total loss of function of one or more of these is still compatible with life, nevertheless, it is self-evident that a loss of some of these functions can have profound personality effects and create serious problems in coping with the environment.

1. Vision

Presbyopia (farsightedness) generally becomes a problem at about age 45 and is accompanied by some reduction in visual fields, an increased threshold for light stimulation, and a slowing of dark adaptation. Arcus senilis (the ring of opacity at the corneal margins) and macular degeneration (opacity of the cornea itself) are fairly common in people of an advanced age; in very old people there is marked sclerosis and atrophy of the retina. Senile cataract is present in some degree in almost all people after age 70 and there is some degree of increase in intraocular pressure in most old people, although the latter is not considered inevitable.

Changes in vision have a tendency to be limiting as to activities, both active and passive. Many vision problems prevent enjoyment of travel, of shopping, of reading, of television and other forms of diversion, and may be viewed as the most difficult physical handicap to which an older person must adapt.

2. Hearing

In both men and women hearing sensitivity decreases with increasing age, and the hearing loss spreads progressively from higher to lower frequencies. The onset of hearing loss occurs about five years earlier and produces greater degrees of auditory impairment at higher frequencies in men than in women. It is not known to what extent these aging changes are the result of changes in the structure of the ear and to what degree they are due to impairment of the nervous system. In older people there is an atrophy of the lower half of the inner ear.

A decrease in hearing sensitivity in the aged may cause a limiting of social relationships and enjoyment of such entertainment as radio, concerts, television and social visiting. This disability is an isolating one, bringing with it certain mildly paranoid symptoms, suspicions of others and the like.

3. Speech

Changes in pronunciation and enunciation are quite common in the aged. Dysphasia and aphasia are less common. (Dysphasia is difficulty in speaking or in understanding language. Aphasia is loss or impairment of the capacity to use words as symbols of ideas.

Both are caused by brain lesions.) Many factors may be responsible for these changes. Among these are loss of teeth, ill-fitting dentures, changes in the temporomandibular joints (where the jaw hinges onto the skull), and alterations in muscles controlling movements of the jaw, and in the tongue.

4. Smell and taste

Progressive loss of the sense of smell is quite common, also a loss of the sense of taste as the taste buds diminish in number. Such changes are at least partly responsible for loss of appetite and other pleasurable sensations. The loss of sense of smell can also create a hazardous situation since they may not be able to detect odors of dangerous gases.

5. Tactile

With advancing age there is a progressive loss of ability to experience heat, cold and touch sensations. Vibration sense of the extremities is also often lost, although it may remain even in some nonagenerians.

E. Cardiovascular system

As already pointed out, one large problem in assessing aging phenomena in the human and other vertebrates involves a differentiation between degenerative phenomena which are intrinsic and those resulting from an impairment in blood supply. While there is some merit in such a differentiation, it should be pointed out that the heart and blood vessels themselves undergo aging changes which may be considered intrinsic, although there is a considerable component of mechanical wear and tear.

1. Functional changes

With aging there is a decline in cardiac output at rest. Moreover the heart becomes less capable of responding to extra work which in young persons is characterized by an increase in rate and stroke volume. The heart does not enlarge with age unless there is an increase in blood pressure. Old people with normal or low blood pressure have normal or small hearts. There is a progressive increase in peripheral resistance to the flow of blood, and also a tendency for increased systolic blood pressure.

2. Structural changes

With advancing age there is some increase in the interstitial fibrous tissue, but the atrophy seen in voluntary muscle fibers does not occur here. The muscle cells, however, progressively accumulate brown pigment (lipofuscin) in a manner similar to nerve cells. Current research also indicates that senile amyloidosis (excessive deposit of a starch-like material) of the heart is quite

common. These changes appear to occur even in the absence of significant narrowing of the coronary trunk arteries. These alterations are probably responsible for the diminishing cardiac output.

The arteries elongate with advancing age, become tortuous and calcify. In addition there is fibrosis of the lumen (inner channel) which becomes narrower. Such changes cause the pulse wave to be propagated more rapidly in older people, and may also be responsible for the trend toward higher systolic blood pressures.

Basement (supporting) membrane thickening advances progressively with age in vessels of all sizes, even down to capillaries. In small vessels muscle fibers hyalinize and perivascular fibrous tissue increases. These changes bring about an impairment of diffusion of nutrients into the tissues as well as of the removal of waste substances. Many aging changes may occur secondary to these vascular alterations.

F. Respiratory system

Changes within the respiratory system may lead to a limiting of mobility and activities of all kinds -- shortness of breath and other breathing difficulties produce varying degrees of fear and anxiety to older persons similar to the apprehensions which accompany heart conditions.

There are three components of this system which may show age-related impairment: ventilation (breathing), diffusion (exchange of oxygen and carbon dioxide between lungs and blood), and pulmonary circulation.

1. Functional changes

Extensive comparisons have been made between individuals in their twenties and those in their eighties. Total lung capacity declines, while there is an increase in residual volume. There is a reduction in vital capacity and its subdivisions. Maximum breathing capacity declines from 132 liters per minute in the young group to 50 liters per minute in the old group.

2. Structural changes

Age-related factors which interfere with ventilation are weakness of the muscles of respiration, marked obesity and skeletal abnormalities of the rib cage. As already pointed out, these are basically representative of changes which take place throughout the skeletal system. There is also diminished resiliency of the lungs, probably due to changes in the elastic fibers. Changes in diffusing capacity are probably due to a progressively increasing thickening of basement membrane structure between alveoli (air sacs) and capillaries. Pulmonary fibrosis, most often due to environmental factors, also impairs pulmonary ventilation.

Pulmonary arteriosclerosis occurs at a much slower rate than systemic arteriosclerosis, primarily because of the lower operating pressures in the pulmonary circulation. Nevertheless, all of the changes in arteries, arterioles and capillaries noted under cardiovascular system ultimately also occur here.

3. Emphysema

While there are notable differences between senile and other forms of emphysema, the ultimate clinical effects differ only quantitatively. Old people commonly experience increasing dyspnea (shortness of breath), although they do not characteristically show the obstruction to exhalation common in other forms of emphysema.

G. Gastrointestinal tract

Food and enjoyment of it is a primary satisfaction available to many older persons, so that digestive difficulties, modified diets and intestinal upsets are often major problems to the elderly, representing one more area of deprivation for them. There is great preoccupation with food intake and excretion. Food fads are not uncommon, and these are often difficult to resolve by those supplying food regularly to the aged. Bowel incontinence represents a major nursing management problem to those caring for the aged.

1. Functional changes

Complaints referrable to the gastrointestinal tract are common among aged persons. Loss of the sense of smell and its effect on appetite has already been mentioned, as has the loss of taste buds in the oral cavity. The latter may be further impaired by the presence of glossitis. The intake of food may be further reduced because of poor teeth and ill-fitting dentures.

The stomach shows a reduction in gastric motility, but this is usually not sufficient to delay gastric emptying. There is, however, an increased tendency towards achlorohydria (loss of digestive acid) and a reduction in gastric volume.

There is diminished peristalsis throughout the gastrointestinal tract due to the generalized weakening of muscle activity, which also involves the smooth muscle of this system. This may be responsible for constipation which is common in old people. Other factors which contribute to constipation are the generalized dehydration, which has its effect on the water content of the stool, and changes in pH of the feces. There is a rise in fecal pH with age which results in a killing off of the lactobacilli.

Many old people have hemorrhoids which further complicate processes of elimination, and bleeding from these hemorrhoids may be responsible, in part, for the anemia which is often encountered in the aged. Some investigators have suggested that anemia in the aged

may be due to impaired iron absorption. While there is some evidence supporting such a concept, the serum iron and saturation of iron-binding protein are within the same range as for younger individuals.

There is ordinarily no impairment of liver and pancreatic function in the healthy aged. The usual functional tests employed to evaluate the competency of these organs remain normal. There is also, generally, no evidence of impaired function of the gall bladder or bile ducts, although the frequency of calculi (stones) increases with advancing age.

2. Structural changes

There is atrophy of the mucosal lining of all segments of the gastrointestinal tract with advancing age. There is thickening of the basement membrane and submucosal connective tissue which probably accounts for impairment of absorption. Age-related vascular changes already described occur also in this system and further contribute to impaired absorption. It has been observed in liver biopsies obtained from aged persons that many of them show abnormalities suggestive of a nonspecific hepatitis, even though they show no manifestations of clinical disease of the liver or gastrointestinal tract. There is some increase in fibrosis (scarring) in the pancreas.

H. Urinary tract

Urinary incontinence, also a major nursing management problem in institutions and hospitals for elderly, brings a feeling of shame to the patient and is difficult for family and friends to accept and understand. It has been demonstrated by several institutions for the aged that retraining for continence can be successful, with a great improvement of morale among the patients whose retraining was successful.

1. Functional changes

Probably the best quantitative data on aging changes are those available for renal function. The filtration rate in the kidney of persons in their eighties is about 50 percent of that of individuals in their twenties; renal blood flow is also about 50 percent of that of the young group. Tubular function is comparably diminished.

Polyuria (excessive urination) and nocturia (nighttime urination) are common among the aged. In the male this is most often due to prostatic enlargement, which occurs in about 75 percent of males over age 55. This is often accompanied by infections of the bladder due to urinary stasis. In the female infections of the urethra with extension into the bladder are common and usually account for these symptoms.

2. Structural changes

The structural changes in the kidneys which probably account for the alterations in renal function consist of hyalinization (obsolescence) of glomeruli (kidney filters), interstitial fibrosis with some loss of tubules in the cortex, a peculiar soft hyaline which compresses and produces atrophy of collecting tubules, and vascular aging changes already noted. Contributing to this decrement in renal function are the age-related diminution in cardiac output, dehydration and anemia.

I. Reproductive organs

1. In the female

Undoubtedly the most consistent aging phenomenon is menopause, although even here there is a considerable variation in the age of onset. There are many behavioral problems associated with this event which will not be detailed here; many of them are a matter of common knowledge. In the female there is, however, a considerable period during which low-grade estrogenic (female sex hormone) activity continues; this appears to be due to the take-over of secretion of estrogenic substances by the adrenal glands. Gonadotropic (pituitary) activity continues at a high level for some years following the onset of menopause. Ultimately, however, there is atrophy of all of the genitalia.

2. In the male

In the male the menopause occurs considerably later in life and is accompanied by a cessation of spermatogenesis, with less marked atrophy of the genitalia.

J. The endocrine system

1. Functional changes

There have been many attempts to relate endocrine deficits to other aging changes. This derives primarily from the association of gonadal deficits with menopause and with the observation that patients with pituitary cachexia (severe weight loss) have certain superficial changes resembling aging. However, the actual demonstration of endocrine deficits has not met expectations. No significant pituitary deficits have been demonstrated, and in fact, certain hormones such as the gonadotropins actually are secreted in increased amounts for a period of time following the menopause. Despite a decrease in oxygen consumption with advancing age, it would appear that there is no perceptible thyroid deficit. There is, however, a fall in the secretion of adrenal 17 ketosteroids, but not of other adrenal hormones. There is also a deficit in anabolic steroids, particularly those secreted by the gonads, which are important in that they are probably responsible for the loss of muscle protein.

Two general comments should, however, be made. There is a wide gap in our knowledge of age changes in the peripheral utilization of hormones, and the long looked-for deficits may exist here. Moreover, certain endocrine functions appear normal when patients are tested in a resting state, but abnormalities can be detected when they are subjected to stress. The glucose tolerance test as a mechanism for determining deficits in insulin secretion is a case in point. The fasting blood glucose level may not change significantly with age, but, if a glucose meal is given, there is a delayed return of blood glucose to a normal level.

2. Structural changes

Nevertheless, structural changes occur in the endocrine glands which indicate there may be a central endocrine deficit.

K. Hemopoietic system

1. Bone marrow

There is little information available on aging changes in bone marrow. There is some evidence of a diminution of functional and reserve capacity which become evident only under conditions of stress. Thus, there is a diminished leucocytic response to infection and a retardation of recovery from anemia due to hemorrhage.

2. Lymphoid system

Similarly, responses of the lymphoid system, including the spleen, appear to diminish with age; there is a reduction in volume of lymphoid tissues and the response to external antigens is diminished. Thus, for example, the regional lymphadenopathy (enlargement of lymph nodes) associated with infections of the skin is often absent in old people.

3. Blood volume

Some reports indicate that blood volume diminishes with age. This may be due to indirect effects since blood volume is related to height, weight, surface area, muscle mass, protein content and other variables, some of which diminish with age.

4. Blood chemistry

Anemia is not a characteristic of aging; the hemoglobin level is normal in healthy old people. However, nutritional state and dehydration may affect the level of hemoglobin. The total and differential white cell counts also do not change significantly with advancing age. Serum proteins do change with age. There is a diminution in the proportion of albumin and a proportionate rise in globulins, primarily the beta globulins; these changes are most impressive in the unfit elderly.

L. Nutrition and Metabolism

The social aspects of eating are lacking for many elderly who live and eat alone. Lacking motivation for adequate meal planning and preparation, these aged fall into a vicious circle of poor nutritional intake to lowered energy to further poor food intake. Various Meals-on-Wheels programs have observed an upsurge in both physical and psychic energy in aged whose nutritional intake has improved through appetizing and balanced meals delivered to them on these programs. Diabetes, an illness of metabolic imbalance, is often most difficult for elderly to manage, in view of strong preferences for sugar and starchy foods which are quick and easy to prepare and to consume.

1. Nutritional deficiencies

Many of the changes seen in senescence resemble nutritional deficiencies. The capillary fragility responsible for ecchymoses, even following trivial trauma, suggest Vitamin C and Vitamin K deficiencies. The hyperkeratotic changes in the skin resemble those seen in Vitamin A deficiency and the fissuring about the mouth, the glossitis, the angular stomatitis suggest a deficiency in various Vitamin B components. Other changes suggesting nutritional deficiency are the loss of lean body mass, water depletion and sometimes even fat depletion. Obesity in some aged persons may actually mask a protein loss. The process of demineralization of bone suggests a deficiency in mineral intake. Regarding the water content changes with aging, it is noteworthy that intracellular water falls by about 15 percent between age 40 and age 80.

2. Indirect factors

Indirect factors also point to a nutritional deficiency. The usual changes in eating habits of old people can be listed as follows:

a. They have a reduced water intake as a rule.

b. Characteristically old people develop a preference for sugars.

c. The motivation for preparing and eating an adequate diet is often lost along with other motivations.

d. The decreased appeal of food may be related to a loss of taste buds and reduced sense of smell, as already noted. The loss of teeth or ill-fitting dentures may also be a factor.

e. There is a reduction in the quantity of digestive enzymes and gastric acidity, which may impair absorption.

On the other hand, as has been noted, the basal metabolic rate decreases with age, indicating that the nutritional requirements of the aged are also reduced.

3. Blood levels

A common method of assessing the normalcy of a metabolic process is the measurement of blood levels of the biochemical components of the process. It should be pointed out, however, that such measurements have only limited value since changes in the blood represent the combination of the level of synthesis and discharge into the blood stream, the uptake by the tissues utilizing the particular component, and the efficiency of the excretory mechanism. Suffice it to state that some of these measures rise with age, others fall, and still others remain constant.

4. Ratio of organ-body weight

Similarly varying patterns of change in relation to age occur in respect to the ratio of organ weight to body weight; this ratio can also be considered as dependent on changes in nutrition and metabolism. This ratio for such organs as the spleen and liver show a rise to a peak during middle age, followed by a decline; a similar curve obtains for dilatation of the large arterial trunks. The ratio for the heart reaches a peak at about age 40 and remains constant thereafter. The ratio for kidney, brain, pancreas and testis remains essentially constant after adult growth has been attained, and for lung and prostate it increases throughout the life span. For still other organs, such as thyroid and some other endocrine glands, it diminishes progressively after adult growth has been reached.

5. Temperature maintenance

Another body function, temperature maintenance, can also be considered to reflect alterations in nutrition and metabolism, proper nutrition being essential for maintaining the insulating qualities of the subcutaneous tissue, and metabolism for providing energy for the production of heat. It has been repeatedly observed that adjustments to adverse environmental temperatures is less rapid and complete as persons become older. It has been estimated that at least 10,000 old people die every winter in Britain from hypothermia. The rectal temperature can fall as low as 70-90°F, and mortality from hypothermia in old people is about 85 percent. This constitutes a real danger to the aged living alone without sufficient food and heating facilities.

BIOLOGICAL AND PSYCHOLOGICAL ASPECTS OF AGING

Bernice L. Neugarten

This paper stresses the importance of recognizing the diversities rather than similarities among older people. Variations in personality and choices of accomodation to change are described.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Welfare Administration, Office of Aging

BIOLOGICAL AND PSYCHOLOGICAL ASPECTS OF AGING

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(University of Chicago) -- March 5, 1963

Having been asked to comment upon major findings in biology and psychology with regard to aging, I want to begin by saying that we should look at aging and at old people within the frame of reference of the total life span. An old person is a person with a long life history. There is nothing very sudden about old age. As a matter of fact, we do not know how old is "old." Usually the definition varies according to the age of the person who is considering the question. Those of us who are afraid of being called "middle aged" if we are 40, say that middle age begins at 45; if we are 45, we say 50. Similarly if we are 60, we say old age begins at 70.

In a more serious vein, one may view the aging process primarily in terms of the continuities and discontinuities that occur with the passage of time. This is not to say, from the point of view of biology or of psychology, that old age is not without its crises. It is an exceedingly eventful period of life, but it is a period that can be understood only in relation to earlier periods of the individual's life history.

If old age is seen in reference to the whole life span, we should look at processes of change. To do so, we need an arbitrary base line; usually, middle age. One can understand something about old age by studying childhood, or youth; but for today's purpose, let us draw inferences about old age by looking at persons in middle age and by describing major changes that occur as they move into old age. By middle age, I will be arbitrary and refer to the period between 40 and 60 years old.

Biological Changes

Marked changes begin to appear in the biological status of the organism in the middle years. Up until this point, one might say without too great inaccuracy that the organism operates at relatively optimal levels -- certainly in the 20's and 30's. About 40, however, there are usually measurable changes in biological status. Change in vision is one example; (the lens of the eye can no longer accommodate to close objects); change in hearing is another (the ear can no longer distinguish tones of high frequency). These are not sudden changes, but they become noticeable in the 40's, so that in middle age most people begin to complain about changes in sense organ acuity. Hearing

is a much more frequent problem than vision, and more frequently is related to personality disturbance. The syndrome of the deaf, suspicious personality is true in fact as well as in sterotype, and is an illustration of the close relationship between biology and psychology.

The same kind of decline occurs in other parts of the body. Blood pressure increases in middle age; digestive and respiratory systems begin to lose their efficiency; sexual capacity or at least sexual desire diminishes. There is menopause in the female, which may or may not have its counterpart in biological changes in the male. With menopause there is not only cessation of menses, but also vaso-motor disturbances such as the hot flush, and disturbances in the sympathetic nervous system. (I might add that several of us in the Committee on Human Development are presently carrying on research concerning middle-aged women. We are beginning to doubt that there is anything like a menopausal syndrome, except for the vaso-motor disturbances I've just mentioned. This is not to say that middle-aged women do not have psychological and emotional problems, but that these problems are not directly related to the menopause.)

One way of looking at the biological changes that occur with age is to consider the concept of homeostasis. This is a biological concept which refers to the fact that there are a large number of regulatory mechanisms which operate to maintain a relatively constant internal environment for the cells of the body. A great many complicated procedures operate to maintain these balances. Biological change in middle and old age can be conceptualized in terms of loss of the organism's capacity to maintain homeostasis.

For example, there is loss in the ability to maintain an even level of blood sugar circulating to all parts of the body -- it is more difficult for the older organism to maintain relative balance of the biochemical processes, or to restore equilibrium once there has been a disturbance.

With regard to physical exercise, it is much the same. If a young person jumps up and down a dozen times, his pulse rate rapidly returns to normal. In an older person it takes a long time for that restoration to occur.

The maintenance of body temperature is still another example. It becomes more difficult to maintain even body temperatures with successive age. Old people, that is, suffer more from cold and heat than do young people.

On the same principle, it is more difficult to maintain resistance to infectious disease; it is probably less easy to produce antibodies in an aging organism than in a young one.

This means that with successive age persons tend to need more time to recover from illness or injury and to restore biological balances.

Biologically, the period from middle to old age is a period of decline and loss; but this fact must not be overgeneralized. It need not be assumed that because there are biological losses there must inevitably be parallel losses in psychological and social processes. There seems, instead, to be a certain independence between various processes of aging, and they certainly do not occur at the same rates.

For one thing, there are tremendous individual differences from person to person. At any given chronological age, at 40, or at 50, or at 70, or at 80, there are greater differences between individuals than between <u>averages</u> for successive age groups. As a matter of fact, there is some evidence that with successive age, greater and greater differentiation occurs between people. This means that, on the whole, 20-year-olds are apt to be more alike than 60-year-olds; 60-year-olds more alike than 80-year-olds.

Another important fact is that different biological organ systems age at different rates. The heart and circulatory system has an aging pattern that differs from that of the central nervous system; and both are differenc from the pattern characteristic of the sexual organs. Thus biologists puzzle over the question of whether or not one can speak at all of a general aging phenomenon in the biological organism; and are not yet agreed.

There are many different theories which attempt to explain biological aging, ranging all the way from the effects of radiation to the effects of built-in genetic mechanisms. There is good evidence that there is a linkage between heredity and longevity. People tend to live out a life cycle whose length can be fairly well predicted from knowing the length of life of their ancestors. This, in turn, is used as evidence that there may be a knid of inborn programming, or an inborn clock in the human organism -- if I may use these relatively loose analogies -- which somehow determines the rate at which aging goes on and which therefore determines the time of death.

<u>Health</u>

I shall not go into statistics on the health of older people, but from reading the newpapers alone, we all know that persons aged 45 and over suffer from more illnesses than persons who are younger. The major medical problems which face us in America today relate to the chronically ill, not to the short-term dramatic illnesses such as the infectious diseases. We have made tremendous strides in conquering the illnesses of childhood and adolescence, but our advances in medical science have not yet had much effect upon the chronic and degenerative illnesses that are characteristic of middle and old age. As we are all probably well aware, the chronic diseases of the heart and circulatory system constitute the foremost cause of death

When one goes down the list of causes of death, however, one finds that suicide is fifth in frequency in persons aged 45 and over. This startling rate of suicides in older persons is one indication of the extent of mental illness in the United States, and of the fact that mental illness in considered the number one health problem of the nation.

With increasing age comes increasing rates of mental illness. In successive age groups, the rate of persons being admitted to hospitals for psychiatric treatment, when shown on a graph, forms a straight upward curve. At the present time, the increased rate of admissions to mental hospitals of persons over 65 is three or four times greater than the increase in their proportion of the population.

There are both biological and social factors which account for this phenomenon. For a considerable period of time it was assumed that the increased number of old people in mental hospitals was traceable to a breakdown of the family as a social institution. That is, with the change in family pattern from the extended family and the three-generation household that characterized America 100 years ago to the so-called "nuclear" family of 1960, it has become more and more difficult for the family to care for its older members. Given increased urbanization and industrialization, and the presumable breakdown of family ties, it was concluded that in America our old people were being shunted into state hospitals or into other institutions for the aged. This may be partly true; but there are trends that operate in the opposite direction also. Our society seems to be more tolerant of deviant behavior in the aged than of deviant behavior in younger people. For example, there is one very large scale study now in progress on the West Coast of all persons admitted to mental hospitals at age 60 or older, comparing them with older persons who live in the community at large. It looks as if the community has a number of flexible and informal ways of providing for, and for tolerating, psychiatrically ill behavior in the aged, for the number of severely disturbed old people who continue to live at home seems to be at least as great as the number who enter hospitals. An old person who, for instance, wanders about the street at night in a disoriented state is picked up by a policeman and returned home. A landlady will tolerate bizarre behavior in an old person "...because, after all, he is old..."

There is good evidence, also, that older persons, on the average, are not isolated from their children, even though the three-generation household is not common. Studies based on national samples show that older persons tend to live very near at least one of their children, and they see their children often. By and large, family ties continue to be strong, even though the nature of the tie is less often financial than was the case a generation earlier.

Certainly it is an oversimplification to assume that larger numbers of older people are being admitted into institutions today because the

family cannot accommodate to the needs of aged parents as well as before; or because people in urban communities cannot tolerate erratic behavior in the aged as well as people in rural communities.

I have already cautioned against overgeneralizing from biological losses to other types of changes with age. Generally speaking, the individual's attitudes toward health and his attitudes toward biological change tend to be highly significant factors in his patterns of adjustment. Attitudes toward health in middle age and old age tend to be, interestingly enough, somewhat independent of actual physical health status. We have had the experience over and over again in research studies of asking middle aged and old people, "How would you say your health compares with the health of other people? We find a high proportion, sometimes as high as 80 percent, who say, "My health is much better than the average person of my age." Many of these persons will then go on, in the next sentence, to say, "Of course, I had a heart attack last year," or "Of course, I suffer from diabetes."

From research in which health is studied in relation to adjustment or to life satisfaction, there is evidence that attitudes toward health are probably more important than actual health -- at least, within certain broad limits. (In the very ill, this relationship will not hold true.) To put this in different words, it is probably more important in predicting an individual's adjustment pattern to know what he thinks about his health than to know what his health actually is.

The Psychology of Aging

Now let us move to what I have arbitrarily called "psychology," and make a few comments about psychology, personality, and aging.

Perhaps most of us, when we think about psychology, think first about mental ability. Accordingly, I should say very briefly that the general pattern found in study after study of intelligence tests and of mental abilities, is again a pattern of loss with age. Test scores when plotted against age show a curve that goes steadily downward. Usually the decline begins to be evident after about age 20 or 25; the decline is relatively slow in the period from 20 to 30, then becomes more rapid. In general, the curve becomes acceleratingly downward in direction.

However, the major question is "What do these curves really mean? What do the tests measure?" It should be pointed out that psychologists are on much less secure ground in explaining what the tests mean when we speak about adults than when we speak about children. In the field of mental measurement we proceed with some degree of assurance regarding test performance as an important measure in evaluating the progress or the adjustment of children and adolescents. We have a criterion against which to relate these measures of intelligence. The test measures are meaningful because we know they are predictors of

academic behavior, and the tests have been validated against academic performance. We know also that school performance is intimately related to other aspects of the child's life, so that it makes a real difference whether or not the child succeeds in school. Thus academic performance is a good criterion to use for validating intelligence test scores.

When one attempts to assess an adult, the criteria become less clear-cut. What is a successful life style at age 40? By what criterion shall we judge success? By occupational success? By mental health? By the mental health of the offspring? How shall we decide the extent to which an adult is fulfilling his potentials? We don't have school achievement to use, as with children, and it is not easy to decide on the criterion for intelligence or the criterion for adjustment in adulthood. The problem is even worse in dealing with old people. One has not only the problem of value in the selection of each criterion, but also the problem of measuring any of the criteria once they have been selected. How shall we measure occupational success? Or success in marriage?

This digression is not irrelevent, because it raises the whole question of how we shall evaluate decline in intelligence test scores beyond the age of 25. What do the tests mean? What important aspect of life is really being reflected on test performance? To put these problems into still different words: it is not easy to decide with what other behavior the test results should be correlated, what they reflect, how they are related to real life. In applying the knowledge obtained from laboratories or special test situations to real life, the application becomes more and more difficult with the successive age of the individual tested.

Now just a word about losses of memory. This is a real enough problem in old age and the problem relates usually to loss of memory for recent rather than for early events. There are a number of neurological and biological theories regarding memory and memory loss, and a great deal of research going on in this area. Loss of memory causes tremendous anxiety to many middle-aged as well as to old people, and particularly, it seems, to middle-aged men who are said to worry, by and large, about two things: loss of sexual potency, and loss of memory. Although these may be crucial problems for the middle-aged male, we do not, unhappily, know enough about either topic.

Personality of the Older Person

It is particularly difficult to summarize what I think are the most important personality changes of middle age and old age. The major reason is that research on this subject is just beginning.

Aging itself is a relatively new area of research; and research in the psychological aspects of aging is especially new, since most

of the research on aging has thus far dealt with biological change. Our findings regarding personality are very tentative. Nevertheless, I shall hazard a few generalizations based largely upon ongoing studies carried out by my colleagues and me in the Committee on Human Development.

First, it appears that there are measurable changes in personality that go on in middle age. It looks as though middle age is the time of greater preoccupation with the inner life, a time when the person begins to reevaluate, to take stock of himself and his life. In more psychodynamic terms, the middle-aged person becomes preoccupied with the resurgence of impulse, and to be concerned, as it were, with the relations of self with others. There is a kind of turning inward, a kind of preoccupation with self and a reexamination of the self in relation to the external environment.

There is probably a significant difference in the aging of men as compared with women. Such sex differences are well known in other areas. To take only one well-known example: in terms of morbidity figures, the female not only lives longer, but she suffers from fewer of the severe illnesses characteristic of middle age and old age. In personality, there seem also to be major sex differences. The female seems to show increased emotional expressivity. Her "elan vital" seems to go up; she seems more free to express her emotions; she seems to have greater self-confidence as she moves from the forties to the sixties. There are more attempts to control interpersonal situations, greater freedom for expressing opinions, even greater need, and probably freedom in expressing the need, for dominance.

The male, on the other hand, seems to become more concerned with intellectual processes. He becomes more and more detached, even withdrawn from the emotional side of life. He becomes more acceptant of his needs for nurturance, and more acceptant of a passive role.

The extent to which such underlying impulses are acted out in everyday behavior is another question. Social control operates so that both males and females learn what is appropriate behavior, and by the time they are 40 or 50 their patterns of behavior have become well-established. One does not expect very dramatic changes in overt behavior in either sex, even though I believe, on the basis of a half dozen research studies, that the kinds of underlying personality changes that I have mentioned do occur. To put this another way: there are changes in inner aspects of personality which are not readily observable in overt behavior, especially when overt behavior patterns have become habitual over many years of living.

Another psychological change that occurs with increased age -- and I refer to the 60's 70's and 80's -- is what my colleagues and I have

called "psychological disengagement."[1] "Disengagement" has different dimensions, but here I want to stress the psychological dimension. Our theory is that, with increased age, there occurs an overall withdrawal of emotional investment from the environment, and a decreased cathexis for objects or persons in the external environment. Emotional energy is redirected from the outside world back upon the self. The aging individual may show greater emotional investment in some persons in the environment than in others, but at the same time, more of his psychic energy seems to be caught up in self-preoccupation (sometimes in self-gratification) and with inner impulses rather than with duties and responsibilities. Often in the mid-40's or 50's people begin to say "Oh, but I don't care about that any more and, at my age, I don't have to care." One person said that when she reached 50 she could speak her mind and not dread the consequences, and that this was the great gain of growing old.

It is probably in middle age, rather than old age, that most people experience a re-evaluation of time, and when they form new perceptions of time and of death. There comes a point in life when the individual realizes that time is not infinite and that the self will die. Along with this realizttion may come, also, an end to measuring one's life-time from the date of one's birth and measuring it, instead, from the distance from one's death. This is the period when it is typical to take stock of one's life and to ponder what one may yet accomplish, or obtain, in the time remaining. Time takes on a new saliency for most persons; and it is at this point that introspection increases and contemplation on one's inner thoughts becomes more frequent.

This introspection of middle age is not the same as the reminiscence of old age; but it is probably its forerunner. It is probably a preparatory step to the psychological disengagement that follows in old age, when the individual chooses the persons, the activities, and the values that he regards as most important in his life and when he begins to give up those he regards as less important. Finally, as he approaches the end of life, he withdraws emotional investment from more and more objects and persons of the external world and turns more and more to his inner thoughts and preoccupations.

The extent of psychological disengagement varies greatly from one person to the next. The important thing in personality processes, just as is true of biological processes, is the wide range of individual differences and the variety of personality types. In old age, as I have

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[1] Growing Old, by Elaine Cumming and William F. Henry. N.Y.: Basic Books, 1961.

already said, people are probably more different than before. The extent to which psychological disengagement is associated with happiness or good adjustment varies also from one old person to the next.

There is one extensive study of personality patterns which has shown at least three clear-cut personality types which are associated with high personal adjustment, or, in other words, with high life satisfaction.[2] The three personality types which seem to get along very well in old age are the "mature" type, the well-defended or "armored" type, and the "rocking chair" type. The "mature" is that ideal type to which we all aspire. These are the individuals who can accept the facts of aging, who have adjusted well to their losses, who are realistic about their past and present lives, and who face death with relative equanimity.

Let me point out, incidentally, that death is a topic which is still very much taboo in our society -- among psychologists, as well as among other people. And if I may be permitted a further digression: of all professional groups in this society, it is the ministerial profession whose central responsibility it is to assist individuals as they prepare for death. It is no exaggeration to say that preparing to die is the major psychological task of all old persons, whether or not most of them meet this task successfully. No minister I have known denies this responsibility. Yet it is surprising that in so many conferences on the role of the church in relation to the aged, this topic is omitted, if not deliberately shunned. I have read a good deal, in the past few years, about ways in which the church should help provide social activities for older persons; or how, as a social institution, the church has responsibilities for promoting the welfare of the aged. But it is only rarely that I have heard or read anything with reference to the minister's very special psychological function in ministering to the aged, and in assisting aging persons to accept the fact of approaching death -- to assist them, that is, before the very end of life when death is already upon them.

But to return to the discussion of personality types in old age: The second type of personality that seems to adjust well to aging is the so-called well-defended or "armored" type. This is the type of person who clings to middle age patterns of behavior. He denies aging; he keeps as busy as he ever was. He defends himself against aging, and manages to get along very well.

A third type of well-adjusted older person is the rocking chair type. This is the person who can accept passivity; who feels he has the right, after he is retired, to sit and rock, and who does not feel

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[2] Aging and Personality, by Suzanne Reichard, Florine Livson and Paul G. Peterson. New York, Wiley, 1962.

guilty about it. I might point out that this type is probably becoming more frequent in our society, particularly among males, as we are becoming a more leisure-oriented rather than work-oriented society.

There are two personality types of maladjusted man in the study I am describing. They are the "angry" or "extra-punitive" type, and the "intra-punitive" type. The "extra-punitive" are the people who are always blaming the world for all their troubles. "I never could get what I wanted in life because I never got the breaks"; or "If I'd only had an education," or "If I'd only married a woman who would have understood me," and so on. The "intra-punitive" is the one who says, "If I hadn't been such a weakling, or if I hadn't been so stupid, life would have been better today." He is the self-blamer, the self-pitier, the one who punishes himself.

These five types of old age personalities are, I'm sure, very familiar to you all. They are also types that occur in all ages.

Old age is inevitably a period of crisis. There are the biological losses already mentioned which are sometimes very dramatic -- the sudden heart attack, and the sudden threat of death. Retirement from work is usually a crisis for a man, one that calls for a far-reaching readjustment of life pattern. The death of one's spouse is a major crisis. The death of a friend tends to be a crisis especially because as one grows older it becomes harder to form new friendships.

Old age is an exceedingly eventful period of life, a time in which major readjustments are called for. In this sense, it is a period of crisis. As already implied, the styles of adjustment or the styles of adaptation are varied in old age, perhaps more varied than at any other period in the lifetime. There are some old people who are happy when they stay socially "engaged" or when they stay busily involved in the roles and in the activity patterns which characterized them in middle age. These are the people who illustrate the paradox current in our society: "The person who ages the best is the person who does not age at all." It is this person who says to others, "Keep busy. Visit your friends. If you lose your job, take up a hobby. Keep your activity pattern high."

On the other hand, there are persons who are happy when they are not only psychologically, but also socially, disengaged. These are the persons to whom the rocking chair looks good and feels good; and who resent the fact that younger people often want to rush in and change things for them. These are the old persons, who, if they were to use such terms, would remind us that "isolation" is not the same as "desolation." They welcome isolation, never having had enough of it until old age, and they enjoy every minute of it. Other people have been relatively isolated all their lives, and want to keep it that way.

In closing, I should like to reiterate that with regard to both biological and psychological factors, it is the diversities in the aging process rather than the regularities which are most impressive. Accordingly, in programs designed for the aged, those developed in the church just as those developed in other institutions, it would be well to emphasize variety. Because old people are so different, one from another, any program -- whether formal or informal -- will have to meet a great range of needs and interests.

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"THE EXPERIENCE OF MASTERY" PRINCIPLE

Prescott W. Thompson

The author discusses the importance of giving older people the opportunity to continue to experience skills which have contributed to their self-esteem during previous phases of life.

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"THE EXPERIENCE OF MASTERY" PRINCIPLE

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"THE EXPERIENCE OF MASTERY" PRINCIPLE

Prescott W. Thompson, M.D.

I intend to develop with you a principle-- a principle which I call the "experience of mastery"--which I believe may be of importance in trying to help older people. I believe that if we keep this principle in mind, we will discover more ways, and more rational ways, to be helpful in such a way as to prevent personality deterioration and some of the disability and dependency which goes along with it. The principle is applicable whether we are counseling with client or family, or attempting to plan for or establish special community services or resources.

We need to bear in mind that even those persons who are physically disabled are rarely disabled by physical changes alone. They are in part disabled by their feelings about the illness, and their lot in life. The physician will have to prescribe digitalis for the body, but there are things we can all do about the spirit--about feelings. I am going to suggest what I think is a basic approach toward encouraging the development of healthy feelings, restorative feelings, in older people.

I shall preface my remarks with three vignettes--parts of three short stories which have been told to me about older people. Each of the stories was told by a member of the family. Later, I shall refer to an episode from the standpoint of an older patient, and to an episode within a nursing home.

The first story is the simplest. A retired older man is living by himself. His son periodically sent him a box of cigars. After several such gifts, the father asked the son not to send him any more cigars. He said he would prefer to go out to the corner cigar-store for his own.

A second story involves a poor boy who became a wealthy executive While he was on the way up, his mother continued to live alone in an apartment in a run-down neighborhood of the large city where she had lived for many years. The executive decided that he would surprise her by leasing a luxurious apartment, with maid service, in another part of the city. He did so, furnished it beautifully, took her shopping for some new clothes, and then on her birthday moved her into the new apartment and gave her the key. The next day, she moved out and returned permanently to her former home.

The third story involves a mother who came to visit her son and his wife. While she was visiting, she took it upon herself to go through the burear and closet in her son's and daughter-in-law's bedroom, rearranging all of the son's shirts, ties, socks, and other personal effects.

Now I will comment briefly on these three stories.

Fortunately, the old gentleman who wanted to go out for his own cigars had a son who understood the meaning of this. It gave the partially disabled father a reason for dressing and leaving his apartment, greeting and talking with his friends along the way, and picking and choosing his own brand at the corner cigar-store. It gave him somewhere to go where he would be cordially received, where he could hear the local gossip, argue about politics, and complain about the high cost of living. It gave him the feeling that to some extent he was still the captain of his own ship, and that he could still win friends and influence people.

The son whose mother moved out of the new apartment, however, was frankly hurt and perplexed. He genuinely wanted to do something for her, although he knew that his motivation was mixed; that is, he was concerned about what people might say if he left her in poor surroundings while he, himself, lived in relative luxury. He had not talked about his plans with her because he felt it would be more fun to surprise her. He assumed that she would be pleased and grateful. He simply could not understand why she would want to live in circumstances which were now below standard in the light of his income.

We can understand the mother's behavior in several ways. It would be misleading to simply say that older people are reluctant to change. As a matter of fact, for this woman it might not be true at all. It would come closer to the mark to say that, like the man who went to the corner for his cigars, her neighborhood, her friends, and her apartment held much meaning for her. It would probably be accurate to say that she felt out of place and awkward among uniformed employees and the more sophisticated tenants.

But something more basic is involved. What do we mean when we say that her neighborhood, her friends, and her apartment held much meaning for her? The meaning is that in her own neighborhood and apartment she would experience the feeling of mastery. There she could experience the strength-giving, restorative, healing, reparative feeling which in her case came from being the captain of her own ship. There are some people, young or old, who seem willing to turn over their fates, lock, stock, and barrel, to someone else. This is never a desirable situation, although sometimes because of incompetence or unusually serious disability, it is necessary that someone else does take over. Our tendency, however, is to take over too soon, or too much. There is a good psychological reason for the older person to jealously guard his prerogatives. He is the reverse image of the young child who insists that he dress himself without help. The child wants to experience and to demonstrate a newly found skill by doing it himself. The older person is in danger of losing his skills, and with it the previous feeling of independence or personal mastery, or the feeling that he is at the helm. He wants to enjoy the feeling of personal mastery for as long as possible. He can do this in such ways

as caring for his needs, making his own decisions, influencing other people, loving, arguing, and sharing. In her own apartment, the executive's mother could continue to experience the feeling of being able to do those things which brought her the greatest satisfaction. In her own neighborhood she could experience the feeling of being important to other people, the pleasure of loving and being loved by those same people, and the sense of power which comes from bargaining, gossiping, and arguing. In the new apartment, she was afraid that she would soon feel like an old lady who had nothing to live for, without identity, without strength, without influence; weak, awkward, unattractive, unneeded, expendable. She would be unknown, and would even be in danger of losing the image of herself as a person worth knowing, or worth anything.

The mother-in-law presents a more complex problem. Her behavior has its healthy side and its destructive side. On the one side, she attempts to be useful, and to make an active bid for her son's affections. On the other side, she insults her daughter-in-law's housekeeping, and provokes her son to take sides. In a surprisingly immature way for a woman of her age, she possessively acts as though her son is hers and hers alone. Yet, she lets it be known that she needs and wants to be useful and appreciated. She wants to re-experience the feelings of mastery and influence which she had when her son was much younger, and when she was, in fact, the most important person in the world to him.

It was possible for the angry daughter-in-law to recognize that the mother did have some legitimate claim on the son's affection, even though it was necessary for the daughter to make it clear that the home was hers and that she preferred things to be arranged in her own way. It was possible to help the son recognize that the mother's behavior was a bid for his affection, and to point out that he could be appropriately attentive to her while he at the same time upheld his wife's position. The daughter could then respond to the mother's need to be useful--and to experience the strength and self-esteem which come from the exercise of skills and experience and knowledge--by pointing out that she could be of real help in many ways within and without the home, and with the grandchildren. Hollywoodish endings are never quite real, but in general terms this is what happened: A serious domestic crisis was averted, mother continued to be welcome in the home, and she was spared the uncomfortable feelings of guilt which always accompany unchecked hostile and immature behavior. At the same time, she experienced the pleasurable feelings of power and affection which arose from sharing her skills and experience with the daughter-in-law and grandchildren.

These vignettes are shared with you in order to point up a major principle which I consider to be important in trying to understand what is behind problems which involve older people, and to understand how we can be most helpful to them and to their families.

There are so many popular or stereotype solutions--so many "pat answers"-- to the various problems which inevitably arise when a large segment of the population push on toward the upper decades. A good many of these pat answers arise from partial understanding, prejudice, or outright rejection. The commonly held beliefs that people in their sixties, seventies, or eighties should not get married, or that parents should never live with their grown children, are examples in point. Actually, the latter bit of advice comes close to the principle which I am developing. Thorton Burgess, (86?), creator of Peter Rabbit and other children's stories, gives one reason why parents should not live with their grown children. He says that the children try to be too helpful. If those children understood the principle, they would not be too helpful. Other bits of advice, like the necessity to develop a hobby before retirement, or the advice that one should not retire until he has to, come close to the principle of the "experience of mastery." Unfortunately, however, it is not always possible to develop hobbies or continue with them, and it is not always possible to hold on to one's job. Advice of this kind, therefore, has limited usefulness. Perhaps if we understand the principle, however, we can find other solutions or substitutes. Certainly, better solutions will be found in many situations when psychological principles are brought to bear. It would have been easy for the man who thoughtfully sent his father cigars to resent the latter's apparent ingratitude; it would have beer easy to give up trying to do anything further for him. The executive who wished to help his mother was hurt and bewildered, but with a little counselling he was able to see that she did what she had to do, and that she was better off for it. He was then able to find other ways to be helpful to her.

At this point, let me tell you a fourth vignette, this time from the standpoint of the patient. While visiting the geriatric unit in a psychiatric hospital, we found a sad woman lying on her bed in her room when all the rest of the patients were at dinner. The doctor explained to me that some of her family had visited with her during the preceding weekend, and had treated her like a child. They even used baby-talk with her. The message conveyed to this patient by such infantilization is this: She is no longer useful to them, she has nothing more to contribute; whatever she has learned in her many years of living no longer has any value. Should she live with any of her children--she has no home of her own--she could not be permitted to find outlets for her intelligence, wisdom, skills, or energies, or even her need to express affection through caring for her grandchildren. She would not be able to feel the strength, and the heightened self-esteem, which come from experiencing mastery and influence. Treating her like a child is an open rejection of her, rather than an expression of real love. At least it is rejection mixed with misguided love. In defense of the family, we should say that we don't know all of the circumstances which led them to behave in this way. Perhaps the patient provoked some of it. We can only describe the unfortunate end result.

Obviously, it isn't so simple as to say that older people should be loved, or cared for, no matter how much they may need it. It is true that a good many older people need more love of the right kind, or care, or help in establishing community resources for them, than they are now getting. But the most helpful love is the kind which recognizes the need to experience, as much as possible and for as long as possible, feelings of mastery and influence. The need to use, to exercise, and to demonstrate whatever talents, intelligence, knowledge, or skills exist. The need to mix with people with whom one can experience the pleasures and the power which come from sharing, loving, discussion, and even arguing. The need is for care when this is essential, but the kind of care which is most likely to be neglected is that which encourages the older person, and makes it possible for him, to do all that he can for himself, and for others. Care or resources which make it possible for the older person to continue to experience the strength and self-esteem which come from mastery and influence.

It should be said at this point that when we talk about older people we are talking about all kinds of people. We are talking about persons who are relatively young, healthy, and vigorous, even at sixty-five or seventy. We are also talking about people who are bedridden and completely dependent. We are talking about men who have just retired, and widows who live alone. We are talking about parents who are visited frequently by their grown children, and grandchildren, and we are speaking of old folks who live alone without children in a strange community.

But for all of these people, the need remains the same. At least one need remains the same: to have opportunities to experience the strength and self-esteem which come from using intelligence, knowledge, experience, and skills with or for other people. It isn't important, insofar as the application of the principle is concerned, that intelligence and skills, and so on, may have lessened as the years have gone on. The need remains to use what is there.

Making this possible may require two approaches. The first approach I have in mind is the casework, the counseling, or the psychotherapeutic approach. It may also sometimes be done by the family physician, or even by trained "friendly visitors." Something in the feelings of the older person may have to be unlocked by talking with him. As a matter of fact, the very fact that the doctor or caseworker or friendly visitor is interested enough to be there listening to him, and is willing to see him again, may help the patient or client to begin to experience the feeling of mastery or influence, and to recognize that it feels better to keep exercising it.

The second approach--with or without the first--is to provide opportunities for self-expression--opportunities for the older person to use himself in a gratifying way, to demonstrate to himself and to others that the hand at the helm remains strong enough to do its own navigating.

Now, what kinds of opportunities do I have in mind?

Let's start out first with the nursing home patient. He is certainly not, in a social sense, the captain of his own ship. But there are ways to help him feel this way, and to keep him this way as much as possible. Bear in mind that our goal is to provide him with opportunities to use whatever he still has, preferably in ways which are helpful or interesting to others.

First, we look at everything we do in the home with this question: Is there a patient who can do it? We are not going to use the patient if we give him something to do which he is willing to do, or which he can be reasonably prevailed upon to do. We are going to strengthen him through the experience, and the process of personality deterioration will be slowed down. He will find new zest and new enthusiasm, providing the job is within his capacities. If it is not, we shouldn't ask him, although we are more likely to underestimate his capacities than to overestimate them. If he is willing to dust or to polish furniture, we can give him that job. If he can wash windows, and the doctor has no objections, give that job to him. Or he can make beds, or push other patients in their wheelchairs, or arrange for games or entertainment, arrange flowers, or whatever.

That very simple opportunities are overlooked is illustrated by this story: For the Halloween Eve tricks-or-treaters, the administrator and his staff prepared popcorn balls. When the children came to the door, he answered the bell himself and gave them the popcorn.

Now I submit that two or three weeks before Halloween, if some thought had been given to the matter, the following process might have taken place: Certain of the more intact patients could have been asked for inexpensive ideas about what to give the tricks-or-treaters. These patients would have had the gratification of using their intelligence and past experience with children to come up with an idea, perhaps a better one than popcorn balls. Then certain of the patients could have wrapped or otherwise prepared the packages. If the treat was to be popcorn balls, they could wrap the balls in wax paper and tie them with colored string. Then when the children came to the door, even the bedridden patients could have given the children the packages, and again experienced the skill--so important to all of us--of making children happy.

This is a very simple illustration of the principle I have mentioned. The complexity of the task varies with the capacity of the patient, but almost all of the patients might have participated at one stage or the other. Each would have shared in the gratification and the excitement. The idea of having the patients do it would have occurred to any administrator who was searching for opportunities to provide gratifying tasks for his patient.

For ambulatory and relatively intact people living by themselves or with their families, the principle is the same, although the setting is different. Hobby shows sponsored by the community further stimulate the experience of mastery and influence, as well as stimulate interest in meaningful activities. Library exhibits of paintings or craft products by older people serve the same purposes. Certain universities offer their extension and correspondence courses free to citizens over sixty-five, and thus encourage the continued use of intelligence and knowledge. Larger communities have established day centers. I should like to describe a day center in detail, but this is a subject in itself. The program, however, is designed to permit and encourage the use and exercise of whatever talents, skills, knowledge, or experience the member possesses, including leadership, teaching, and organizational skills. A good many day centers have community service projects. In short, the day center utilizes to the fullest extent the principle which I have mentioned. It is there we can best observe the halting of deterioration, the restoration of function, and the acquisition of new zest and vitality.

So, I commend this principle to you, whether you are working with clients, supervising workers, attempting to establish community resources, or engaging in city planning. I don't know what you can do in your county, but perhaps you will find that opportunities are close at hand, just as we found them even in the nursing home.

CONFUSED AND DISORIENTED ELDERLY

Caroline S. Ford

The author describes various forms of emotional or mental disabilities that often accompany physical illness in the aged. She discusses medication and other therapies used to alleviate these conditions. The needs for training staff to handle these people, and the legal problems which arise with these patients are discussed.

CONFUSED AND DISORIENTED ELDERLY

Caroline S. Ford, Chief of Home Services
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Alongside the disabling and chronic physical illness suffered by the aged, with a clear cut organic basis, we find many instances of the disability variously described by physicians as "senility", "senile psychosis" or "cerebral arteriosclerosis". The symptoms are often suggestive of a functional rather than an organic disorder, resembling those of mental illness. On the other hand, certain observations indicate the possibility of organic causations solely, some organic causations, or perhaps a combination of organic and functional causes.

More research as to specific etiology is needed in these situations.

The symptoms displayed by those suffering from this disability are varied and troublesome both to the aged person and to those around him. Many of these elderly are agitated and, in their activities, agitate others. They appear to have excessive energy, and are seen to be pacing back and forth or taking long walks; they often speak in very rapid fashion, their words tumbling out in a steady, unintelligible stream. They wander away in compulsive fashion, as if seeking some more familiar, happier place.

These aged are often very much disoriented as to time and place (or perhaps wish they were). Their contact with present day reality fluctuates from day to day, so that sometimes they give the impression of normal, rational adequacy, then again the disorientation reappears. This inconsistency gives rise to the question as to organic vs functional causes, and also makes direct service planning with such persons a difficult procedure for those in the immediate environment.

In these persons, a loosening of both physical and emotional controls has been observed. Sometimes the aged person becomes incontinent, for example, and is unaware, indeed surprised by this himself. Gross irritability and frequent expressions of rage and hostility are common. Quite often temper tantrums are the order of the day, triggered off by relatively small incidents, so that the reaction is quite out of proportion to the precipitating event. The hostility may be expressed verbally or in actual physical attacks, with cane, fists or whatever is handy. Yelling and screaming are also frequently observed. Loosening of other controls is observed in certain aged persons who continually disrobe or whose ideas and speech are highly colored with gross sexual connotations and obscenities.

Delusional, paranoid ideas occur in some instances. The classic persecution complex is expressed, the concept of people stealing money from them, of people being poisoned are some examples. Often these aged express extreme religious fervor, claiming to have direct contact with the Lord.

In general, the overall medical-social treatment of such situations has been non-productive of results. Many so-called "senile" patients occupy beds in public or private psychiatric facilities. Tranquillizing drugs, including barbiturates, are relied on heavily for control of these patients with mixed results.

Observations of the effect of tranquillizors with elderly patients give rise to many questions as to benefits, both short and long range. In certain aged persons, tranquillizers appear to produce a reverse effect, i.e., seem to stimulate rather than calm the patient. Certain patients appear to improve when the dosage is reduced or the drug discontinued. Confusion and disorientation seem lessened; vision and general steadiness of gait appear improved. On the other hand, some persons appear much less anxious and more controlled under this type of medication.

Nutrition appears to play a part also in certain elderly persons whose nutritional intake has been marginal or deficient over a period of time. Observations have revealed a marked improvement in cerebral and behavioral function when adequate nutrition is instituted.

Medication such as nicotinic acid, to increase the blood flow to the brain, has had considerable success in certain aged patients, with resultant improvement of physical and mental functioning.

Other successful approaches include use of a total professional team of therapists, physical, occupational, speech, recreational, social work (both casework and group work) to provide maximum stimulation to the senile patient and maintain or improve his contact with reality and prevent further regression.

The presence of these confused and disoriented aged in the midst of those with unimpaired mental faculties produces anxiety and fears among those who are well. Group facilities for the aged of whatever orientation, residential health care or nursing or other, report numerous difficulties in the handling of the confused aged as part of the total group and have of necessity developed methods of segregating these residents or patients. Sometimes one wing or one floor is reserved for them; sometimes separate buildings are used.

Specialized training and orientation are necessary for those on the staff who deal with the confused patients. Specialized building design plays an important part in physical control of the wandering and in providing facilities to meet these special needs.

Legal questions also arise in connection with the protection of those whose judgment is impaired, particularly in the milder or beginning confused patient whose disorientation may be slight or fluctuating. Family members are often concerned lest the older person's failing judgment lead to financial exploitation, yet at the same time are reluctant to institute guardianship proceedings, or request a power of attorney from the aged person since the latter may still be able to express good judgment in many areas.

Those institutions charged with the care of the aged are also reluctant to play the role of legal guardian, yet difficulties often arise in obtaining guardianship of the person, where there are no assets or estate. At present, society has developed no appropriate alternate for protection of aged persons in these situations.

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MATCHING SERVICES TO INDIVIDUAL NEEDS OF THE AGING

Walter M. Beattie

The author discusses the concept of "matching services to individual needs" in the light of the societal values which place obstacles to older persons participating in family and community life. The paper emphasizes the importance of recognizing the individual older person's needs and the modification of these needs through the aging process. He cautions against viewing these needs in a stereotyped way. The author outlines his developing conceptual model of services for older persons.

FOR THE CURRICULUM PROJECT OF THE
GERONTOLOGICAL SOCIETY

MATCHING SERVICES TO INDIVIDUAL NEEDS OF THE AGING*

Walter M. Beattie, Jr.**

The apochryphal story of the two blind men attempting to describe the nature of the elephant through their sense of touch and their resultant description of the animal as having a tail at either end probably best sums up the perceptions of our society, its communities, and those working with older people in the provision of services of the older person. Too often the older person is viewed only in the perspective of the setting and only with the perception of our relationship to him.

To discuss the concept of "matching services to individual needs" it is important to address ourselves to several basic questions. Why the use of the terminology, "aging," rather than "aged;" why our present concern with the individualization of services; what are the "needs" to which services are addressed; and how can such services be put into "context," that is, how can they be cognizant of and relate to the world and reality of the older individual?

First, why the terminology "aging" rather than "aged?" When is a person old? This is a matter for philosophical debate. Certainly you have known many persons who, although they may be in their advanced years, you remark what a young person he or she is. On the other hand, we have all known persons in their middle years who somehow have always seemed "old" to us. Aging is relative and has many dimensions. Aging is a life-long process and it is important that we explore some of its several dimensions.

Certainly there is the psychological dimension of aging; that is, one's perceptual and learning abilities. You have probably heard the phrase, "you can't teach an old dog new tricks." This is what I would call a stereotype of aging in that many of us believe that older persons can no longer adjust or adapt to change and cannot learn to live with new ideas or knowledge. That, however, is not borne out by the facts of the situation. While it is true that with advanced years people may have increasing impairment of eyesight and hearing, we also know that a person continues to learn as long as he lives. Studies have revealed that while the older person may be slower in the learning process, his ability to retain what he learns and relate it to past experiences is much

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greater than those of the younger years. A study made at Columbia University several years ago using two study groups, one comprised of those in their late teens and the other in their eighties, revealed that while the "youngsters" learned much more rapidly and could do better on an examination given immediately following the presentation of material, the "oldsters", although much slower learners, related what they had learned to past experience. Upon retesting following a time lapse from the presentation of the material, the "oldsters" retained their newly acquired knowledge far more than the rapid learning teenagers. I point this out because it is important to recognize that older persons continue to adjust to new situations and can learn far more than we are apt to give them credit for. Margaret Mead has pointed out that we have much to learn from the older generation in that they have adjusted to so many changes in their life time that they can teach us much about the process of adjustment. No other generation in the history of mankind have had so many changes to meet and to adapt to as has our present generation of older persons.

Another dimension of aging is the physiological. The biologist tells us that aging, biologically speaking, is a relative process. That is, persons at any particular birthday may be more different than they are alike. Also, it is interesting to note that each one of us ages differently within our own organisms. I may have a younger heart than you, but you may have a younger kidney than I. Certainly with some of the tissue and organ banks that are being developed, it may be possible to keep persons alive for a much longer period of time as we replace some of these aged organs with younger counterparts. Biologists believe that the human organism could attain a life expectance of 125 years and we do know that we have an increasing number of persons passing the 100 year mark.

It is also important to note that today's generation of older persons are physiologically younger than their counterparts at the turn of the century. You are all, I am sure, familiar with the famous painting of Whistler's Mother. Certainly she epitomizes "old age." How many of you know that she was only 44 years of age when she sat for that painting? Many of our 65 year olds today are more like their 50 year old counterparts at the turn of the century due to improved nutrition, health care, and environmental sanitation.

Another dimension of aging is the chronological. Because of our mass society, we have a tendency to categorize a person in terms of his birthday. One day a man is working and views himself as an adequate and contributing member of his family and society. He goes to bed one night and mysteriously, upon awakening, finds that he has crossed that imaginary line of 65

years which determines that he is "too old" to remain in the work force and must retire. Many of our social policies are based upon the mistaken notion that birthdays count and that all persons are essentially alike because they happen to have the same chronological age. It is interesting to note what has appened in regard to the change in retirement eligibility for Old Age and Survivors Disability Insurance. That is, now men, as well as women, may retire at age 62, receiving a reduced benefit. We are beginning to see the envolvement of a new social policy; that is, that 62 years is the age for retirement. In the future will we see the "golden years" as beginning at age 62?

A last dimension which I would like to discuss with you is the sociological. This may be defined in terms of the social function which a person performs in his family or society. Many of the so-called problems of the aging are related to this dimension in that society's values and attitudes determine our behavior. If you pick up most newspapers across the country, you will note that a woman need not apply for a secretary's job if she is over 35. Sociologically, she is "old" and will find it increasingly difficult to change jobs or obtain new employment. For males this is increasingly a dilemma for those who are unskilled or displaced from a rural to an urban economy, as the ages 40-45 mark them as being too old for the labor force. With technological innovations this is particularly so in those industries which have automated their production. The worker in his middle years, skilled to perform specific tasks, finds it nearly impossible to re-enter the labor force without retraining. The Yale economist, Neil W. Chamberlain, in this month's Atlantic, discusses the root of this problem and its increasing applicability to the white collar professions. He states:

> "The fundamental change which has taken place in our culture is a speeding up of the rate of accumulation of knowledge, an acceleration so much in excess of what we have been accustomed to that it is imposing unexpected strains.". . .
>
> "The most immediate impact is felt in the professions. The older a man grows the less professionally adequate he becomes. For a period, perhaps an extended period, he may compensate for this obsolescence of his professional capital by the experience he acquires on his job. As a specialized researcher in a laboratory, he may come to know more and more about his subject. As an administrator, he may acquire skills in dealing with other professionals. As a teacher, he may develop competence in imparting knowledge to students. But the odds are yearly becoming greater that at some

> point in his career, while he is still in his prime, the subject he has researched, or the functions which he administers, or the body of knowledge he has to teach will have changed so greatly that his lack of current professional competence will stand revealed."
>
> "The new knowledge will be in the possession of a younger man who will have just come through a period of instruction that had winnowed out the older, less useful knowledge and substituted for it the new, more relevant knowledge. And then that younger man, once on a job, will himself begin the process of professional deterioration."
>
> "It has been reliably reported that one large corporation, whose name is a household, word, has concluded that because the knowledge which will be important to its profitability, and indeed its continuity, is of ever younger vintage, promotions will no longer go to men past forty." 1/

Functionally, in regard to work roles, one is aged at an ever younger chronological age. This factor alone requires much reconsideration of the function of education in our society. Is education something acquired in the early years and, in a sense, completed? Or, is it a life-time process, basic both to the individual and to his society.

All of the above dimensions are important because they give us many perspectives in regard to aging. We are concerned with the aging process as it affects individuals and families. We are concerned with the changes of aging as they interfere with or impinge upon the ability of individuals and families to be self-reliant, to make choices, and to participate in and contribute to the broader social life of the community. Our goal, too often, has been to provide a service or plan a community program for older persons as ends in themselves. For example, our concept may be the provision of safe and adequate housing for an aged individual. While good in itself, it is a static concept and fails to consider immediate short-range goals as these are placed in the broader context of long-term goals. Aging is a dynamic concept predicated upon our knowledge of change brought about by the process inherent in goowing old. Specific housing needs of older persons must be put in the broader context of providing networks of living arrangements and services to permit alternatives of choice

1/ Chamberlain, Neil W. "Retooling the Mind." in The Atlantic, Vol. 214, No. 3 (September, 1964). pp. 48-49.

based upon present and predictable changing individual requirements and preferences. To date, the majority of our services have failed to go beyond the stereotypes of our culture. Where we have developed and provided services for older persons, such services have failed to view the essential unique and individual characteristics of older individuals. As Miss Ollie Randall has stated,

> "The major characteristic of older people is that of being extraordinarily individualistic. Each person is in himself the 'sum of all his days,' of what he has done with them, and what they have to him. He is totally different from every one of his fellows - even from members of his own family who may have been exposed to the very same influences and events. This leads any generalizations about the personal, financial, and social characteristics of this large number of persons open to the usual specific exceptions which are supposed to prove the rule. It also makes the task of individualization of treatment and of creating the proper milieu for treatment - whether in or out of hospital - an extremely difficult one with serious implications for change in current methods." 2/

The fact of the greater differentiation through life experiences of older persons of the same categorical age means that they are more individualized and are in many ways more unique than persons of earlier age groups. It has been my perception that services to children place greater emphasis on the individual than do services for the aging, although the child tends to be more like his peers due to fewer life experiences. This is not to suggest that services to children not be individualized; rather, it is to say that the processes of aging - biological, psychological, sociological - interact with the physical and social environment. Greater individualization is the result. Further, we must recognize that when we are talking about the aging we are focusing on a segment of the population which spans anywhere from one-fifth to one-fourth of the total life span. Too often we have compared and developed services for older persons such as the 65 year old and the 85 year old as if their needs were essentially alike without recognizing the distinct differentials inherent and the changing requirements among those in the 60 to 70 chronological age group; those in the middle 70's to mid 80's and those 85 and over. We should note that even in the 100 and over groups, of which there are thought to be approximately 14,000, there is a variety of difference.

2/ Randall, Ollie A., "Protective Services for Older People." in Seminar on Protective Services for Older People. New York, The National Council on the Aging, 1964. pp. 3-4.

The emphasis inherent in the concept of matching services to individual needs must be on the right choice. The community, its social institutions and their representatives, must offer alternatives. It is not enough to consider that in the area of shelter and living arrangements that the appropriate armamentarium of community facilities should include one's own home, congregate specialized housing, and institutional care. Rather, it must include a constellation of services and facilities which will permit remaining in one's own home through supportive and supplementary services such as homemaker-housekeepers, visiting nurses, social case work services, transportation services, and portable meals related to this basic need in a point of time in the life of the older person. Such services, however, while meeting particular needs of a particular situation, must also be focused on not merely maintaining the present but on creating new social goals and dimensions in the life of that person, while at the same time reassuring that related services and facilities will be available, should the need arise, in the form of substitute family care, congregate housing, and so forth. What is suggested is that if we are going to recognize the importance of individualization of services as essential to older persons, there is the consequent implication that community services must be related and so organized to provide choice and alternatives for the individual; that is, that they have as their goal "the right service, in the right place, at the right time."

It is only possible to discuss and to be sensitive to the needs to which services are addressed if we recognize some of the primary values of our society which, in a sense, are the yardsticks by which we measure the significance of such needs. Such values also have prevented us, at times, from perceiving the unique individual requirements of the older individual. Through society's values, that is, those goals which we as a people hold to be desirable or valuable or those which we seek to avoid, we have placed obstacles in the way of older persons participating in family and community life -- including the church, the business community, and social and cultural activities. What are some of these values which tend to create "problems" to the older individual, his family, community, and nation? These I would state as follows:

1. "Worship of Youth"

In our society, to be young is to be desirable and worthy of acceptance. This we see all about us, especially in advertising with its emphasis upon the use of cosmetics, dyes, and powders to hide the traces of aging -- and even this for males! Have you ever seen a more tragic figure than the woman who obviously is in her late 70's or 80's who dresses like a teenager and attempts to camouflage the inevitable changes brought by the years? Yet haven't we also been impressed with the well groomed older person who has overcome this feeling of shame and has capitalized upon

the asset of age to give her a certain style and dignity? This worship of youth is also related to the second value, which is:

2. Our Faith in Progress and Social Change

That is, "tomorrow will be better than today." In an agricultural society the older person represented knowledge and experience to situations which recurred for each of the generations. He could teach the young how to meet emergencies which reoccurred, applying knowledge gained from past experience to the present situation. The older person had much self-esteem, and prestige was conferred upon him by others because he had a valuable role to perform as the repository of knowledge out of which grew wisdom. This is not so in our urban society. With rapid technological change there is a constant requirement for new knowledge. The older person represents tradition while we make a fetish of innovation and change. His opinions are devalued, and his wisdom discounted. We turn our backs upon yesterday and believe that youth represents a better tomorrow. Old age denotes the past -- and that which is less than it could or might have been!

3. Productivity or Work

is another dominant value, as opposed to leisure in our society, although the majority of individuals can expect to spend one-fourth or one-fifth of their life span in retirement. We note that retirement is from work and we must raise the question -- retirement to what? Many men in our society have feelings of guilt about the prospect of retirement. We must understand that work represents more than earning a living and yet our emphasis is that in order to be worthy, one must contribute economically or be productive. The fact that the highest suicide rate in our population is the older male 65 years and over, points to the fact that the golden years are not what they ought to be. We have failed to define the role of retirement in our society or what is an acceptable alternative to work. Certainly we cannot expect adult men, given the values mentioned above, to be well adjusted or happy by playing checkers or fishing for the last twenty years of their remaining life.

4. Independence

is another value which seems of particular importance. In American society we place much emphasis on the individual as he matures, moving from dependency to independence. Yet, we fail to note that much of what happens to the individual in his later years moves him from a state of independence to one of dependency. Perhaps nothing is more difficult for the older person to accept than the gradual loss of what the psychiatrist, W. Prescott Thompson, of the Menninger Foundation, calls "self-mastery," or

what we can generally call loss of independence. In our programs of public assistance and in many of our statistical appraisals of our population, the label of "dependent" is placed on those over 65 years. Furthermore, too many of our communities regard as a suitable alternative to independent living in one's own home, institutional care, whether it be a home for the aged or a nursing home. We do little to identify how older people may remain independent and participating members of the community when their traditional mode of living is no longer possible.

5. "Togetherness"

as emphasized in many of our contemporary family magazines, is the last value of our society about which I should like to speak. The question may be raised in regard to who should be "together." We say that it is ideal for what the anthropologist calls the nuclear conjugal family, that is, husband, wife, and children, to live together in a separate household; that it is not best for adult children and their parents, especially after these adult children have married, to live together, and that our basic responsibility is to our spouse, our children, and ourselves. We may raise the question, "togetherness for whom?" Man is a social animal; that is, to be human he must participate in the human group. Yet aging in our society tends to isolate the individual from the group. Some of the typical life situations which face most aging persons and which move them more and more toward a socially isolated situation would include:

Bereavement, especially for women. We find that the later years are increasingly a woman's world. Upon an examination of the 1960 Census, you would find that the typical older man is married and lives with his spouse. The older woman, however, is widowed, living alone, or with her daughter and her daughter's family.

Retirement separates the man, as pointed to before, from the work group relationship and this is particularly difficult for the unskilled or semi-skilled blue collar worker who tends not to be a "joiner" and participant in the organized life of the community.

Income Reduction is another factor which must be reckoned with in old age. Sixteen percent of today's aged have no income; an additional 69% have incomes below the $3,000 a year level (85% in all). It costs money to participate in many of the social activities of the community. Studies have revealed a tendency on the part of older persons to withdraw from church participation due to reduced income. Many older people express the feeling that one cannot participate adequately without being a financially contributing member.

Reduction of energy and loss of physical function is another factor which tends to increasingly limit the world of social contacts for the older person. One of the basic needs of many of our communities and one which is most difficult of organizing is adequate transportation. Studies in rural communities have indicated that although health services and facilities, social opportunities, and resources for other needs may be available to the older person, the lack of transportation may be the most basic reason why he is not receiving such services or participating in the life of the community.

Social mobility is another factor which tends increasingly to separate the lives of the aged from those of their children. We find that children tend to move where the job is and consequently many leave their aged parents and grandparents far behind, often living literally thousands of miles apart. The once a year visit of the grandchildren does not compensate for the lack of daily contact.

While the above factors tend to work against the older persons' participation in the life of the community, we must also recognize that many of them do not occur until well after the individual reaches 65. I would say that the hard to solve "problem" aspects of aging are with the 75 and older age group although we do find many persons in the 60's finding life most difficult.

As a reaction to this tendency to isolate older people, we see on the other hand many older persons forming their own age-based organizations such as "golden age" or "senior citizens" groups. (I should point out that many older persons rightfully resent this terminology.) Many of these organizations appear to be a reaction to the "rejection" of the aging and aged on the part of society. As pointed out before, it is essential for persons of all ages to participate and to be contributing members to the organized life of the community.

Within the context of society and its values it is important to note that the needs of the aging are the needs of persons of all age groups. All human beings, regardless of age, have adaptive and survival needs which must be met. These may be classified under three broad categories -- man in interaction with his environment; man in interaction with others; and man in interaction with the unknown. Time does not permit a detailed description of each specific need within each of these categories. Some are more obvious than others. All are affected by the aging processes -- biological, psychological, and sociological. All practitioners working with older persons should have knowledge of these needs as they are conditioned and modified by the aging processes. Such knowledge is a prerequisite to an understanding of how such needs

will be met; their context and relevance for a specific older individual. For example, basic needs for man in interaction with his environment are food, clothing, and shelter. Let us take the specific of food. It should be pointed out that food is the object, nutrition relates to biological needs, eating is the social behavior. Are we aware -- those of us who are responsible for financial assistance and budgeting for the dietary requirements of older persons; those of us responsible for institutional care -- that there are changing requirements in the food needs of older people, both calorically and metabolically. Do we understand the restorative requirements of diet as related to disease, or its preventive aspects in relation to degenerative illnesses? Food has meaning -- socially as related to varying regional, cultural, religious, and nationality backgrounds of the individual. Psychologically food may be a compensation for other unmet needs or losses, such as loneliness, rejection, or a substitute for a loss. Food has social meanings -- eating in groups; offering food as a "gift;" a festive occasion. Yet aging and too often the concomitant of social isolation in our culture, negates the fulfillment of the bio-psycho-social needs of the individual through such an obvious factor as food. Malnutrition, dehydration, anemias are prevalent among the aged in our affluent society.

Although it is not possible here to enumerate each of the specific needs of older persons and how they are modified by aging processes, you should know that the Gerontological Society, a multi-disciplinary professional society of scientists and practitioners concerned with research in aging, is now preparing curricula in aging for general practitioners -- medical and social -- relating basic knowledge on aging to the basic needs of the individual. This should provide essential tools for individualizing services, so necessary to older people.

Social and cultural approaches to "aging" and being "old" categorize the individual because of the situation through which we approach him. We fail to differentiate and individualize our approach to his needs which is the basic requirement of the older person for the reasons already cited. For example, in public welfare the means test requires that to be eligible for public assistance the individual must meet the standardized definitions of the program. Once he becomes a "case" and is "on the rolls" his needs and requirements are determined and dictated by "the book." Too often, admissions and eligibility policies and practices to congregate housing and institutional care for older persons relate not to the essential needs of the older person, but rather to whether he meets the requirements and needs of the institution.

An example of our rigidities to recognizing and being able to respond to the needs of the individual was the requirements

of the Public Housing Administration, now changed, that a single individual did not constitute a family and was ineligible to live in public housing. When one of an elderly couple died, not only was the survivor faced with the adjustment to the loss of a spouse, but he or she had to move, losing the social supports of neighbors and friends, and probably facing the additional adjustment to reduced income.

Too often, we as practitioners only view the older person and his needs through the stereotyped vision of our culture and society and from the limited range of our agencies and organizations which relate to him in regard to one facet of interrelated and interdependent needs.

Needs of older persons must be seen, evaluated, and understood in the context of the world of the older person. For instance, although we emphasize the parent-child relationship as the focus of family life, we have not come to grips with the meaning of the four generation family for such a relationship. With the extension of the life span for more and more individuals, we see increasing conflicts in the definition of intergenerational responsibilities. In dealing with the long-term illness of an older family member, we often see decision making based upon role reversals, that is, the child places himself in the decision making role of the parent, and so forth. It also raises questions in regard to the two generation aged family such as the 65 year old facing retirement -- and consequent income reduction -- who is concerned about how to pay for long-term medical or institutional care for his 85-90 year old parent or parents. At the same time evidence indicates (as in the excellent study, Filial Responsibility . . . in the Modern American Family)3/ that parents still view themselves as having responsibility towards their children regardless of aging, while at the same time children are caught in a mesh of intergenerational responsibilities, all of which they would like to assume if they could. "Today there are more aged people living with children than were alive as recently as 1920." 4/ The question of economic responsibilities for the long-term care of the aged is one of the key issues in financing long-term illness. That children are no longer responsible for their aged parents is refuted by the evidence at hand.

3/ Schorr, Alvin L., Filial Responsibility in the Modern American Family. (Washington, D.C.: U.S. Department of Health, Education and Welfare. Social Security Administration, 1960) 45 pp.

4/ Ibid. p. 3

To place the older individual in the context of his family and this relationship in the context of his social, economic, and cultural life is essential if we are going to individualize our services to him. What does it mean to be aged and Negro at the same time in our culture? How does a tradition of religious training and culture as an Orthodox Jew affect the meaning of services, their setting, and their content? Again, time does not permit a full discussion of these important dimensions of the individual and his needs as he ages in our society. It is important, however, that we recognize our failure to assess the world of the older person as he sees it.

What does it mean to own a home? What does it mean to own that home in a section of the city where urban renewal occurs, or highway construction either condemns its existence or isolates it through its concrete "Berlin-like" walls into a ghetto -- removed from once familiar contacts and relationships? And, what does it mean to be relocated into a rootless world of strangers, unfamiliar faces and social institutions?

What does it mean to live in the once active central areas of the city, now called the core-city, from which all too often the social agencies, churches, and other familiar institutions are moving out to the suburbia of the younger families and their needs. Finally, what does it mean to have new social and cultural groups "move in" to the neighborhood once familiar? Probably no group in our urban society is so dislocated from the anchors which make life meaningful and relevant than are today's aged. We must comprehend their impact on the older individual and view him in their context if our services are to be of significance.

In the planning for and the delivery of services to the older person we must give recognition to the needs of the aging in the family, in the home, in the neighborhood, in the community, and in the region. Today there is an increasing emphasis, for example, in the area of health, upon a regional, metropolitan-wide approach to facilities and services. This is not to challenge the validity of such an approach; rather, it is to emphasize, within the context of such an approach, the necessity of recognizing the unique and important relationships of the larger area to its smaller units, such as the neighborhood and the individual. There is an increasing tendency to stress the centralization of services, such as the community hospital, as the community health center, and measuring the importance of such approaches in terms of efficiency, while at the same time losing sight of the individual and his particular needs in a specific setting.

Too often we have failed in the planning and offering of services which recognize the dynamic, ever changing character of human needs. For older persons, in particular, it is imperative that our health and welfare services be flexible, permitting movement among and between services.

When we speak of matching the services to individual needs of the aging, we must question whether we look at the services and how the individual must fit its definition or do we view the service in the light of its role, its potential modification, and possible linkage to other services to meet the particular needs of the individual. For example, do we view the purchase of nursing home services as payment for a nurse? a substitute family? a "roof over the head?" and so forth. What is the responsibility of the caseworker in the public agency in viewing the older client who presents the need for such a service? Is it solely eligibility and payment? Is it linkage to other societal and community resources in the development of an appropriate plan? Is it to permit the possible development of alternatives to nursing home placement through the use of skilled social casework, public health nursing, church resources, libraries, and so forth?

Many of the problems associated with the aging and their needs are interrelated. This is basic to understanding the behaviors and requirements of older persons. Because of the fear of outliving and exhausting economic resources and not being able to maintain their households and the security it represents, an older person may attempt to "save" by cutting down on food expenditures. Such attempts at saving all too often contribute through faulty or malnutrition to long-term and costly illness and disability, forcing the individual to use of his financial resources, give up his housing, and reduce his social activities and associations. It is this interrelatedness of needs and the provision of services to meet them which forces us to reappraise the organizational basis and our traditional methods in providing services for older persons.

Aging is forcing a reappraisal of the uni-dimensional agency to which people go for service, as opposed to the multi-service agency which may reach out and be more related to the neighborhoods where the clientele live. I, for one, am not convinced that this is a more expensive way of providing service. We must re-evaluate our concept of the organization of health and welfare services, and their base of operation in the community, as well as their relation to the people they are to serve. We are concerned about the individual, his ability to function, and appropriate ways to intervene if he is unable to function. This implies levels of evaluation and assessment of individual situations which, in turn, would mean levels of services based upon evaluated need.

What follows is a conceptual model of services for older persons which I have been attempting to develop. It is highly tentative and is only presented in that it may give us some perspectives in regard to services required by older persons.

Specific levels of services for the aging as related to specific conditions of older persons:

a. basic services
b. adjustment and integrative services
c. supportive services
d. congregate and shelter care services
e. protective services

Basic services level -

A primary goal of any community plan must be the identification of what is considered to be the basic service needs of all persons, including the aged. Specific services might include: community health services, environmental sanitation, family and individual counseling, financial assistance, group services, inpatient medical care, outpatient medical care, recreation, social treatment (group) services.

Adjustment and integrative services level -

Specific goals: ways of permitting the older person to:

a. participate in the life of the community;
b. retain and utilize his capacities and potentials in a way that is socially approved and recognized;
c. adjust to new social roles in the family and in the broader community.

Specific conditions to which the goals are related are:

a. retirement
b. income reduction
c. loss of work-role (45-65 age group)
d. increased physical limitation

Specific services would include:

a. specialized casework service to the older person and/or his family
b. old age assistance
c. recreation services for the aging
d. day activity center programs for the aging
e. retirement preparation

Supportive services level -

Specific goal: to aid the older person to remain in his familiar habitat or to retain his usual living arrangement when this is no longer possible through his own efforts.

Specific conditions to which this goal is related

a. aged or handicapped persons living alone who may be bedfast or housebound with a physical disability
b. inability to normally manage the home
c. isolation from others due to age, physical disability, illness and increasing deprivation of friends and relatives

Specific services would include:

a. friendly visiting
b. organized home care
c. home meal service
d. homemaker-housekeeper service
e. motor service

Congregate and shelter care level -

Specific goal: to protect the older person from hazards of living in the open community, or from his inability to cope with independent or family-living situations due to physical and/or mental infirmity.

Specific conditions to which the goal is related

The difficulty and at times inability of older persons to maintain a completely independent living arrangement or are unable to meet or satisfy their basic needs for self-maintenance, care or protection.

Specific services would include:

a. day care for older persons
b. homes for the aged
c. housing for the elderly
d. inpatient medical care -- custodial and long-term nursing
e. substitute family care

Protective services level -

Specific goals: to protect the civil rights and personal welfare of older persons from neglect and/or exploitation by relatives, friends, the aged individual himself, and the community.

Specific conditions to which this goal is directed

Inability of older persons with limited mental functioning due to mental deterioration, emotional disturbance, or extreme infirmity to manage their own affairs in such areas as providing for personal and physical needs, planning and decision making, and handling of finances.

Specific service would be basically a coordinated and focused organization of legal, medical, and social services.

It is important that we stress the role and importance of the person who works with older people. In a sense, the worker -- whether caseworker, nurse, homemaker, to mention a few, is the "cement" between the community's resources and services. As such it is important that he recognize breakdowns in our abilities to respons to the unique requirements of the individual, whether such breakdowns be at the agency, community, or societal level. It is important that his knowledge and concern be related to policies and practices, that it be "fed back" to those responsible for research, training, and action in the field of aging. Each practitioner has a dual responsibility, as an individual and as a professional person, to translate such awareness and knowledge to the community and its conscience. He must view his social action responsibilities in education of the citizenry and in the arenas of legislation.

Knowledge about aging is both increasing and changing. Older persons and their requirements will change with the passage of time. We will be able to measure the effectiveness of our efforts to individualize and make available appropriate services for older persons only if we gain knowledge as to the norms or usual mode of behaviors associated with aging. As we recognize and understand such norms we will be able to translate our practice into implications for research, training, and future practice.

Let us hope that we are not, in a sense, defining a mythical zoo in our approach to providing services to the aging. Although the Greeks probably had no word for an elephant with a tail at either end, the world of the unicorn, the satyr, and Pegasus is often about as relevant today as are, unfortunately, the services which are available to older persons in our communities. This is not to understate the real and valiant contributions of many dedicated persons concerned with meeting the needs of the aging. Rather, it is to underscore the immense task ahead.

THE ROLE OF OLDER PEOPLE IN CONTEMPORARY UNITED STATES

Ethel Shanas

The author discusses the role of the older person in our society from the point of view of their social groups and of older people themselves.

THE ROLE OF OLDER PEOPLE IN CONTEMPORARY UNITED STATES

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THE ROLE OF OLDER PEOPLE IN CONTEMPORARY UNITED STATES*

Within the life span of those now over 65, older people have become a numerically important part of our population. Between 1890 and 1955, the proportion of the population of the United States 55 years of age or more rose from less than 9 per cent to 18 per cent, and the proportion 65 years of age or older rose from 3.8 per cent to 8.2 per cent. (10, 4) Old age can be defined in various ways. Scholars have developed definitions using physiological, psychological, and sociological criteria, or a combination of these, but in common practice in American culture, old age is governed by the calendar. Most retirement and pension plans, including Federal Social Security legislation, begin to pay benefits at age 65. Largely as a result of this age being the end of the working life for most people, 65 has come to mean "old age." For the purposes of this paper, let us accept this calendar definition of old age or later maturity and consider the implications of being an older person in our contemporary culture.

The social role of a person, to quote Ernest W. Burgess, "...is an activity which he performs as a member of society or one of its component groups. Typically any given role of a person embodies the expectations both of himself and of society. Every society and every group have a repertory of roles corresponding to the diversity of functions required to carry on a common life and to achieve desired objectives." (3)

Since any given role includes the expectations and evaluation of both the individual and his group, along with each role comes an assigned status or a place in the social structure.

Obviously, older people play many roles in American society. They are parents, grandparents, husbands, wives, workers or retired employees, rich bankers or poor pensioners. (6, 7) There is one social role, however, which all older persons share. This is the role of the elder, a basic role which exists and is meaningful for older people, whether they be parents or grandparents, business tycoons, or welfare department "clients."

What is the role of the elder in our society? And, since each role has an ascribed status, what is the status which comes

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with being "old"? In the social structure of the United States at the present time, to be old is to be no longer a member of adult society. The old are assigned a role which differs in kind from the role of the middle-aged adult, and which is, perhaps, analogous to the role of the child in our culture. Old people recognize this view of themselves and include it in their self-conceptions. Along with this role comes a sharp reduction in status. The status of the old as elders is lower than that of the middle-aged adult and even than that of the child.

The rejection of the old and their negligible status is an obvious feature of contemporary life. (9) Among the major causes of this rejection are the emphasis placed on youth and on employment in our urban culture. As Dr. Maurice Linden has stated:

> "Our values have been the values of youth -- vigor, physical beauty, motion, quantitative productivity, and, to some degree, arrogance." (9, p.1)

Since our values are those of youth, to be no longer young is automatically to have a lessened status. Further, in our society a man's employment is not only a means of making a living, his occupation is itself a social role, and employment in and of itself can assure his social status. (8) When a man who has worked throughout his life gives up working, he ceases to have adult status. It is no accident of philology that individuals who have no economic need for employment and who do not occupy themselves with work-like activity are called playboys.

In the same way, the woman whose status came from her role as a wife and mother, who is left widowed and alone at 70, describes herself as "being important to nobody." She feels intuitively, and correctly, that there is no role for her in our culture, and lacking a meaningful social role, she lacks social status.

Let us turn from this brief consideration of the lessened status of the aged to a fuller discussion of the role of the elder. The American view of old age is seen most clearly not in the formal statements of scientists, politicians, and welfare workers, but in what people say and how they behave when they are least conscious of making value judgments. Thus, in trying to explain the large number of short stories about children and old people now being published, the editor of a recent book says:

> "The only conclusion that I can come to is that the modern adult exhibits a frightening complexity of traits caught in a web of appalling circumstances. The very young and the very old are usually harmless. Writers and editors both would like to avoid the kind of adult we have today." (5)

The treatment of older people by American adult society falls into two main categories, both of which stem from the view of the role of the older person as different in kind from the role of the adult. The first category includes the whole approach to older people which frankly treats them as children. This is seen most clearly in the attitude of many adult middle-aged children toward their parents. In this approach to the aged, the older person, like the pre-adolescent child, is urged "to stand on his own feet," make his own decisions, and not to look for any special assistance from adult society. Another variety of this approach, that is, the treatment of the aged as though they were children, is seen in the protective attitude which is so often directed toward them. To use a homely example, the boy scout feels he must help the old lady across the street whether she desires help or not.

The other main category into which behavior toward the aged may be classified discriminates against them as adults in a more subtle fashion. In this approach, the aged are admired for their activities and resourcefulness. By the very manner in which such admiration is expressed, however, the older man or woman is set apart from adult society and reduced in status. An example of this approach, familiar to all, is the articles which appeared for many years about Arthuro Toscanini. In these accounts the writer would first point out Toscanini's great musicianship and, second, his advanced age. It was either implied or stated outright that it was unusual to find such technique on the podium exhibited by anyone past the middle years. What these writers usually neglected to say was that Toscanini's musicianship had probably been unusual when he was 50. This unusual quality was as apparent in the conductor at 75 as it had been when he was 50, but the critic's evaluation of the musician was colored by the latter's calendar age.

Similarly, when a sociological colleague, retired at 65, continues to publish and carry on research, the usual reaction is apt to be: "Isn't it wonderful at his age!" Those who express these sentiments seem to expect a lifetime of intellectual productivity to stop with a page in the calendar. Yet, since sociologists are also part of the larger society, they are only verbalizing what is accepted in contemporary culture, that somehow,

simply by becoming older, people become less adult.

Society's view of the role of the elder is reflected in the conception older people have of themselves. We see this most clearly in two groups: those who try to cling to middle-age, and those who aggrandize their less-than-adult role by claiming the privileges of extreme age. The man who seeks paid work after retirement, because without work he lacks status in his own eyes, the older woman who adopts the dress styles of those younger than she, are both trying to maintain conceptions of themselves as adults, that is, worthwhile people, not older people. In keeping with this hypothesis, in a recent study Zena Blau reports more than 60 per cent of all persons between 65 and 70 years of age called themselves "middle-aged." Further,

> "Neither the knowledge of their years, nor even their white hair and wrinkles, induce older people to perceive that they have changed...Regardless of their actual age, people come to believe that <u>others</u> consider them old only if they consider <u>themselves</u> old." (2)

Somehow, for these older people, if one can continue to be "as young as ever," or "as young as one feels," one can continue to see oneself as a middle-aged adult, part of the mainstream of social life, not as an old person.

Less common than the "I'm as young as I ever was" philosophy among the old, but just as indicative of the fact that old people feel themselves apart from adult life, is a behavior pattern which, since it is seen most often in women, may be described as "Of course, I'm really a very old lady." The protagonists of this philosophy use their advanced age as an excuse for demanding special treatment and special favors from other adults. Their behavior is much like that of wilful children. As an example, an older woman came to the hospital where her husband was a patient, at hours when no visiting was permitted, and cajoled the hospital officials to be allowed to see him. "Certainly, after I've made this long trip here, you're going to let me see my old sweetheart," she would tell the attendants. Invariably, she was successful in securing special visiting privileges. When her adult children tried to persuade her to use the set visiting hours, she told them, "You don't think they're going to refuse an old lady like me, do you?"

Just as the attempts by older people to cling to the status of the middle-aged is a reflection of their self-conception, so those who use their advanced age as an excuse for special

attention are reflecting society's conception of the old as somewhat childish.

We have discussed the role of the aged in our society from the points of view of the social group and of older people themselves. What, then, is the function of the aged in our social structure? In our culture, despite our numerically large group of older people, the aged as "elders" have no function. They are not considered the repository of wisdom, or the bearers of the mores, or even as the custodians of great wealth. Perhaps it is because older people feel that they are being classified into a category "Old," which has no social function, that they are now clustering together for self-protection. As Milton Barron has pointed out, older people are beginning to exhibit many of the characteristics of a minority group in our society. (1) Analyzing his studies of industrial workers, Barron states:

> "Prejudiced attitudes against the aged are not uncommon. Stereotypes and rationalizations for discrimination by younger adults assume the same properties as they do in ethnic inter-group relations. The aged have many of the reactions of a minority group. Lastly, legislation against discrimination has begun to be enacted in behalf of the aged which parallels that for the protection of ethnic groups." (1, p. 481)

Since the publication of Barron's paper, there has been an increasing awareness of the special needs of older people by everyone from the pharmaceutical manufacturer to the purveyor of health breads. There has been a proliferation of organizations dealing with various aspects of aging, some with general membership, others with membership restricted to older people. Indeed, as one views the popular as well as the scientific press, one is struck by the resemblance between the discussions of the needs and wants of the old, and the discussions of various ethnic and racial minorities.

All this special attention to older people as "old" has had a marked effect on the aged. More and more, older people are conscious of themselves as different in kind from other adults, as being not quite grown-up in the eyes of the young and the middle-aged. With this increased self-awareness there will certainly be more pressure for special services and attention for the aged, pressures which are usually associated with minority group behavior.

Despite this sort of activity, it is doubtful whether older people will continue for any extended period of time as a

quasi-minority group. Adults now age 70 or more grew to adulthood at the turn of the century, when the average expectancy of life was 48 years for white males and 51 for white females. The thought of living to be 70 or more was not part of the youthful consciousness of the American now 70. Research indicates that perhaps a majority of these people never expected to live to this age. Further, during their young adulthood there was no large group of the elderly with a special social role and a function with which people now old could become familiar. Without such a pattern to follow, older people must create a new role of the elder for themselves. Much of what can be identified as minority group behavior represents some of the attempts to achieve such a new role.

Those now young and middle-aged are part of a society in which there are many older persons. To grow old, for those now middle-aged, will be far less of a surprise than it has been for their parents. The next generation of elders, possibly because of the struggles of those now old, will undoubtedly find a new status associated with being old in the United States.

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COMMUNITY HEALTH PROGRAMS AND RESOURCES

George M. Warner

This discussion defines the scope of public health programs in terms of their application to the care of the elderly. They need provisions to handle long-term illness and/or chronic disease in settings other than as an hospital in-patient. Not enough programs exist, and coordination of the many aspects involved are nearly always lacking. However, numerous communities in New York State are experimenting with different approaches to the problems. Reports on some of the attempts to meet these needs suggest a variety of solutions which other communities will find it valuable to consider.

COMMUNITY HEALTH PROGRAMS AND RESOURCES

by
George M. Warner

(Reproduced by the Gerontological Society, Projects Division, with permission, from a paper prepared for the Training Institute for Public Welfare Specialists in Aging, Cleveland, Ohio, June, 1965, by Dr. George M. Warner, Director of the Bureau of Adult Health and Geriatrics, New York State Department of Health.)

The speaker apologizes for reciting largely from his own personal experiences--unfortunately, but understandably, these are the only experiences he has had.

Before we discuss specific Community Health Programs and Resources we will define terminology and describe the conceptual framework within which health programs and resources have grown.

PUBLIC HEALTH PRACTICE

Training

First, as a public health physician myself, I am obligated to define the term and describe the image of the public health physician. Training-wise the public health physician has his M.D. degree, has completed his one year of hospital internship, has completed two or more years of approved residency training in public health and preventive medicine, and has obtained his Master's Degree in Public Health from a graduate school of Public Health. Some public health physicians previously engaged in general practice or in the practice of some specialty. Their concerns with the preventive aspects of caring for patients in their offices and in hospitals may have led some general practitioners and specialists (notably pediatricians) to become interested in public health.

The Process in Office and Hospital Practice

The health problems of individual patients are the principal concern of office and hospital practitioners. The patient presents to his physician a symptom or a group of symptoms (such as discomfort or pain) that represent, correctly or not, his reasons for seeking medical help. The physician uses the medical history, physical examination, laboratory work, x-ray and other aids as his diagnostic tools. Medications, surgery, and other treatment modalities are his tools for ameliorating or curing the patient's medical conditions.

The 'Patient' in Public Health

Public health physicians principally are concerned with the health problems of groups of people. These population groups may range in size from small communities to large cities to an entire state or to the entire United States. Subspecialists in public health may be concerned largely or only with the health problems of special subgroups in the population--as for example with the health problems of children or of the aging or of people who are especially susceptible to diabetes or tuberculosis or cancer.

The 'Symptoms' in Public Health

The group or community's 'symptoms' often are expressed in the form of changes of rates of occurrence (morbidity) of a disease or a group of diseases, and/or changes in the rates at which deaths from a specific disease occur. Examples of 'symptoms' in public health would include actual or suspected increases in the occurrence of alcoholism in a community, increases in fatal auto accidents among teenagers, increases in the proportion of patients hospitalized for stroke, voiced concern by management of public housing about the health problems of elderly residents, outbreaks of infectious hepatitis in children, etc.

The 'Diagnosis' in Public Health

Interpretation of subjective information, use of behavioral science observations, measurements of changes in the kinds and amounts of needs for public health nursing services, calculations of alterations in the cost and utilization of various kinds of health care services--these are but a few of the diagnostic tools used in public health. The basic tools are data on mortality and on the incidence and prevalence of morbidity.

'Treatment' in Public Health

Programs to improve and extend existing health care services, to create new services, and to improve the use and coordination of services truly are 'treatment' modalities for community health problems. Classic 'treatment' tools include environmental manipulation (safeguarding the water supply, assuring adequate sewage disposal, reducing air pollution, assuring restaurant sanitation), vaccination of infants and children, better case finding and treatment of tuberculosis patients, and measures to prevent the spread of venereal diseases.

Practice Similarities in Public Health and Private Medicine

So, as the individual office practitioner endeavors to become and remain sensitive to individual patient's symptoms, to diagnose the illness correctly and to treat it adequately, thus does the public health physician use his specialized skills to detect special health problems and deviations from acceptable levels of health in the community, to

obtain and use a wide variety of information and data to diagnose these problems accurately and to design and apply measures that will bring the problems under the best practical control. There is the hope, of course, that the office and hospital practitioner is sensitized to and concerned about the larger health problems in the community; there is hope that the public health physician does not lose sight of the problems of individual patients nor of the context within which these are seen and treated by the individual physician.

CLASSIC METHODS FOR CONTROLLING ILLNESS AND IMPROVING HEALTH

To control communicable diseases one can try to protect the individual from becoming infected, treat the infection when it does occur, prevent or restrain the infectious agent (be it bacteria or virus or fungus) from being transmitted from one person to another (as by improving or treating the environment through which it may pass), and try to improve the general level of health so that people's natural resistance to diseases will increase.

To improve general health, steps can be taken to improve nutrition, to reduce stress (or to assist people to cope better with stressful situations), reduce unhealthy practices such as cigarette smoking and alcoholism and the overeating that may lead to obesity, and encourage desirable routines of physical activity and exercise.

Vaccination and immunization will prevent some communicable diseases from occurring. These 'primary prevention' techniques and tools are useful for only a few important health problems.

The term 'secondary prevention' is used to describe the measures that will help detect illness conditions and health problems at early stages. In some instances it is possible to prevent certain diseases from progressing or to slow the rate at which they progress.

Rehabilitation is another group of measures that can be used to restore or preserve function among those individuals who already have developed disability as a result of an illness condition.

APPLICATION OF CLASSIC CONTROLS TO THE HEALTH PROBLEMS OF THE ELDERLY

Chronic illnesses and disabilities are the principal causes of serious deviations from a state of good health among older people. Programs to improve general health are useful for this group.

Primary Prevention

The clinical tools now available for 'primary prevention,' though effective for controlling communicable diseases, offer little in the control of chronic diseases and disabilities. Unfortunately, there are as yet no 'vaccines' or miracle drugs that will prevent completely

the illnesses that are the principal cause of health problems among the elderly. This is with the possible exception of some useful steps that can be taken to prevent accidents among older people.

Secondary Prevention

There are many useful tools for preventing the progression of chronic illnesses and disabilities. Early case finding through periodic health examinations is a very important activity. Even the use of relatively crude laboratory screening tests will help single out those individuals whose risk of having or developing a chronic disease is high. And there are many ways of improving the opportunities for recovery and improved function among those who are found to have life-threatening or potentially progressive conditions. Removing a precancerous or early cancer may eliminate the disease entirely in some instances. Weight reductions in obese individuals who have heart disease improves their chances for recovery and for return to normal or near-normal function. Physical rehabilitation reduces the level of disability, reduces the need for and costs of medical care services; it certainly improves attitudes and can help increase motivation.

THE HEALTH SERVICES BY SETTING CONCEPT OF CONTROL

The classic controls (as in communicable disease control) are a conceptual framework that is less easily visualized when the health programs and resources for the elderly are under scrutiny. A simpler conceptual framework has come about as a result of asking where (in what physical settings) are the people who have chronic illnesses and disabilities, and what health services do they or should they receive in each of these settings. The adequacy of community health programs and resources then can be analyzed in each of the settings in which health services are delivered and by the extent to which services are coordinated.

The four principal settings in which health services are provided to people are:

1. The HOSPITAL (special as well as general hospital).
2. The LONG-TERM CARE FACILITY (often referred to as nursing home or extended care facility).
3. AMBULATORY CARE SETTING (this referring to the clinic or physician's office--the place to which the patient can ambulate or be transported for services).
4. The HOME (individual's own home or home substitute).

THE EPIDEMIOLOGIC METHOD

The classic but simple epidemiologic method provides a rational and logical way for analyzing health programs and resources. The five orderly and successive steps in the epidemiologic method are:

1. Define the problem.
2. Review available data regarding the problem; utilize subjective as well as objective information; examine basic and applied research results, experiences in community demonstrations, and other pertinent information.
3. Formulate an hypothesis (or hypotheses) regarding the causes, the solutions, or other aspects of the problem.
4. Test the hypothesis; in community health programs and resources carry out studies, demonstrations, and direct service programs; provide continuing analysis and evaluation.
5. From the various tests draw conclusions regarding the validity of the hypothesis; apply by instituting the indicated programs.

STEP I -- DEFINE THE PROBLEM

Categorically and arbitrarily the leading health problems of the elderly are chronic illnesses and disabilities. These are among the major health and medical care problems in Western culture at the present time.

STEP II -- DATA REVIEW

There are disproportionately high rates of chronic illness and disability in the elderly patient. One jolting reminder of this is that while 6.6 people out of every 1000 in the general population require part-time or constant care at home, nearly 22 people out of every 1000 ages 65 through 74 and nearly 88 people out of every 1000 ages 75 and over require part-time or constant care in the home. Another reminder is that lower income persons require more care than do those who are not so harrassed financially. For example, out of all those persons who require constant care at home, 54 per cent are in families with incomes under $4000 per year, only 34 per cent earn over $4000 per year (incomes of another 12 per cent are unknown).

Certainly nearly everyone in this audience is aware that the elderly utilize a proportion of hospital beds far beyond the proportion of the total population that they represent.

The data that has most meaning to community health programs and resources is best analyzed according to the setting in which the elderly receive their health services.

General Hospital

Hospital costs are increasing and have been increasing approximately 8 per cent per year since 1946. An increasing proportion of hospital beds are occupied by the elderly. The length of stay per admission

of the elderly in these hospital beds has begun to increase, even though it had been decreasing each year since the mid-forties until 1963.

The amount of hospital insurance coverage is far less among the elderly than in the general population. The costs of hospital insurance usually are greater for this group. Such coverage as is available is less than adequate in many instances.

Many hospitals are not geared for care of the elderly, longer-stay patient. The attitudes and techniques of hospital personnel are not always conducive to encouraging and aiding more rapid return to function. The institutional setting sometimes is such as to contribute to disability, disorientation and withdrawal. That the clinical and care problems of the chronically ill elderly are somewhat different and sometimes more complex and more difficult to diagnose and treat is not as much appreciated as might be desired.

Long-Term Care Institutions

These can be grouped according to the type of sponsorship. The three groups are: 1) Proprietary Nursing Homes, 2) Public Infirmaries, and 3) Infirmaries Operated by Voluntary Non-Profit Agencies.

In many such institutions the per diem costs now range between $5.00 and $12.00 per patient per day. The costs of care in better institutions are as high as $16.00 to $20.00 per patient per day, or approximately one-half the cost of hospital care.

Many voluntary institutions deliver excellent care but at proportionately higher cost. Quality of care varies considerably in the public infirmaries. The care in many of the proprietary settings is not satisfactory.

The cost of care in long-term care facilities will increase at least as rapidly as hospital care costs are increasing. If quality is improved to at least a satisfactory level, then the cost increases will be greater and will rise more rapidly.

In some areas of the United States there are serious shortages of long-term care facilities. Often the existing facilities are marginal insofar as the adequacy and safety of the physical plan is concerned. Many are unacceptable insofar as the quality of care delivered is concerned; in face of bed shortages it is not feasible to close such institutions at the present time.

The public welfare reimbursement for care in long-term care institutions often is not adequate to support a satisfactory level of care services and programs. Tax-supported budgets for some public infirmaries restricts to a marginal or sub-marginal level the quality and quantity of service that can be provided. And the resources for deficit financing the voluntary infirmaries are becoming less adequate--especially as the services are improved and the costs rise.

Only recently has there been developed a national program for standard-setting and accreditation for these institutions. Unfortunately two competing accreditation systems now exist. Both are voluntary, and, therefore, may have little influence on the institutions that do not elect to request reviews.

Many State standard-setting and enforcement activities have excellent bases in law but inadequate programs for implementation. The inspectional systems often are less than adequately concerned about the quality of patient care that is provided even though the control over the quality of the environment may be excellent.

Neither voluntary nor commercial insurance provides for payment for care in long-term care institutions--except for several limited Blue Cross trials with extending benefits to cover this type care. This denies the marginal and middle income patient access to these facilities. The facilities are utilized largely for the care of public welfare recipients and for upper income patients.

Care in the Home

An increasing number of persons with long-term illness remain at home or are discharged home from the hospital. The health services now available for care of patients in the home are inadequate in quantity and unevenly distributed. Home health services are administered independently and out of a series of small agencies, many of which are not under adequate medical direction and professional supervision. Since services are poorly coordinated, if at all, to obtain a 'package' of services requires multiple and separate requests to each agency.

Except in a few communities, home health service benefits are not provided by voluntary or commercial health and hospital insurance. In those programs that do provide for this coverage the number and kinds of services that are paid for by insurance are limited.

Only in a few communities are there centrally-administered, professionally-supervised high-quality programs that provide comprehensive services to the home. The growth of this type home care program has been disappointingly slow despite seemingly rapid growth in immediate post World War II period and despite the proved need for and excellence of these few programs.

Some high quality programs report costs between $5.00 and $10.00 per patient per day or nearly one-fourth of hospital cost. Costs can be expected to rise as the number of kinds of service increase and as sicker patients are transferred from the hospital to the home. The pressure for hospital beds in some areas will accelerate the transfer process.

Restrictive definitions, such as those that require a complete team evaluation of every patient transferred to the home, have discouraged the further growth of programs. They have discouraged experimentation

with a wide variety of programs, especially with programs that should be conducted on a community-wide basis while yet retaining strong medical direction and professional supervision.

In some areas the public welfare system of medical care fails to encourage the purchase of comprehensive home care services. The intergovernmental relations between public welfare and public health could be improved to encourage growth of home care programs.

Public health nursing services to the home are in short supply in face of great demand in most communities in the United States. Increased pressures for expanding services are coming from many other avenues; these include pressures for nursing visits for the after-care of discharged mental hospital patients, for nursing visits to an increasing number of children who are engaged in medical rehabilitation processes, and maternal and child health visits are rapidly expanding in a population with a growing birth rate. The supply of nurses from the training institutions is falling behind the expanding needs for services.

Visiting health aides and homemakers are in seriously short supply in nearly every community in the United States. Because these nearly always must be deficit financed, both public and voluntary agencies are very reluctant to take responsibility for starting and operating these services. Except in a few communities there is almost no prepayment insurance coverage for health aides and homemakers.

Sick room equipment loan chests are operated by a wide variety of agencies, few of which have any expertise. Much of the equipment, gifted by families of deceased patients, is antiquated, not versatile, and unsuited to the home environment. Some modern hospital sick room equipment is not suited for home use; the equipment supply houses have not experimented with and created the types of equipment that are needed.

Ambulatory Care

Most care in offices and clinics is paid for on a fee-for-service basis and is difficult to cost account. Therefore, the true cost for ambulatory diagnostic and treatment services is not well known. Those hospital out-patient departments that have studied the economics of ambulatory care report high and increasing costs per visit or per illness--particularly when the cost of laboratory services, drugs, and the various therapies required for the management of the chronically ill aged in the clinic are included.

Standards for clinical care are suggested from studies and guides; these have had little implementation.

Many hospital out-patient departments operate a large number and wide variety of specialty clinics, particularly for house staff teaching purposes. These clinics are poorly coordinated with each other. Only a few hospitals operate comprehensive care clinics in which the needed preventive, family-centered, and continuity elements are present.

Clinics operated by health departments usually are limited in variety, poorly coordinated, and conducted without relation to the out-patient services of the general hospital.

Continuity of Care

There are many breakdowns in the relationships and communications among the agencies that are responsible for care in each of the four settings. Unit records that could accompany the patient from one setting to the other are almost nonexistent. Interagency referral forms, potentially useful for furnishing limited amounts of information when patients are transferred, frequently are poorly completed and inadequately used.

Generally, hospitals provide the most complex, varied and well-rounded services for patients. However, beset with economic and administrative problems as well as with the continuing need to keep up with scientific advances, most hospitals are preoccupied with resolving problems that largely are internal. Little attention is devoted to the medical care problems in the community and outside the brick walls of the hospitals. Continuity of patient care is a concern only for the time from the patient's admission to the time of his discharge.

Public health and public welfare agencies often fail to furnish information to the hospital about patients they have been seeing out in the community prior to admission. Only a few such agencies furnish follow-up information periodically on patients who have been returned to the community from the hospital.

Discharge planning activities have been initiated in a few hospitals. These encourage earlier and better planning and improved transfer of information to the non-hospital setting.

Nursing homes, particularly proprietary nursing homes, encounter great difficulties in obtaining information that is required in order to arrange appropriate care in the institution. Even admission histories and physicals are long delayed in being done or being recorded on patients' charts.

In some communities less than one-half of the practicing physicians have referred even one patient to public health nursing for visits in the home.

Many hospitals do not maintain a unit record system for their own patients who are transferred from the in-patient setting to the care of their own clinics.

With reference to the care of the chronically ill and aged it has become increasingly clear that this type patient tolerates institutional atmospheres poorly. The rigidities of the hospital environment often are as damaging to the patient as the hospital's clinical and scientific services are helpful. Early and appropriately-timed transfer to a suitable after-care arrangement in one of the other three settings

is desirable. Transfer cannot be arranged or will not be successful unless the needed health and social services are available in the setting to which the transfer is made. There is urgent need to create and improve services in each and all of the other three settings. Otherwise, coordinating and patient care planning efforts will be of little avail.

It is the exceptional, almost rare, community in which there are comprehensive, high quality and sufficient quantity of health and health-related services in all four settings. Even in these exceptional circumstances the coordination and appropriately-timed transfer among settings may be more by accident than by design.

STEP III -- HYPOTHESIS

Despite the bleak picture painted by the Step II Data Review, it is possible to formulate a relatively optimistic hypothesis. Admittedly the data review has been negatively biased to challenge this audience in hope that there will be careful scrutiny of the scenes back at home when this Institute closes.

The hypothesis is:

> IT IS FEASIBLE AND PRACTICAL (AND NECESSARY) TO CREATE HEALTH PROGRAMS THAT WILL ASSURE THAT THE RIGHT PATIENT RECEIVES THE RIGHT SERVICES IN THE RIGHT PLACE AND AT THE RIGHT TIME. THIS WILL BE POSSIBLE 1) IF THERE IS SELFLESS COOPERATION AMONG THE CONCERNED PUBLIC AGENCIES AND BETWEEN THE PUBLIC AND VOLUNTARY AGENCIES; 2) IF PROGRAMS IN EACH AND ALL OF THE FOUR SETTINGS ARE PLACED ON A MULTIPLE-FINANCED BASIS IN WHICH THERE IS APPROPRIATE SHARING OF COSTS OUT OF TAX RESOURCES, VOLUNTARY AND COMMERCIAL PREPAYMENT INSURANCE, DIRECT PAYMENT OF FEES, AND PHILANTHROPY; 3) IF THERE IS CONTINUING COLLECTION OF DATA FROM ALL FOUR SETTINGS, CONTINUING EVALUATION OF THIS DATA, AND CONTINUING AND LONG-RANGE PLANNING; AND 4) IF THE PUBLIC AND THE PROFESSIONS ARE BETTER INFORMED AND BETTER PREPARED TO ASSUME LEADERSHIP.

STEP IV -- TEST THE HYPOTHESIS

Ordinarily at this stage in our epidemiologic method a program or several programs would be designed for testing the hypothesis, supportive funds for the programs would be sought, and the long and trying process of collecting data and evaluating results would begin.

Fortunately a sufficient number and variety of programs have been conducted for a sufficient length of time so that their experiences now can be used as tests of the hypothesis. We can short-cut describing the apparent pros and cons revealed by the experiences in each.

Resources

As background it should be noted that the Hill-Harris Act, commonly known as the Community Health Services and Facilities Act, has had an enormous and favorable influence on community health programs and resources.

The major objective of the Act was to encourage the growth of out-of-hospital care service programs and demonstrations, particularly in the care of the chronically ill and aged.

Per the provision of the Act, two major sources of funds were made available for programs. Project Grant monies were for the purpose of encouraging demonstrations and new patterns for providing out-of-hospital services. These were handled in the form of direct grants by U.S. Public Health Service to the requesting agency upon approval by appropriate advisory and review committees and groups, including the State Health Departments.

In another provision of the Act, Formula Grant funds were assigned to each of the fifty states. The funds were allocated according to the proportion of population over 65 and the relative income level of that population in each state. The funds were allocated to the state health departments and, through them, to the public and voluntary agencies in various communities in each state.

Various states utilize the Formula Grant funds in a variety of ways. One state suballocated the funds to each county on a formula basis and then required that each county submit a satisfactory plan for using the funds in order to secure approval. Some state health departments used much of the funds to create their own statewide programs operated directly by the state health department.

In New York State the philosophy was that as great a proportion as possible of Formula Grant funds should derive to local communities rather than to the state agency. This decision was based in the belief that health programs should be locally-designed and locally-operated to meet well-identified local needs within the health and socio-cultural climate of the local community. It was recognized, however, that though a wide variety of experimentation in pattern of operation would be encouraged there also would be need for the local operating agency to maintain certain standards that were to be worked out jointly between the operating agency and the informed consultants of the New York State Department of Health.

Local agencies also were encouraged to seek Project Grant support directly from the U.S. Public Health Service whenever the program had significant study or research or demonstration elements. The programs that were designed largely for supplying services were considered to be more appropriate for funding out of Formula Grant monies.

Since the passage of the Hill-Harris Act and its early stage of implementation the margins between the uses of Formula Grant and Project Grant funds have become fuzzy and blended.

What will follow is a series of case descriptions of community health programs in New York State. Features that illustrate tests of the hypothesis will be accentuated. The programs are grouped according to the setting in which their services were intended to be used.

Ambulatory Health Services -- Early Detection and Health Education

In Erie County the United Health Foundation conducted several Health-O-Ramas. These were health fairs in which multiple disease detection services were provided largely for the adult and older persons who might be expected to be "at risk" for developing chronic illness. The United Health Foundation is the health arm of the United Fund; much of the financing was through this avenue. However, Erie County Department of Health, New York State Department of Health and at least 20 local voluntary agencies joined the efforts and provided funds, personnel, materials and services.

The Health-O-Rama was established largely for informing the public about the needs for and values of early detection services, as well as about the activities of the participating agencies.

With some trepidation the first four-day Health-O-Rama was conducted two years ago. Attendance the first afternoon and evening was moderately heavy; it improved on the second and third day. On the fourth day, a sunny, fall Sunday afternoon, a three-block long line of people awaited the opening. While in operation every test station was jammed with work and long lines of registrants awaited the opportunity for having the tests. At the close of the evening, people still were vying for the privilege of being tested.

The total attendance was over 20,000. A number of persons were found to have previously unknown chronic illness conditions. They were referred to their physicians and follow-up data has revealed that they made and kept appointments for more detailed diagnostic work.

This first affair plus the several that have been conducted since then seemed to indicate that there is a high level of interest in health matters in the adult and older population and that there is, or can be, improved recognition of the value of ambulatory health services--especially if information and health education is used to identify and encourage this interest.

The New York State Department of Health conducted multiple disease detection programs at statewide meetings of the County Officers Association and the Association of Mayors. The reception among these middle-aged and older officials was excellent, as evidenced by the high level of use they made of the early detection tests and by the verbal and written comments they made about the services. Case finding rates were good.

These programs seemed to illustrate that there is or can be an informed interest among local government officials and political leaders.

Queensbridge Health Maintenance Program for the Elderly in New York City has been furnishing a battery of laboratory tests, history and physical examinations by qualified physicians, follow-up counselling assistance from public health nurses, special diagnostic aids arranged with a nearby general hospital, and treatment for some discovered conditions.

Data obtained among 1800 elderly and marginal-income individuals revealed that they had had very little health services in preceding months and years. Many previously unknown and unsuspected conditions were diagnosed and brought under medical management.

A social problem case finding activity revealed a high prevalence of previously unrecognized and largely unmet social problems. Many of these were health-related; some were amenable to relatively simple case work services.

It is believed that the program has been preventing and will continue to prevent or slow the progression of illness conditions that otherwise would be expected to lead to serious disability. In a significant number of cases, imminent social as well as health breakdown was staved off and potential need for public welfare services and assistance was avoided.

The Queensbridge Health Maintenance Program, with modifications, is being instituted in at least four other large public housing projects in New York City in early 1966.

The Queensbridge Program was supported in part by Project Grant from the U.S. Public Health Service. The many cooperating and contributing agencies included the New York City Departments of Health, Welfare, Hospitals and Housing, several family service agencies, a community center, and other groups.

This program seems to illustrate the feasibility for cooperative public and voluntary action to improve the ambulatory care of the elderly. It illustrates also the values of the preventive aspects of the health services and the high level of unmet health needs among a marginal income population group normally found as residents of units for the elderly in low-cost public housing.

A five-year demonstration is near completion at New York Hospital-Cornell Medical School in New York City. This medical care project deliberately set out to examine the value of comprehensive health and health-related services for welfare clients. New York-Cornell took responsibility for complete care of 1000 welfare cases representing 2300 individuals. The care included care in the hospital, care in the home, comprehensive care in the clinic, and care in the nursing home for those few clients who were institutionalized.

Simultaneously, 1000 similar control cases were selected and permitted to pursue their normal and random avenues for finding medical care services. The project is conducting an extensive analysis of utilization of services and of costs along with the study of the effect of the services on the users in the control and study groups.

Though the data is not yet fully analyzed, the early results reveal that many welfare clients had previously undetected illness conditions that responded well to early and continuing medical management. Some of these conditions eventually would have lead to hospitalization and increases in public welfare costs had there been no service program. The project data showed that the quality of care furnished to the study group was superior in significant ways to the care services in the control group. It showed, also, that it is difficult to alter the pre-established patterns of use of medical and health services in this particular welfare population in New York City.

The project certainly pointed out the need for data regarding the efficacy of various patterns of providing medical care to welfare clients. To a limited extent it seems to have shown that comprehensive health services are valuable for early case finding and that continuity of care among the four settings is feasible, practical and needed.

Erie County Health Department, in a county of 1,250,000 population, established a Well Aging Conference for the purpose of providing pre-definitive diagnostic services to presumably well and ambulatory medically-indigent persons 60 years of age and over. Those found to have illness conditions or for whom thorough diagnostic services were required were referred to their own physicians or to specific hospital clinics for completion of the workup.

The users largely were members of Senior Citizens groups. They enrolled largely because they learned about the service from colleagues. A significant number of previously undetected illness conditions were discovered at early stages. Some patients were referred to and brought under adequate physician management so that the conditions could be prevented or slowed from progressing.

Social problems also were common in this group though not nearly as high and ordinarily not as severe as in the Queensbridge program.

Insufficient numbers of two and three year follow-up examinations have been done as yet. Therefore, little data is available regarding relative values of yearly examinations and rates of case finding of new diseases on their second and third visits.

In the project it was learned that one of the most important functions of the public health nurse is the counselling regarding the medical findings and the follow-up to assure that the patient obtained the needed services.

This program seemed to show that there is a high level of unmet need in an ambulatory, older and presumably well population that is not

indigent and yet not affluent. It also showed that a high quality comprehensive program can be conducted by a health department. There is sufficient interest in Erie County so that the program will be continued at the end of the demonstration period.

In New York City, the Department of Welfare contracted with several HIP groups for each group to assume full responsibility for the care of welfare clients who resided in the geographically assigned area of the group. A capitation rate for reimbursing the group for services to welfare clients was established and revised based on experience. Utilization was high in the early months of the program. Rates of utilization dropped off within a few months and returned nearly to the level of utilization by a similar age group who were not indigent and who were being carried by prepayment insurance through HIP.

This program seemed to show that welfare departments can obtain comprehensive services through the group practice prepayment mechanism for financing medical care. The utilization rates and costs were not unusually high once the initial backlog of needs among this group had been met.

The program was of sufficient value and the cost sufficiently low to the New York City Department of Welfare so that the arrangement has been extended to other HIP groups in New York City.

At St. Vincent's Hospital in New York City there is a well-run general medical clinic in the out-patient department. To this clinic are refereed patients who require diagnostic services. They are referred from the various in-patient departments at time of discharge in order to be placed under adequate clinic management. Patients also are referred from the hospital's 'screening' clinic in which minor ailments are treated and from which potentially more serious problems are referred to the general medical clinic.

Not fully satisfied with the management in the general medical clinic of some of the patients' more serious health and social problems, St. Vincent's Hospital, three years ago, requested assistance to improve and broaden the functions being carried out in this clinic -- especially for the indigent and medically indigent. Accordingly, the New York State Department of Health in cooperation with the New York City Departments of Health and of Welfare through a contract mechanism and using formula grant funds arranged to aid St. Vincent's Hospital to achieve its objectives.

The purposes of the program were to assure that newly-accepted welfare clients and their family members would receive comprehensive health and social and nursing evaluation and services. The services were to be preventively-oriented and family-centered in hope that social as well as health problems could be detected early, diagnosed properly and brought under comprehensive and long-range management.

Essentially this program was a service-oriented application of some of the early study and research findings of New York-Cornell project. To obtain utilization and cost data New York City and New York State

helped St. Vincent's Hospital obtain additional funds from the Division of Hospital and Medical Facilities of the U.S. Public Health Service. These funds have been used to support the data gathering and research and evaluation -- especially regarding utilization and costs.

In this program, excellent cooperative work relationships have been developed among public health, public welfare, voluntary hospital and a number of other official and voluntary agencies. This special Medical Care Unit in the general medical clinic has discovered several new cases of unsuspected tuberculosis in the families of a known tuberculosis patient whose illness somehow had not been previously reported to the public health agency. Previously unknown cases of diabetes, glaucoma, heart disease and other illnesses also have been diagnosed and put under treatment, and a myriad of serious social problems have been brought under the joint management of the hospital-social service department and the public welfare agency. Hopefully, some of these social problems are amenable to treatment.

The use of social work services for early detection and for the application of preventive measures is somewhat different than the normal use of social service in a busy out-patient department. In the latter instance the social workers often are overwhelmed with the acute management problems of people with far-advanced, extensive social difficulties. And, much of the skilled social worker's attention is devoted to finding emergency financial help, aiding transfer of patients to other institutions, etc.

The results in St. Vincent's program thus far would seem to indicate that a community-minded general hospital can provide preventively-oriented, family-centered, and comprehensive health and social services effectively to a population whose needs are great. The case finding, treatment and follow-up require coordinated efforts of a number of official and voluntary agencies -- the St. Vincent's program has demonstrated that this cooperation and coordination is feasible and is helpful to each and every such agency.

St. Vincent's Hospital hopes to convert the operation of the general medical and, eventually, the entire out-patient department to the pattern that has been established in this special Medical Care Unit. The program already has been responsible, in part, for the extension of hospital services into the homes of a few patients and for St. Vincent's agreeing to provide medical coverage for welfare clients in a nearby, large proprietary nursing home.

At St. Joseph's Hospital in Syracuse, the Director of Medical Education designed and conducted a family-practice training program for physicians. Objectives of this 'general practice' residency are to train physicians to furnish comprehensive care that is oriented towards families as well as the individual members thereof and that is concerned with prevention and early diagnosis as well as with the diagnosis and care of the acute illness problem. There is hope that the program will provide an increasing supply of physicians who will engage in family practice in communities of the greater Syracuse area that are having serious difficulties meeting their physician coverage needs.

To improve the program the hospital entered a joint agreement with the County Department of Welfare to provide family-centered care for individuals and families who are being aided by various public assistance programs. Each family-practice resident is assigned office space in the out-patient department. He uses his office much as a private physician would use his own private office -- the only differences being that the equipment, supplies and the supportive personnel are furnished by the hospital. Each family-practice resident is responsible throughout his entire two or three years of training for a group of public welfare assistance recipients and their family members. Each person and family is assigned to the resident by name and he, acting as the family physician, is responsible for complete care of each person and family in his out-patient department offices, in the patient's own home, in the hospital whenever it is feasible, and in the nursing home for those few who are placed therein.

The County Welfare Department pays the hospital a clinic fee for each visit. The actual cost of these clinic visits and the services provided in connection therewith are being cost accounted. Hopefully, a true cost figure will be available and, hopefully, the Welfare Department will reimburse no more, no less than this cost.

The program started on a small scale without any outside financial help. The hospital now is seeking demonstration funds to increase the size of the program and to improve the quality and comprehensiveness of the services.

The family-practice physicians have found the experience very provocative and of considerable value. On their own initiative they have made home visits to learn more about their patient, the patient's family, and the home setting -- even at times when the patient's medical condition did not necessarily call for a home visit.

The public health nurses from the local Department of Health and from the voluntary nursing agency have been an integral part of the program from the start. The nurses make the home-evaluation visits, provide nursing care services to patients who require it and participate in the conferences for planning, following-up and evaluating patient care.

In this program it would seem that public welfare families may represent a population group which can be of the utmost value in the training of physicians. It seems to have demonstrated, also, that the quality of care of the assistance recipients can be improved considerably when preventive and family-centered services are furnished. It certainly has demonstrated the values of cooperative effort among the various agencies. It has shown, also, that it is possible to start a program on a small scale without outside special funding, even though the program is not operated at the more sophisticated level that might be desired.

Some five years ago in Binghamton City the Health Department was requested to inspect private substandard rental housing in order to find unhealthy and unsafe conditions and to initiate action that would force landlords to correct these conditions.

The housing inspectors were bombarded by tenants' stories of health problems. As a result they found it difficult to complete their environmental inspections in the time normally allotted.

To collect data regarding unmet health needs and to free the housing sanitarians to do their part of the job, the local health department assigned public health nurses to visit jointly with the housing sanitarians. The nurses collected a great deal of information and recorded it in scheduled questionnaires that had been prepared jointly by the local health department and the State Health Department. However, the nurses found it difficult to collect the information in the time normally allotted for nursing visits because they, in turn, were besieged by tenants' stories about social problems. Therefore, with the assistance of the State Health Department a social problem section was added to the questionnaire.

The combination of environmental, personal health and social problems became known to voluntary agencies in the community. Groups such as the Junior League pressed for the development of services that would help resolve some of the problems. As an outcome the city was pressured to and did add a position to the Health Department's staff for a physician who would help diagnose and arrange treatment for illness conditions that were uncovered during the nursing visits. This led, eventually, to the establishment of a weekly coordinating conference involving the Medical Society, the Health Deparment, the Welfare Department, the community hospital and other agencies. The more complex health and social problems of specific patients were reviewed during these conferences. Plans were made and activated to resolve the problems.

Unfortunately, the program was discontinued when a new County Health Department was established and the City Health Department's operations were discontinued. It is hoped that the activities will be revived in the very near future.

The program seems to have shown that there is a considerable unmet need for health and social services among residents of substandard rental housing. The voluntary agencies were effective in applying public pressure to improve programs. And, the program certainly demonstrated the benefits of close cooperation between public welfare and public health. Very interestingly, the activities grew out of an initial interest in the health and safety of the environment rather than in the personal health problems of the people in the environment. And, the activities were supported almost entirely by local public and voluntary monies with only a few pieces of laboratory equipment and some laboratory supplies having been furnished by the State Department of Health.

Improved Services in Long-Term Care Facilities

Niagara County, New York, conducted a county-wide study of chronic illness approximately five years ago. The County Medical Society provided vigorous leadership in the design and operation of the study. Though much of the support was local, some assistance and funds came from the U.S. Public Health Service and some technical help was furnished by New York State.

A substantial portion of the findings and recommendations had to do with the need for better services in long-term care institutions. To implement pertinent recommendations the Niagara Falls Council of Social Agencies requested support from the New York State Department of Health. And, since the Council of Social Agencies was well known for the quality and citizen participation of its activities it seemed the logical agency of choice to conduct a program. This was despite the fact that the voluntary agency's attempts to improve nursing home care would not have a base in local law and enforcement.

The New York State Department of Health used formula grant chronic illness monies to contract with the Council of Social Agencies to administer the program. The Council employed a top-level public health nurse who was skilled at working with institutions and professions and who was a natural community organizer. Eventually, the project developed and improved training services for nursing home administrators and operators, for their professional staff and for their semi-skilled aides. A Medical Society Committee reviewed clinical charts and decided that many improvements should be made in the physicians' management of their institutionalized patients. The Medical Society adopted a protocol that spelled out what physicians' responsibilities should be for visiting patients, for recording admission history and physical examination information, and for recording the recommended treatment routines and periodic follow-up visits.

The dietitians in the area aided the operators of the institutions to improve food services. They also drafted a simplified guide for preparing special diets -- this a joint activity between physicians and the nutritionists with consultations from the New York State Department of Health.

Church groups, service clubs and other agencies were stimulated and aided to set up volunteer visitor services. Volunteers ranged from teenagers from school clubs to elderly members of senior citizens' groups. The voluntary visitors had the effect of reducing the isolation of institutionalized patients. The entire program helped open the doors of institutions to the community and involved the community with these previously isolated institutions. The nursing homes began to become a part of the mainstream of health care affairs in the county.

At the end of the grant period, the Council of Social Agencies accepted the responsibility for continuing certain portions of the program. Niagara Falls City Health Department, and later the newly-formed Niagara County Department of Health, continued some of the training activities, especially in rehabilitation and nursing. The proprietary operators, themselves, have tried to assure that their institutions and their patients did not again become isolated. The County Medical Society started a series of information and training sessions for physicians in connection with hospital attending staff and County Medical Society meetings in order to inform physicians throughout the county about the recommendations regarding how physicians might provide better care for their institutionalized patients.

This program seems to have showed that much improvement in the care of institutionalized chronically ill and elderly can be made even where there is not a vigorous standard-setting and enforcement activity by the public health agency. Again, the coordination and cooperation found among the various public agencies and with the voluntary agencies was notable. The proprietary nursing home operators became very much involved with the program once some of their early fears were abated. Grass roots citizen interest was roused, and has been and continues to be a significant portion of the program. It is being continued at relatively low cost at the close of a period of demonstration when outside funds were no longer available.

In New York City, the Department of Hospitals is responsible not only for operating a large chain of general hospitals and special institutions but also for establishing and enforcing standards for proprietary hospitals and proprietary nursing homes. Several years ago this public agency began a program for training nurses' aides in nursing homes. This was in recognition of the fact that a substantial portion of nursing care is furnished by the semi-skilled aides -- many of whom may have received little if any training to prepare them for their jobs.

The Department of Hospitals organized several roving teams of nurse educators and developed written education materials that they could use to help train the aides in individual proprietary nursing homes.

The Department of Hospitals also initiated a series of one-half hour televised training programs. These were beamed into the proprietary nursing homes through New York City's education television station. The nursing home operators were persuaded to convert their television sets to receive the high-frequency TV education channel broadcasts. The studio productions were video-taped and broadcast in mid-afternoon hours to the aides who were completing the day shift and to those who were coming in for the evening shift. The operators made the aides available for the half-hour period of viewing required. Through this media the more than 80 proprietary nursing homes in New York City were reached.

With the help of the Professional Examination Service of the American Public Health Association, an exam was designed and administered to the aides before they began the training period and after they had completed it. Results showed that their level of information and skills had been improved. Then the roving teams of nurse educators, using supportive written materials, were able to train the professional nurses to help the aides to implement what they were learning.

The operating agency, New York City Department of Hospitals, has secured much help in this training program from voluntary agencies such as United Hospital Fund, the local Chapter of the Arthritis and Rheumatism Foundation and others. But, funds were needed to improve the quality of the television program productions -- prepared on shoestring until then -- to increase the number of roving nurse educators who would assist with implementation, and to improve the guides and other written materials.

The Department of Hospitals decided also to condense the series of 26 television broadcasts into a small group of motion picture training films. These were to be used in intervals between the ending of one TV series and the beginning of the next. Also, they could be used in other areas of New York State and of the U.S. where there were no educational television facilities.

Through the use of Formula Grant funds, New York State Department of Health supported one year of a 'beefed-up' program. This was contracted through the United Hospital Fund, though the Department of Hospitals was responsible for the technical and professional work.

A series of six films have been completed -- the first several having been prepared on a shoestring prior to the time that additional funds became available. It is hoped that funds can be made available to produce at least four more films. The entire series of films will represent the 'core' content of a complete training course for nurses' aides. The emphasis throughout has been on personalizing the training so that the interests and motivations of the aides are stimulated along with providing them with actual factual information about how to do a better job.

This program seems to have shown that a standard-setting public agency can do an unusually effective job in improving care of the institutionalized chronically ill and aged through training the people who provide the bulk of the care in these institutions as well as through using ordinarily available, legal means of enforcement. Also, the public agency can make use of mass media of communication for these purposes. This program also has shown that voluntary health agencies, especially in a large city like New York, can and will be of great assistance financially and in other ways as well. And, since the proprietary operators help pay for part of the training services by a voluntary 'tithe' levied on each as well as by freeing time of their personnel, this shows that programs can be at least partially self-supporting. Hopefully, one of the most valuable end products will be a series of written and audio-visual aids (both films and video-taped TV programs) that will be useful in many other communities.

Sanatorium Gabriels sits on a rather isolated spot in a sparsely populated region of the State deep in the north section of the Adirondack Mountains. Operated by the Sisters of Mercy, this former tuberculosis hospital gradually has become a long-term care facility in recent years. With less than 100 patients and with seeming isolation from the major urban centers for medical care, it, nevertheless, has achieved some rather marked changes in the quality of care of its patients. The most notable of these is a difficult-to-describe 'personalization' of care. This seems to come from the staff's highly sensitive and informed level of awareness of the aging person who is both ill and institutionalized.

Sanatorium Gabriels two years ago began a program to train professional nurses how to provide better care for this type patient. Recognizing that the nurse would require time to devote more personal attention to the patient, the agency also decided to train nurses how to become more efficient and how to do a better job technically in nursing.

The first training efforts were quite rewarding. Therefore, Sanatorium Gabriels sought financial and other help to improve the training and make it available to larger numbers of professional nurses. The New York State Department of Health, using Formula Grant funds, supported this program for one year. The training was aimed at directors and supervisors of nursing from hospitals, from nursing homes and public infirmaries. Most of the enrollees came from modest sized and small institutions scattered throughout the Adirondack Mountain region. A series of three one-week training institutes concentrated on improving the understanding of the geriatric patient, improving actual nursing techniques, increasing work performance, and personalizing and individualizing the nursing care services.

In follow-up evaluation it has been learned that some of the enrollees were able to go back to their institutions of origin and make significant changes in the patterns of nursing care available to their patients. Others have attempted to do so but have run into administrative and other barriers. The enrollees themselves believe the training to be of great value. The follow-up will test the extent to which the quality of care is improved and how long it lasts.

The program has required and enlisted the cooperative efforts of the Sanatorium Gabriels, the hospitals in the area (and their hospital associaton), the State Department of Social Welfare (and its Area Office), the State Department of Health (and its Regional and District Offices), the State University College some distance away and other agencies and individuals. The program seems to have shown that professional nurses need and can benefit from improved understanding of the problems of the institutionalized elderly and that nurses can make considerable improvement in the care of these patients as a result of this type training.

It is noted that there seems to be a quite special quality in the relationship between the patient and the nurse at Sanatorium Gabriels. There is need to identify better what it is in the nurse-patient relationship that makes it feasible to improve care in this setting when care does not improve markedly in other settings despite improved technical information furnished to nurses in other settings. The various consultants and the Sanatorium Gabriels' staff have become interested in having behavorial scientists study this relationship.

A number of agencies in New York State have taken responsibility for developing training programs aimed at one or more of the several levels of personnel who work with the long-term care institutions and with programs that provide health and health-related services to the elderly in other settings. The School of Public Health at Columbia University has been conducting a special training course for operators, owners and administrators of long-term care institutions. The Hospital and Home for the Jewish Aged has a Public Health Service Project Grant to train people from nursing, social work, physical therapy, occupational therapy and other disciplines in the 'practical care of the elderly'. And, the New York Medical College provides rehabilitation-oriented training to professional personnel in a cooperative program worked out with the New York State Department of Health. Shortly there will be an

attempt to establish some logic and order for this whole series of training programs -- each piece of which is aimed at a specific type or level of personnel who provides care to elderly persons. Included will be plans to decentralize the training on a regional or area basis within the State so that the training can be brought closer to larger numbers of people who can benefit.

In Buffalo, the School of Social Welfare of the State University of New York at Buffalo, in cooperation with the Erie County Health Department, three-and-a-half years ago began a study of social and emotional problems of nursing home patients. Recognizing the serious shortages of personnel in the social work profession, one objective of this study was to develop better ways of diagnosing and classifying social problems; another objective was to develop diagnostic methods that could be used by persons less well-trained than the social workers -- specifically by nursing home nurses and other more available personnel. The study was supported by a contract from Formula Grant funds from the New York State Separtment of Health.

The first phase of the study has been completed quite successfully. One result is an interview guide and some interesting interview techniques. Referred to as "diagnostic instrument" this tool can be used to shorten the normal three-hour 'classic' social work interview to one hour -- a rather interesting accomplishment in view of the difficulties encountered in interviewing elderly, sick, and, sometimes, intellectually-impaired patients. The diagnoses made through this techniques correlate unusually well with social diagnoses made through the usual methods.

The School of Social Welfare has received major U.S. Public Health Service research support to further test this "diagnostic instrument" with larger numbers of patients in a wide variety of settings and in the hands of less-skilled people.

Cooperating and advisory agencies have included the Erie County Health Department, the New York State Department of Social Welfare and the New York State Department of Health. This program seems to illustrate that the academic institution, the community service agency, and State Government can work together very effectively to develop improved or new techniques that will assist in the care of the institutionalized elderly.

Probably most people attending this Institute are familiar with the recent trend toward linking the long-term care institution with the general hospital. This movement is stimulating some community-minded hospitals to build, or at least to consider building, long-term care facilities as extensions of the hospitals' programs.

In New York City there is a multi-pronged movement to place the care of the institutionalized public assistance recipient under the medical supervision of one of several quality control sources. Several hospitals have contracted with the New York City Department of Welfare to take physician responsibility for the medical coverage of welfare

patients in proprietary nursing homes. Among these are the aforementioned St. Vincent's Hospital (a recent entry in this plan), the Lutheran Medical Center in Brooklyn, and Lennox Hill Hospital in Manhattan. Quite a few of the individual group practice groups that function under the prepayment insurance plan of the Health Insurance Plan of Greater New York have contracted to provide medical coverage for welfare patients in nearby proprietary nursing homes out of group practice centers. In the borough of Brooklyn one loose affiliation of private practitioners now provides medical coverage for patients in a nearby proprietary nursing home.

In each one of these programs in New York City, the pattern of physician coverage is not unlike that in the teaching general hospital. Selected physicians make patient rounds regularly in the nursing home, assure that the patient charts are kept in an acceptable manner, furnish progress notes and directions for the care that is to be provided, and guarantee night and weekend coverage. The needed laboratory work, transfer to more acute facilities, and other needed services are arranged by the agency or group with which the Department of Welfare has made its contract.

Similar moves are under way in several communities outside New York City. Though less well-developed, they give promise of improving institution care of welfare clients considerably.

In each individual institution, the improvements in the physician care of welfare clients have spilled over among the non-welfare patient population. The regular presence of interested physicians has increased the alertness and awareness of the institutional staff to the sometimes-subtle and previously unmet health needs of their patients. And, private patients have been making increased demands on their personal physicians for furnishing an improved level of coverage. The whole tone of the institutional atmosphere has improved in its professionalism. Job satisfaction to employees seems to improve also.

This series of programs seems to have shown that government need not, and indeed should not, adhere to rigid patterns of health care for those citizens who have become government's health care responsibility. Flexibility and improved quality of care probably costs little more than the inadequate kinds and amounts of care that have been provided up until recently. These programs seem to have demonstrated, also, that public welfare can work very effectively with physicians in group practice, with community hospitals, with solo practitioners in medicine, with insurance companies, with proprietary nursing home owners and administrators , and with other government agencies -- all to the benefit of the institutionalized public welfare recipient.

In another program the School of Public Health and Administrative Medicine of Columbia University studied the growth of the proprietary nursing home movement and the influence that public policy, legislation and the use of public monies to pay for care had had on this growth. The study examined the present scene and the history of the development of the proprietary nursing home movement. The study seemed to show quite clearly that the "for profit" long-term care institution had come into

being in large part because legislation, public policy and public money had encouraged it. There are some lessons for the future for legislators and for public policy makers in this study.

Other community programs in the long-term care facilities field include revised standards for the operation of these institutions, improved programs to enforce the standards, and expanded consultation and other aids to institutional administrators. A number of studies are under way that will attempt to relate the needs of patients to the staffing patterns that should be used; to study the cost-accounted costs of the various types of services delivered to patients; and to improve the linking of the long-term care institutions with other facilities and services in the community.

Services in the Home

Monroe County (Rochester and environs), New York now has a population of 600,000. It has had for some time a remarkable level of community leadership in the health as well as in other fields. Approximately six years ago it completed, under auspices of the Community Council, an extensive chronic illness survey.

One of the major recommendations of that survey was that a comprehensive, centrally-administered coordinated home care program be established. As a result of this recommendation there came into being the Home Care Association of Rochester and Monroe County, Incorporated. This agency became responsible for arranging comprehensive services for the chronically ill who would be transferred home from hospitals and from other settings and for those who already were at home and required improved care.

In 1960, either of two excellent 'home health' agencies, the Visiting Nurse Service or the Monroe County Health Department, could have been designated as the agency to operate this new comprehensive home care service. In order to resolve potential conflict problems a new independent agency was created instead. From the beginning there was excellent understanding and cooperation from the regional Blue Cross plan. In fact, there was the intent from the start that Blue Cross would pay for services in the home for those Blue Cross enrollees who were discharged from the hospital and who might require a complex of services in the home.

This program has had a steady and commendable growth as well as full community support. As it has taken hold and become better known, increasing numbers of physicians have referred patients for home health services, patients have been discharged earlier from the hospital, and a wider variety of patients have been accepted for service. The number and kinds of services furnished has increased steadily.

The benefits to patients, to the hospitals (with their long waiting lists for admission), to physicians (who ordinarily find it difficult to arrange services for individual patients in their homes), and to the community-at-large have been well demonstrated. It seems clear that this activity has become a permanent part of the Monroe County scene.

This program seems to have demonstrated that there is real and pressing need for comprehensive, better coordinated and properly-timed services for children and adults as well as for the elderly -- that is, for any patients whose needs best can be met in the home during short convalescent periods as well as during long stays with severe disabilities and terminal illnesses. Home Care Association, Inc., has shown clearly that financing the program through existing avenues, particularly pre-payment insurance, is feasible and practical. It has demonstrated that the rising cost of hospital care can be offset in part, or at least can be controlled, by making better use of the home setting as the appropriate place for care of some patients. It certainly has shown that the cooperative action of insurance, voluntary agencies, government, and the community is possible.

In Erie County, population 1,250,000, the Health Department has taken responsibility for initiating a new home care program. It has begun by working with two community general hospitals. It intends eventually to work closely with all 18 hospitals in the County. The program is supported in part by a contract arranged between Erie County and New York State Department of Health in which chronic illness Formula Grant funds are being utilized. An additional support comes from a grant to the County by the regional Blue Cross agency. This Blue Cross grant is designed to help the program get under way. At a later point when cost accounting of the costs has been worked out and when fee-charging by the County Health Department has been initiated, the Blue Cross agency will pay for services rather than continue the grant. Some of the early referrals are public welfare patients who have complex illnesses and will require comprehensive and difficult-to-arrange services in the home. With these few referrals it already has been demonstrated that satisfactory arrangements for care in the home can be made with public welfare.

Public health nurse coordinators (or "discharge planners") already are functioning in the two selected hospitals. Early referrals and appropriate discharge planning are being arranged. One public health nurse was assigned to a hospital by the Health Deparment; the other was employed as a member of the hospital nursing staff. Both will work as an integral part both of the home care program and of the hospital staff.

In connection with the home care program, the Health Department also has started a Visiting Health Aide Service. This has been shown in other communities to be vitally necessary to the expansion of home care. In fact, some patients cannot go home unless there is part-time nurse's aide and/or homemaking services available. This service is considered a vital part of the comprehensive home care operation. Already this program seems to have shown that the public agency can create and administer a flexible comprehensive and quality-controlled program for providing home health services.

In Tompkins County, New York, (county seat, Ithaca and a mixed small-urban and rural county of approximately 60,000 population) the County Health Department offices are in the community hospital. In this

setting informal and personalized arrangements for transfer of hospital patients to the home are feasible. Already excellent relationships exist between hospital staff members and County Health Department personnel. For some time there has been joint participation in providing training and field experience for nurses from both of the two agencies.

With State Health Department Formula Grant funds, home care services in Tompkins County have been improved and have become more centrally administered. The earlier referral of patients and improved after-care in the home have been aided.

This program employs part-time per diem nurses in the smaller and more rural communities to meet the needs of the occasional patient who was transferred to his own home in that community to the hospital and who is referred back home on discharge. This flexibility in employing nurses makes it possible to assure that nursing services are available without the long travel distances that full-time public health nurses from the Health Department headquarters in the County Seat might have to make. The program also has made effective use of existing homemaker service; it has assisted the homemaker agency to broaden its functions so that Visiting Health Aide training was provided to its homemakers. The homemakers, in turn, took on the multiple functions of working in illness situations as well as with social problem families.

This program seems to have shown that comprehensive centrally-administered home care arrangements are feasible in a less-urban area as well as in the big cities. In fact, the informality of relationships between public health, public welfare and hospital people may encourage this kind of program more readily in a small county than in the larger communities. Very productive work relationships have been developed with the voluntary and health and family agencies as well. This type pattern gives much promise for coverage in areas of the U.S. that heretofore have been considered less feasible for developing home care programs.

In the city of Syracuse, the Health Department's public health nurses had identified the needs for home care services among adult and older residents of large low-cost public housing. With Formula Grant funds from the State, arranged through a contract, the city of Syracuse Health Department three years ago began a home care program for the residents of the public housing and the census tracts immediately surrounding it. Within a few months the service was extended to one-half of the city; within a year the entire city was covered.

The offices of the home care unit are located in a health station in public housing. Into this office flow the referrals from general hospitals, from private physicians' offices, and from other settings. Out of it are arranged a variety of services, tailored in each instance to the assessed needs of each patient. With experience and with ever firmer seat in the community an increasing number of physicians turn to the service for those of their patients who can be transferred early and appropriately to the home setting.

The program has taken seriously its data collection responsibilities. As a result it identified an unmet need for transportation service to get patients back to clinics for diagnostic and follow-up work and to get them to their physicians' offices. The service designed to meet this need was started as a result of the data and the action on the data taken by the Health Department.

A very pressing need for Visiting Health Aide and Homemaker Services has been well documented. Unfortunately, to date, none of the agencies in the community have been willing to take responsibility for starting this type service. It may well be that the Syracuse City Department of Health will have to initiate the service on its own until and unless another agency is willing to assume responsibility.

The County Department of Welfare, the several community hospitals, the Visiting Nurse Service, and other voluntary and public agencies have become involved with the program, have become valuable allies, and provided much assistance. And, despite the many growing pains that programs like this inevitably suffer, the program shows considerable potential for meeting a heretofore unmet need in that community.

This program seems to have shown that the need identified in public housing and with the indigent and medically-indigent truly is a community-wide need. It also seems to show that physicians in office practice recognize this need and will utilize the service as soon as it becomes available and known. It also shows that the public agency can have considerable flexibility in delivering the service, can work out relationships well with other public agencies and with the voluntary agencies, and can make a valuable contribution to community health generally.

Probably the home care programs of the New York City Department of Hospitals are well known to some of those attending this Institute. The average daily census of patients who are at home under the management of home care programs out of the hospitals in this City Hospital system number approximately 3,000. This number will continue to grow as each of the programs improves and the need for early referral and early discharge becomes more evident.

Also, in New York City and the Greater New York area, the Associated Hospital Service of New York, Greater New York's Blue Cross agency, has been paying for after-care nursing, transportation, drugs and a few other services for Blue Cross clients who have been discharged from community general hospitals. Contract arrangements now exist between Blue Cross of New York and 26 such hospitals.

Although not all home health services are covered under terms of the present contract, Blue Cross has created a valuable base for adding services and for paying for them as the needs of the patients become more evident and as the interest of the contractee hospitals increases.

In New York City and the New York area much of the after-care services in this program are provided by the Visiting Nurse Service of New York, by the Brooklyn Visiting Nurse Service and by several other voluntary nursing agencies. In the surrounding counties many of the requests for public health nursing visits for bedside care come from the county health departments. Blue Cross has contracts with these health departments that assure services to suitable discharged Blue Cross enrollees. Although Blue Cross does not pay the health departments at the present time, it will do so as soon as cost-accounted costs of nursing services are better known and the health departments are ready to move into the fee-charging business. These same health departments already provide nursing and related services to welfare clients who are confined to the home.

In Chemung County, County Seat Elmira, New York, the Health Department initiated a Visiting Health Aide Program in early 1964. This community had no homemaker or health aide services prior to that time. The need for the Visiting Health Aide (or nurse's aide service in the home) had been well identified by Health Department nurses; the lack of service was seen as a barrier to the earlier and more appropriate discharge of some chronically ill and elderly patients.

Through use of Formula Grant funds, the State Health Department wrote a contract to support the starting of a Visiting Health Aide Service in Chemung County. Since its initiation, this service has been overwhelmed with demands. The number of aides has had to be increased greatly, their training has been expanded, and the supervision provided to them has been improved continuously.

In this program approximately one-third to one-fourth of the costs are returned in the form of payments by patients and families for Visiting Health Aide Service. There is no prepayment insurance coverage as yet. Therefore, the remainder of the financial burden is deficit financing through the use of contract funds and through transferring some positions to the local State-aided Health Department budget.

It is known now that the County Welfare Department intends to start a homemaker service for ADC families in 1966. Since the Health Department's program covers largely the illness situations, especially among the elderly, the Welfare Department program will fill another unmet need.

Already the two public agencies, in cooperation with the Community Council and some of the voluntary agencies, intend that the two programs shall be coordinated as closely as is possible. The recruitment, training, placement and supervision of the homemakers and of the visiting health aides will be a joint effort of the two public agencies. Fortunately, in this community, the relations between Welfare and Health are informal and excellent so that this type of close cooperation is possible.

The missing piece in Chemung County is the voluntary-operated homemaker service for the adult and older person. Hopefully, the Community Council and the voluntary agencies will join the movement to help create a broader and community-wide service that will be available to everyone regardless of type of need or financial status.

This program seems to have shown that there is great need for the Visiting Health Aide in the home for the chronically ill and elderly and that the need can be met through expansion of a local public health program. It is hoped it will demonstrate also that public welfare and public health can work together very effectively to broaden Visiting Health Aide and Homemaker Services so the needs in a variety of homebound situations can be met. It has shown that these services can be supported in part by the direct payment of private fees. With the advent of pre-payment insurance and 'Medicare' on the scene, there is great hope that this type service can be better supported financially and started in many other areas of the State.

There are many experiments under way in New York State, the objectives of which are to fill other unmet needs of the chronically ill and elderly who are confined to their own homes. The Henry Street Settlement in New York City has Public Health Service Project Grant support for a "Good Companion's Health Service". In this program older volunteers are visiting the elderly in their own homes to help break down the social isolation barriers and to help provide non-professional services that some of these people need to function better in their own environments and to get out of their own environments from time to time. In Monroe County the Visiting Nurse Service has been conducting a "Personalized Services Program" for several years. In this program the agency tries to find special health and non-health services that some people need in order to function better. It is of note that the Visiting Nurse Service has: taken responsibility for portable dental equipment so that dentists might visit homes and provide dental services to some people who are confined to home; arranged for carpenters to make physical changes in the environment in the home; and furnished companions to assist with the shopping and check cashing and other functions that chronically ill aged cannot get out to do.

The Visiting Nurse Association of Brooklyn, the Visiting Nurse Service of New York City and the District Nursing Association of Northern Westchester have started Visiting Health Aide programs with the aid of Public Health Service Project Grants. Some of these are nearing the end of their demonstration period and now are seeking assistance to continue their services. The Visiting Nurse Service of Rochester and Monroe County has been conducting a Health Aide and Homemaker program for several years. It is partially financed through reimbursement from Blue Cross in connection with the Home Care program.

The Council of Social Agencies of Rochester and Monroe County is operating a Foster Family Care Service for Elderly Persons. This service, too, offers another avenue for getting some people who are ill, disabled and beset with social and environmental problems into settings where they can function better.

Coordination and Improved Use of Services

Four years ago the New York State Department of Health used Formula Grant funds to encourage Rockland County Health Department to start a Health Information and Referral Service. Rockland County was and is a rapidly growing suburban community situated across the Hudson River and not far from New York City. It had no Council of Social Agencies. The rapid growth of population and the relative sparsity of agencies and services left many people without any source to turn to when they encountered health and social problems.

The Health Information and Referral Service of Rockland County was used as a study and demonstration program to develop an information collection and data treatment process that might then be used in other areas of the State. The program employed a well-qualified and community-organization-skilled social worker. With aid from the State Health Department the information and data system was established, tried, changed, and refined. The services delivered by each individual agency were scrutinized and evaluated from time to time. A central telephone point for accepting requests for information was established, and the Health Department assured that those people who needed more than just telephone information would be provided with it. Office interviews were arranged to help some patients and/or their families reformulate their ideas of what they needed. And, patients and families were aided in finding the service and in using it appropriately.

This three-year experience demonstrated quite clearly that there was great need in this community for a central place for people to obtain up-to-date and helpful information about health and health-related services. It also showed that gaps, overlaps in services and mistaken impressions about services could be identified and corrected. This was done by continuously pulling out data on the nature of people's requests and the relative success in helping people to meet their assessed needs.

Out of the Rockland County experience Health Information and Referral Services have been started more recently in five other communities in the State. One of these programs is supported with a Public Health Service Project Grant. The other four are supported by contracts with the State of New York using Formula Grant chronic illness funds.

These Health Information and Referral Services cover areas ranging from a small city to a major metropolitan county of a million and a half population. And, there is intent now to develop multiple-county coverage for areas, the populations of which do not warrant single county services.

These programs seem to have shown that there is a great unmet need among the citizenry for a central place from which they can secure advice and help in finding and arranging for health services. An important part of this need is for skilled public health social workers to assist and guide people in reformulating their and/or their families' ideas about needs and the best ways to meet needs. The public health social

worker provides valuable assistance to assure that the patient finds the correct service that is in accordance with his original or reformulated need.

Other coordinating activities are many and varied. In Monroe County the Health Department has placed public health nurse "discharge planners" in several general hospitals in an attempt to assure that patients are referred early and appropriately for care, that there is an adequate nursing care plan, and that there is good follow-up to assure that services are provided.

In the mental health field the hospitals of the State Department of Mental Hygiene have been seeking increasing assistance from local public health agencies to assure that there is public health nursing visitation to discharged mental hospital patients. In these programs the public health nurses attempt to feed back information to the mental hospitals; and they try to assure that the mental hospital patient returns to the clinic or hospital services at the appropriate times and for the appropriate services. These mental health programs have called for some new kinds of relationships and training to improve skills among the public health nurses. They have led to some improved and new relationships between mental hospitals, the welfare departments, and the health departments.

Regional Hospital Review and Hospital Councils now are active in every area of New York State. These planning groups are concerned with much more than the needs for and planning of hospital facilities. They have become concerned with the long-term care institutions, with the need for the growth of home care programs and with the needs for out-patient diagnostic services and ambulatory care. Working closely with public health, public welfare, mental hygiene and other public agencies they also involve lay leadership people who are integral in the power structure of various communities. It is estimated these Regional Councils will have an important influence on the growth of health care institutions and health care services throughout the State. It is hoped that they will have positive influence on long-range planning. And, it is hoped that this long-range planning will consider all four settings and the need for coordination among the settings.

Regional Rehabilitation Coordinating Committees and Regional Rehabilitation Centers have been developed largely through the efforts of the New York State Department of Health. These Primary and Secondary Rehabilitation Centers have improved greatly already the physical rehabilitation of the disabled at all age levels. There are earnest efforts to coorinate these activities with the vocational rehabilitation activities that are under the New York State Department of Education. Hopefully, the sheltered workshop movement will be tied in closely with the rehabilitation centers and, in turn, with the regional planning that now takes place in several major fields.

At a State level there is an Interdepartmental Health and Hospital Council, membership of which includes mental health, social welfare, vocational rehabilitation, health, and insurance. One committee of this coordinating Council has accepted responsibility for coordinating health, welfare, and other services for older persons. A guide and plan for improving services for the elderly in public housing already has been prepared and will be released shortly. It is hoped this guide will have a beneficial effect on the elderly at all economic levels and in all types of housing as well as on the indigent and medically-indigent in public housing.

Among the professional groups there is a coordinating agency called the State Joint Council to Improve Health Care of the Aged. Membership includes the Medical Society of the State of New York, New York State Hospital Association, New York State Nursing Home Association, and the New York State Departments of Health and of Social Welfare. This has become a valuable medium for interchange of information, ideas and program designs among the professional and public agencies.

Voluntary agencies at State level are represented by an organization called the State Charities Aid Association. This agency has a long and rich tradition of serving as the citizens' voice to improve social conditions and to help formulate social policy. It long has been quite active in the public welfare and child care fields. More recently it has reactivated its interest in health. In its Chronic Disability Project it has taken the responsibility for trying to help coordinate the activities of the voluntary agencies with those of government both at a state and a local level. Its Chronic Disability Project was established for this purpose and is funded by a Public Health Service Project Grant out of Chronic Illness and Aging Funds and with full endorsement and support from the New York State Department of Health.

This program gives hope that the voice of the citizen will be heard increasingly in the health field and that public programs in welfare and in public health will have a firmer basis in the community.

The number of coordinating activities increases -- sometimes to the point where there seems to be need for coordinators to coordinate the coordinators. In fact, in one community this very kind of 'coordinating of coordinators' has been instituted.

Others say there is danger that there will be many more Chiefs than Indians as the complexity of health services increases and as the number and kinds of agencies involved increases. Despite these obstacles the general movement appears healthy. There is the danger, of course, that services to the individual patient will be lost sight of in the process.

STEP V -- CONCLUSIONS AND APPLICATIONS

From the preceding review of case descriptions it would seem that the Step III Hypothesis has been well tested and that it is valid. In fact, many of the cases recited already illustrate programs that no longer are tests of the hypothesis; rather, they are applications of proven results.

It is true that the resources are not yet adequate for starting many of these kinds of health programs nor for supporting them fully or even to the extent to which they deserve support. Nevertheless, there seems to be enough experience to indicate that community programs for health services can be designed, started and supported with the objectives of improving services in the home, in the long-term care facility, and in the ambulatory care setting. And, these can be well coordinated and integrated with services at the hospital.

This can be done if there is citizen participation, agency flexibility, imagination, willingness to cooperate and break down rigid barriers that some agencies and professions erect, and an earnest search for appropriate and broadened funding. Many other elements are necessary. These include long-range planning, continuous collection of information and data, analysis and evaluation of the information and data, and proper use of the data to plan ahead.

In conclusion it would seem that it is feasible and practical to provide the Right Service to the Right Patient in the Right Place at the Right Time -- based on certain aforementioned assumptions about the interests of people and agencies and limits of their flexibility and willingness to work together. In general, the future is very optimistic though the past and the present a bleaker picture.

SOCIAL PSYCHOLOGICAL FACTORS INFLUENCING THE USE OF COMMUNITY HEALTH RESOURCES

Rodney M. Coe and Albert F. Wessen

This paper focuses on social psychological factors, rather than on community health resources, and refers to findings of a number of social psychological studies on medical behavior. The importance and meaningfulness of the therapist-patient interaction is emphasized. The authors concluded that it seems likely that "most if not all the significant factors associated with resistance to utilization of community health resources can be traced to characteristics of response to illness."

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SOCIAL PSYCHOLOGICAL FACTORS INFLUENCING THE USE OF COMMUNITY HEALTH RESOURCES

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SOCIAL-PSYCHOLOGICAL FACTORS INFLUENCING THE USE OF COMMUNITY HEALTH RESOURCES

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The purpose of this paper is to explore some social-psychological concomitants of the utilization of health services. It would probably be wise at the outset, however, to indicate that the title of this paper--"Social-Psychological Factors Influencing the Use of Community Health Resources"--is somewhat misleading. At least it is misleading to the extent that the focus of these remarks will be on "social-psychological factors" rather than on "community health resources." For the purposes of this paper, it is not important to discuss separately the social-psychological factors found to be associated with the use of various clinics, hospital out-patient services, in-patient care or even visits to the offices of physicians in private practice. Rather, we shall concentrate on an event common to all medical settings, namely the social encounter between the patient and the therapist as a significant part of the more general process of response to illness. The term therapist is used here rather than physician to permit generalization of the social relationship to healers other than orthodox physicians, e.g., chiropractors, faith healers and others who, after all, must be included in the community's total health resources. We will return to this point later. First, however, it would seem appropriate to summarize briefly the results of some previous studies in utilization and to indicate some important issues raised by these studies.

In general, the most common utilization studies make use of a host of demographic and social factors related to utilization of health resources.[1] Investigations of this type provide a description of trends in utilization and the variations in important social and demographic factors associated with this use. It has been found, for example, that rates of utilization of health services are greater for females than males, and that use increases with age for both sexes.[2] It has been shown that utilization varies directly with social class standing.[3] It has been demonstrated that while upper social classes spend more for health services, the amount they spend represents a small proportion of their total income than the amount spent by the lower social classes.[4] It has been found that owners of various health insurance policies utilize health services more often than people without insurance.[5] It is also known that to a certain extent ecology influences the use of various health resources, especially hospitals.[6] These are useful, timely data designed to answer specific questions about the extent or quantity of medical care received by a population. They are used as indicators of the medical behavior of certain segments of the population. They also provide administrators and others with data needed to organize and prepare their agencies or facilities for giving medical care. Although these studies describe who gets treated and what treatment is received, they cannot, nor are they intended to, answer questions as to <u>why</u> people

seek care, why some patients delay and others do not, why some patients go to physicians and others go to faith healers or quacks. The answers to these questions are sought in motivational studies which include research into social-psychological factors.

At the present time, the extent of literature on social-psychological research on why people exhibit the medical behaviors they do is not very great nor is it very systematic.[7] Attempts to assess motivation of medical behavior directly have generally failed, perhaps because of the difficulties involved in obtaining objective measures of motives. More often, motives have been inferred from measures of cognition or extent of knowledge, from attitudinal studies and from studies of value orientations. A classic example would be the research of Merrill and his associates.[8] In evaluating a poliomyelitis vaccination campaign in California, they found that the influence of friends, neighbors and the family doctor was very important. Mothers who believed their friends did not like the idea of vaccination also exhibited an unfavorable attitude towards the program and were unlikely to have their children participate. Opposition to the program by husbands or family doctors also influenced the mothers not to let their children participate. Much of the negative attitude was traced to certain beliefs--such as that fostered by the Cutter incident--which led to an expression of fear and anxiety, two variables which are frequently found in studies of this type. On the other hand, mothers who were favorably disposed towards vaccination, but who did not participate, often gave such reasons as negligence, they didn't know about it, the child was sick that day or the child was in an age group believed to be less susceptible to the disease.[9]

Many of these same factors, and some new ones, emerge from studies on patient reaction to specific diseases, particularly cancer. Most of these studies have sought answers to the question of why patients delay in seeking treatment. Early studies, such as those by Harms and Plant[10] and Aitken-Swan and Patterson,[11] emphasized utilitarian features such as symptoms were not serious enough, negligence, ignorance or high cost. The research by Goldson and her associates, however, has emphasized "generalized fear" and a personal reticence to submit to examinations as causes of delay in seeking treatment for cancer.[12] The interesting interpretation of this study, however, is that patients who seek treatment for cancer symptoms early do so to the extent that they seek treatment for any symptoms early. In other words, an attempt was made here to relate behavior with respect to symptoms of a specific disease to a generalized response to illness on the part of the patient. This ties in with other research which demonstrates that response to illness varies with age, sex, race and ethnicity.[13]

These findings of response to cancer symptoms as part of a generalized response to illness have been challenged by Kutner and Gordan.[14] Their investigation showed that patterns of seeking care for cancer resulted

from factors which are different from those involved in response to symptoms of other diseases. They go on to say that while delay in seeking treatment for any illness is greatest in the lower classes, delay is more pronounced for cancer symptoms. Likewise, while amount of education is negatively related to delay in seeking treatment for general symptoms, there is a more pronounced negative relationship between amount of education and delay in seeking treatment for cancer.[15] One may well ask if the more pronounced response to cancer might not be due to a third factor, fear. That is, the response itself is not really different from response to other disease symptoms as Kutner and Gordan contend, but is emphasized because fear of cancer is greater than fear of symptoms of other diseases, such as poliomyelitis. Some support for this latter interpretation is offered by Levine.[16] He found that a national sample of nearly 3,000 respondents rated cancer as the disease they feared most. Moreover, he found that personal acquaintance with a cancer victim, especially a member of the family, was more important in producing fear than amount of education or degree of specific knowledge about cancer. Although interesting, these studies in themselves do not explain much of the wide variation in response to illness that has been observed in demographic studies of utilization. A more promising approach has been suggested by Suchman and his associates who have attempted to combine socio-cultural and social-psychological factors in explaining medical behavior.[17]

From interviews with about 1800 respondents in an ethnically heterogenous section of New York City, Suchman obtained information on demographic and social characteristics, social status, health status, attitudes toward medical care and the medical profession. These data were organized to measure the position of particular groups along several dimensions: (1) degree of skepticism about doctors and their abilities, (2) cosmopolitanism-parochialism or the degree of orientation toward urban, "worldly" values as opposed to close-knit, traditional relationships, and (3) ethnic exclusivity or degree of ethnocentrism of the group. As might be expected--and as Suchman found--these dimensions are interrelated, but they each also showed highly significant relationships with medical behaviors. For example, respondents who resisted or delayed seeing a physician tended to be more parochial, highly skeptical of the medical profession and most often turned to their own ethnic group for advice and counsel.

In these dimensions one can recognize the familiar elements of cognition, attitudes and values. For example, skepticism of the medical profession reflects, in part, the degree of knowledge and certain beliefs held by the patient. Highly skeptical persons tended to have less factual knowledge about the medical profession and nature of disease and, therefore, utilized their services less often. This is similar to the results reported by Browning and Northcutt,[18] Anderson[19] and Glasser[20] all of whom found that utilization of health services varied inversely with the amount of knowledge held by the patient. Similarly, Suchman's

findings on attitudes varying along the cosmopolitan-parochial dimension and values related to ethnic exclusivity support the previous results of Friedson,[21] Bloom,[22] and many others. Here Suchman found highly "cosmopolitan" people tended to seek the services of a physician very early in the stage of illness, while those at the "parochial" end of the scale depended more on the advice and prescription of relatives and close friends, i.e., utilized what Friedson called the lay referral system. Moreover, ethnically exclusive respondents--who also tended to be more parochial--maintained many of the values of their ethnic group and some of these values conflicted with those held by practicing physicians. For example, to some groups time is not an important element which may lead them to be late or break appointments with the doctor. To other people, preventive medicine in the form of annual examinations or vaccination is unheard of. They do not go to a doctor unless they are ill. Others may not maintain a diet regimine because the food customs of their ethnic group encourage deviance.

The importance of a study such as Suchman's is that an attempt was made to examine medical behavior within the broad framework of a socio-cultural setting rather than trying to identify single, specific factors associated with certain observed behaviors as so many earlier studies have done. However, even Suchman who claims a "social system" approach has omitted one of the key elements, the therapist who provides the care. Many of the studies already mentioned, including Suchman's, allude to the influence of the physician on the medical behavior of the patient. Other studies, such as Koos' classic report on a small community in New York,[23] suggest that certain kinds of patients, especially those in the lower classes, complain most about doctors and were most likely to seek care from chiropractors and faith healers. Simon and Rabushka[24] found that impersonal treatment by clinic physicians was the chief complaint of patients in a labor union health clinic. Sussman's[25] study of attitudes toward a hospital clinic showed that patients most wanted a definite appointment time, to see the same physician each visit and the possibility of home calls by physicians. What these and other studies are suggesting is that our understanding of the medical behavior of patients is incomplete if the influence of the physician is omitted from consideration. We would go a step further. The understanding of medical behavior lies in an examination of the therapist-patient relationship--the nature of their social interaction--in the context of the patient's response to his illness. Unfortunately, little empirical research has been conducted on the therapist-patient interaction except, perhaps, in the field of mental health, so that much of what follows must necessarily be somewhat speculative. Nonetheless, it is felt that further research on the ideas suggested below will enable us to account for the somewhat disparate factors already mentioned.

By this time, nearly everyone must be aware of the changes which are taking place in the field of medicine. Many writers have pointed to such trends as increased specialization in practice which is accompanied by

fragmentation of patient care and emphasizes the therapist's interest in the disease rather than the "whole patient."[26] The trends toward group practice, partnerships and the declining number of general practitioners, especially in urban areas, also is evident.[27] An increasing number of people are now covered by some form of health insurance. This has increased the demand for medical care services which must be provided by a declining ratio of physicians to population.[28] Although these changes are important, it is felt that the trends noted above serve only to define some of the external constraints on the interaction which takes place. Of greater importance are the characteristics of the therapist-patient interaction.

We have already examined some characteristics which patients bring to the encounter. Besides certain social and demographic attributes, it has been suggested that patients exhibit a "selective attention" to symptoms,[29] that they employ a lay referral system, that in other words, there is a wide variation in response to illness. In one of the classic studies, Barker and his associates reported that perception of symptoms of illness often constituted a threat to that person's self-conception in terms of pain, incapacitation, disfigurement and even death.[30] They indicated also that anxiety and fear accompanying the uncertainty over the meaning of symptoms are not necessarily alleviated by professional treatment. They suggest that patients lack knowledge of, and therefore are frightened by, an array of unusual instruments, unfamiliar sounds and smells. While this may be true to some degree, it is felt that the social-psychological ramifications of illness--uncertainty, fear, anxiety, etc.--are aggravated, or more technically, are reinforced by the therapist-patient encounter. To make this point more clearly, we must now look at the physician's role in the encounter.

Early descriptions of the doctor-patient relationship assumed that like other kinds of social interaction there were explicit norms governing the behavior of both parties. Parsons,[31] to take a well-known example, analyzed the roles of doctor and patient in terms of his concepts of pattern variables. The intent was to show that the role attributes which each role player brought to the encounter were mutually compatible and were understood by each party. That is, the physician held certain expectations of the patient and the patient knew what they were and could comply and vice versa. Recently, however, some writers have begun to question the explicitness of these expectations. Zola,[32] for example, suggests that potential sources of conflict were overlooked by early analysts because treatment of acute, infectious diseases, which predominated years ago, was often successful after short treatments. Under these conditions, the therapist-patient encounter was likely to be brief, perhaps only a one-time affair and had, as its principal component, a specific therapeutic intervention. For example, when one had pneumonia, one went to a doctor for a penicillin shot. Control of chronic diseases, however, may require many, varied treatments and medical supervision over a long period of time.[33] He suggests

also that sources of conflict were overlooked because of the great power differential between physician and patient. In fact, if one looks at the amount of preparation--or socialization if you will--by the role players, one finds enormous disparaties. On the one hand, a physician has a great deal of medical knowledge learned through long years of study during which time he also learns certain attitudes and values.[34] He is a doctor by choice and as such accepts the rules and regulations, both formal and informal, designed to control his behavior. The patient, on the other hand, ordinarily does not choose to be ill and enters the relationship without any clear conception of what is expected of him or the norms, if any, which are supposed to guide his behavior in that situation.

Superimposed on this relationship, which on the face of it, places the patient in a very unfavorable position is another factor, namely the manner in which physicians handle the problem of uncertainty of diagnosis and treatment. Although as Scheff[35] has pointed out, uncertainty has always been a part of medical practice, it has been accentuated by the current shift in morbidity and mortality from acute to chronic diseases. The remarkable progress in medical science in reducing death rates from acute, infectious diseases has led to similar public expectations with respect to the control of chronic ailments. As yet, however, medical research has not produced the required data. Thus, practicing physicians are often confronted with problems for which they have no answers. Accordingly, physicians must decide whether to treat a patient even if the therapy has not been tested or not to treat a patient and hope that somehow the body will heal itself. In the interest of patient survival--andperhaps his own--the physician will probably choose to risk an error of commission rather than omission on the assumption that the treatment cannot hurt the patient and might actually help him.[36] However, this kind of decision has some unfortunate consequences for the doctor-patient relationship. Not only does it mean prolonging the relationship with repeated appointments so that the doctor may observe the outcome of his therapy--thus increasing the cost to the patient--but the physician's uncertainty is often communicated to the patient, thereby increasing the latter's anxiety or fear and his skepticism about the competence of physicians. More importantly, however, by these procedures the physician forces the patient into the "sick role" where he more than likely does not want to be and may not really belong.[37] Indeed, if persons seeking help for a medical problem are forced into a role which they do not want and which places them in an unfavorable position vis a vis the physician because the latter is unable to cope successfully with his problem, one can begin to see how the various disparate factors--anxiety, skepticism, complaints about expense, generalized resistance to physicians and even hostility--can arise.

All this leads back to an important social-psychological facet of response to illness which is reinforced by the therapist-patient

encounter: the impact of the encounter on the self-concept of the role incumbents, especially the patient. According to early analysts, patients willingly gave private and personal information to the physician because they knew he had to have that information to carry out his role and because they knew their private information was safe with him. However, just as the assumption about knowledge of role expectations is being questioned, we may well question the validity of this one. Under conditions imposed by contemporary medical practice--of extreme impersonality, of skepticism about the physician's competence, of the inability to establish the relationship stereotypically represented by the "old family doctor"-- it is more likely that patients may resent and resist the intrusion into what Goffman dramaturgically described as the "backstage region," i.e., the area of private and personal data.[38] The thought of permitting access to private data without any kind of reciprocity and without being able to control what information is discovered, that is, the possible discovery of private information not relevant to the immediate medical problem, is a direct assault on a person's conception of himself. There is a considerable amount of research which suggests that people tend to resist or even withdraw altogether from situations in which they occupy a disadvantaged position or lose control over the factors which enable them to present themselves in a favorable light.[39]

From this admittedly speculative viewpoint, it seems likely that most if not all the significant factors associated with resistance to utilization of community health resources can be traced to characteristics of response to illness. Specifically, it is suggested that the nature of the therapist-patient interaction under conditions imposed by current medical practice is such that it may reinforce a threat to the patient's concept of self, a threat that makes it difficult if not impossible for the patient to continue the interaction. This may account for the phenomena of "shopping" for a physician or why patients continue to go to chiropractors or other "healers" who must, of necessity, give "personalized" service. If the hypothesized importance of the nature of the therapist-patient relationship can be demonstrated to be an empirical fact, implications for effecting changes to improve the utilization of health resources would be evident. In fact, some studies have already shown that negative attitudes toward clinic personnel can be partially mitigated by modifying the physician's approach to the patient.[40] Essentially, physicians must be made aware of the importance of using themselves as a therapeutic tool in the encounter. This, of course, would require not only a re-emphasis on sociological factors of illness in medical education, but also some changes in conduct of contemporary medical practice which would permit an increase in the therapist's commitment to patient care rather than disease treatment. These areas plus other facets of utilization, such as "over-utilizers," should be made high priority targets for future research.

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CURRICULUM PROJECT
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SOCIAL-PSYCHOLOGICAL FACTORS INFLUENCING THE USE OF COMMUNITY HEALTH RESOURCES

Rodney M. Coe, Ph.D.
and
Albert F. Wessen, Ph.D.

The purpose of this paper is to explore some social-psychological concomitants of the utilization of health services. It would probably be wise at the outset, however, to indicate that the title of this paper--"Social-Psychological Factors Influencing the Use of Community Health Resources"--is somewhat misleading. At least it is misleading to the extent that the focus of these remarks will be on "social-psychological factors" rather than on "community health resources." For the purposes of this paper, it is not important to discuss separately the social-psychological factors found to be associated with the use of various clinics, hospital out-patient services, in-patient care or even visits to the offices of physicians in private practice. Rather, we shall concentrate on an event common to all medical settings, namely the social encounter between the patient and the therapist as a significant part of the more general process of response to illness. The term therapist is used here rather than physician to permit generalization of the social relationship to healers other than orthodox physicians, e.g., chiropractors, faith healers and others who, after all, must be included in the community's total health resources. We will return to this point later. First, however, it would seem appropriate to summarize briefly the results of some previous studies in utilization and to indicate some important issues raised by these studies.

In general, the most common utilization studies make use of a host of demographic and social factors related to utilization of health resources.[1] Investigations of this type provide a description of trends in utilization and the variations in important social and demographic factors associated with this use. It has been found, for example, that rates of utilization of health services are greater for females than males, and that use increases with age for both sexes.[2] It has been shown that utilization varies directly with social class standing.[3] It has been demonstrated that while upper social classes spend more for health services, the amount they spend represents a small proportion of their total income than the amount spent by the lower social classes.[4] It has been found that owners of various health insurance policies utilize health services more often than people without insurance.[5] It is also known that to a certain extent ecology influences the use of various health resources, especially hospitals.[6] These are useful, timely data designed to answer specific questions about the extent or quantity of medical care received by a population. They are used as indicators of the medical behavior of certain segments of the population. They also provide administrators and others with data needed to organize and prepare their agencies or facilities for giving medical care. Although these studies describe who gets treated and what treatment is received, they cannot, nor are they intended to, answer questions as to <u>why</u> people

seek care, why some patients delay and others do not, why some patients go to physicians and others go to faith healers or quacks. The answers to these questions are sought in motivational studies which include research into social-psychological factors.

At the present time, the extent of literature on social-psychological research on why people exhibit the medical behaviors they do is not very great nor is it very systematic.[7] Attempts to assess motivation of medical behavior directly have generally failed, perhaps because of the difficulties involved in obtaining objective measures of motives. More often, motives have been inferred from measures of cognition or extent of knowledge, from attitudinal studies and from studies of value orientations. A classic example would be the research of Merrill and his associates.[8] In evaluating a poliomyelitis vaccination campaign in California, they found that the influence of friends, neighbors and the family doctor was very important. Mothers who believed their friends did not like the idea of vaccination also exhibited an unfavorable attitude towards the program and were unlikely to have their children participate. Opposition to the program by husbands or family doctors also influenced the mothers not to let their children participate. Much of the negative attitude was traced to certain beliefs--such as that fostered by the Cutter incident--which led to an expression of fear and anxiety, two variables which are frequently found in studies of this type. On the other hand, mothers who were favorably disposed towards vaccination, but who did not participate, often gave such reasons as negligence, they didn't know about it, the child was sick that day or the child was in an age group believed to be less susceptible to the disease.[9]

Many of these same factors, and some new ones, emerge from studies on patient reaction to specific diseases, particularly cancer. Most of these studies have sought answers to the question of why patients delay in seeking treatment. Early studies, such as those by Harms and Plant[10] and Aitken-Swan and Patterson,[11] emphasized utilitarian features such as symptoms were not serious enough, negligence, ignorance or high cost. The research by Goldson and her associates, however, has emphasized "generalized fear" and a personal reticence to submit to examinations as causes of delay in seeking treatment for cancer.[12] The interesting interpretation of this study, however, is that patients who seek treatment for cancer symptoms early do so to the extent that they seek treatment for any symptoms early. In other words, an attempt was made here to relate behavior with respect to symptoms of a specific disease to a generalized response to illness on the part of the patient. This ties in with other research which demonstrates that response to illness varies with age, sex, race and ethnicity.[13]

These findings of response to cancer symptoms as part of a generalized response to illness have been challenged by Kutner and Gordan.[14] Their investigation showed that patterns of seeking care for cancer resulted

from factors which are different from those involved in response to symptoms of other diseases. They go on to say that while delay in seeking treatment for any illness is greatest in the lower classes, delay is more pronounced for cancer symptoms. Likewise, while amount of education is negatively related to delay in seeking treatment for general symptoms, there is a more pronounced negative relationship between amount of education and delay in seeking treatment for cancer.[15] One may well ask if the more pronounced response to cancer might not be due to a third factor, fear. That is, the response itself is not really different from response to other disease symptoms as Kutner and Gordan contend, but is emphasized because fear of cancer is greater than fear of symptoms of other diseases, such as poliomyelitis. Some support for this latter interpretation is offered by Levine.[16] He found that a national sample of nearly 3,000 respondents rated cancer as the disease they feared most. Moreover, he found that personal acquaintance with a cancer victim, especially a member of the family, was more important in producing fear than amount of education or degree of specific knowledge about cancer. Although interesting, these studies in themselves do not explain much of the wide variation in response to illness that has been observed in demographic studies of utilization. A more promising approach has been suggested by Suchman and his associates who have attempted to combine socio-cultural and social-psychological factors in explaining medical behavior.[17]

From interviews with about 1800 respondents in an ethnically heterogenous section of New York City, Suchman obtained information on demographic and social characteristics, social status, health status, attitudes toward medical care and the medical profession. These data were organized to measure the position of particular groups along several dimensions: (1) <u>degree of skepticism</u> about doctors and their abilities, (2) <u>cosmopolitanism-parochialism</u> or the degree of orientation toward urban, "worldly" values as opposed to close-knit, traditional relationships, and (3) <u>ethnic exclusivity</u> or degree of ethnocentrism of the group. As might be expected--and as Suchman found--these dimensions are interrelated, but they each also showed highly significant relationships with medical behaviors. For example, respondents who resisted or delayed seeing a physician tended to be more parochial, highly skeptical of the medical profession and most often turned to their own ethnic group for advice and counsel.

In these dimensions one can recognize the familiar elements of cognition, attitudes and values. For example, skepticism of the medical profession reflects, in part, the degree of knowledge and certain beliefs held by the patient. Highly skeptical persons tended to have less factual knowledge about the medical profession and nature of disease and, therefore, utilized their services less often. This is similar to the results reported by Browning and Northcutt,[18] Anderson[19] and Glasser[20] all of whom found that utilization of health services varied inversely with the amount of knowledge held by the patient. Similarly, Suchman's

findings on attitudes varying along the cosmopolitan-parochial dimension and values related to ethnic exclusivity support the previous results of Friedson,[21] Bloom,[22] and many others. Here Suchman found highly "cosmopolitan" people tended to seek the services of a physician very early in the stage of illness, while those at the "parochial" end of the scale depended more on the advice and prescription of relatives and close friends, i.e., utilized what Friedson called the lay referral system. Moreover, ethnically exclusive respondents--who also tended to be more parochial--maintained many of the values of their ethnic group and some of these values conflicted with those held by practicing physicians. For example, to some groups time is not an important element which may lead them to be late or break appointments with the doctor. To other people, preventive medicine in the form of annual examinations or vaccination is unheard of. They do not go to a doctor unless they are ill. Others may not maintain a diet regimine because the food customs of their ethnic group encourage deviance.

The importance of a study such as Suchman's is that an attempt was made to examine medical behavior within the broad framework of a sociocultural setting rather than trying to identify single, specific factors associated with certain observed behaviors as so many earlier studies have done. However, even Suchman who claims a "social system" approach has omitted one of the key elements, the therapist who provides the care. Many of the studies already mentioned, including Suchman's, allude to the influence of the physician on the medical behavior of the patient. Other studies, such as Koos' classic report on a small community in New York,[23] suggest that certain kinds of patients, especially those in the lower classes, complain most about doctors and were most likely to seek care from chiropractors and faith healers. Simon and Rabushka[24] found that impersonal treatment by clinic physicians was the chief complaint of patients in a labor union health clinic. Sussman's[25] study of attitudes toward a hospital clinic showed that patients most wanted a definite appointment time, to see the same physician each visit and the possibility of home calls by physicians. What these and other studies are suggesting is that our understanding of the medical behavior of patients is incomplete if the influence of the physician is omitted from consideration. We would go a step further. The understanding of medical behavior lies in an examination of the therapist-patient relationship--the nature of their social interaction--in the context of the patient's response to his illness. Unfortunately, little empirical research has been conducted on the therapist-patient interaction except, perhaps, in the field of mental health, so that much of what follows must necessarily be somewhat speculative. Nonetheless, it is felt that further research on the ideas suggested below will enable us to account for the somewhat disparate factors already mentioned.

By this time, nearly everyone must be aware of the changes which are taking place in the field of medicine. Many writers have pointed to such trends as increased specialization in practice which is accompanied by

fragmentation of patient care and emphasizes the therapist's interest in the disease rather than the "whole patient."[26] The trends toward group practice, partnerships and the declining number of general practitioners, especially in urban areas, also is evident.[27] An increasing number of people are now covered by some form of health insurance. This has increased the demand for medical care services which must be provided by a declining ratio of physicians to population.[28] Although these changes are important, it is felt that the trends noted above serve only to define some of the external constraints on the interaction which takes place. Of greater importance are the characteristics of the therapist-patient interaction.

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