

Older Workers
(1986 folder)

**AMERICA'S
AGING WORKFORCE**

A Travelers Symposium

" A MONOGRAPH OF
PROCEEDINGS
FROM A LEADERSHIP
SYMPOSIUM "

*Houston, Texas,
February 26-28, 1986.*

Travelers Corporation

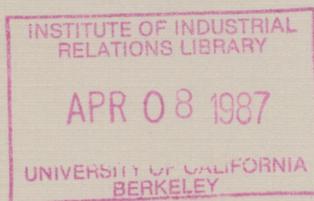


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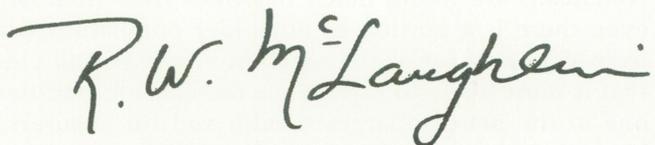
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Foreword

In February, 1986, senior executives from several dozen of America's largest corporations met in Houston to explore the implications of an aging population and workforce. Along with some of our nation's leading experts in medicine, social science, and public policy, we discussed the impact that an aging workforce will have on American business, and how management can respond to the challenges and opportunities it presents.

The Travelers National Accounts Group sponsored this meeting as part of Travelers long-standing commitment to the field of Aging. Over the last decade, we have devoted considerable attention to the issues of the economic security and health of older Americans. Our Houston Symposium focused these issues in terms of managing a changing workforce within large, complex organizations. As the papers included in this volume document, older Americans themselves represent a crucial resource for addressing the challenges of an aging society.

We hope that you will find this collection of the presentations useful in planning your own human resource strategies, and in turning the graying of our population and workforce to the advantage of your organization.



RICHARD W. McLAUGHLIN
Executive Vice President
National Accounts Group

The Travelers Symposium on Aging

Remarks by Edward H. Budd

Chairman of the Board, President and
Chief Executive Officer
The Travelers

The aging of our population is a critical concern for all of us, as business managers and as Americans.

America is aging rapidly, and it is in the self-interest of business to examine closely the changes taking place, to prepare and plan for their impact.

Travelers involvement in the issue of aging goes back a decade. Those efforts have been focused on two areas of importance to us as a corporation: the first of these concerns is employment and economic security. We have instituted a number of programs that benefit the Company, our older employees and retirees. We started a pre-retirement planning course to help our own employees make informed decisions about their own retirement and economic security. We established a retiree job bank to meet the increasing use of temporaries in the Company. The job bank has been so successful that we have had to expand the pool. It now includes not only Travelers retirees but also growing numbers of non-Travelers retirees. Both of these programs have been meaningful for the participants and economically successful for The Travelers.

Our second concern at Travelers is improving the health care of older persons in a cost-effective manner. The vast majority of older Americans are living much healthier lives than in the past. However, there is a portion of our older population which is not. The over-85 population is the segment of the overall elderly population that is most likely to experience the chronic frailties of late life. As one of the nation's largest health and life insurers, it makes good business sense for us to be vitally interested in this particular issue.

Our two most significant projects in this area have been The Travelers Geriatric Fellowships for medical students and the newly

established Travelers Center on Aging at The University of Connecticut Health Center. Our ultimate objective with both efforts is to enable older people to enjoy their lives, be independent and continue to contribute to society.

Beyond these efforts, we are taking other steps which are related even more directly to our bottom line. We are looking at a variety of financial products and services intended to protect the assets of our nation's elderly.

In many ways the aging of our society has gone on without much attention from the corporate sector. Corporate policies—in employment and personnel, in pensions and retirements and in product development and marketing—have been based largely on the realities of the first half of the twentieth century. At The Travelers we've been moving to base our corporate policies on the realities we see emerging not only for the rest of this century but into the next, as well. In doing this, we find we are dispelling a number of misconceptions about the elderly in America.

People are the greatest asset of any organization. We may find, over the next two days, that older, experienced people may be the greatest asset of all. We'll be reminded of the impressive contributions older men and women can and do make—individuals like Conrad Adenauer, Pablo Picasso and Ronald Reagan. Some of our symposium participants themselves offer similar evidence. Even more exciting, we'll learn that what now seems to be the extraordinary achievement of a few may become the normal performance of many.

The British historian, Arnold Toynbee, taught that civilizations evolved only by effectively responding to external challenges. I believe it is the same with businesses. Inside each challenge lies new opportunity for those who are careful to understand the challenge and its implications, and who look to the future as they work in the present. I believe that you, as senior human resource managers, have a particularly vital role to play in helping American business, and America, deal with the issue. This symposium will be an important step in that direction. It has been designed specifically for you and I'm happy that you chose to participate.

At The Travelers we will continue our commitment to the issue of aging, establishing an appropriate business role for ourselves that is consistent with society's interests and those of our shareholders and employees.

This symposium is a step in understanding and planning for the impact of an aging society. I think it will be one of many steps that we all take. I believe you will leave here excited about the opportunity for the elderly of America to achieve their potential in terms of their business productivity and their contribution to our society. I hope we will find many ways to work together on this vital issue in the years to come. ■

Our Aging Society: An Overview of the Challenge

by Alan Pifer

President Emeritus and Senior Consultant
The Carnegie Corporation of New York

My assignment is to present a broad overview of what I see to be some of the major implications of the aging of our American society. Over the next two or three days we will then be discussing the more specific issues of the aging workforce. By aging society, of course, we mean the aging of our population, as indicated by a growing proportion of elderly citizens, a declining proportion of children and a long-term secular rise in the median age.

Population aging, one must emphasize, is a phenomenon totally unlike that of individual aging. An individual ages from the moment of birth to the moment of death. In the absence of accident or illness, death comes naturally at the end of the appointed life span as the result of physiological decline. Population aging, however, is not inevitable or irreversible. Populations can become older or younger, depending on shifts in the proportion of people at various age levels.

Thus, during periods when relatively large numbers of children are being born but few people live to older ages, the median age will fall, and the population can be said to be getting “younger”. Conversely, in periods when relatively few children are being born but large numbers of people are reaching older ages, the median age will rise, and the population can be said to be “aging”. The main factors that determine a population’s general youth or age are changes in the fertility rate (the average number of children born to women in their childbearing years), changes in the infant mortality rate, and changes in life expectancy at older ages.

The aging of America is not a new phenomenon. It has been going on for a long time—since at least the beginning of the Nineteenth Century. At that time, we were still a very young nation, in the sense that half the population was under the age of 16 and very

few people lived beyond the age of 60—a configuration not unlike that of many Third World countries today, such as Nigeria and Mexico. Since the early Nineteenth Century, the population has aged steadily, except for a brief period after World War II, when a huge rise in the fertility rate, producing the baby boom, temporarily arrested the aging process.

Acceleration of Societal Aging

What is startling about the aging trend today is the rapid pace at which it is proceeding. Two separate but simultaneous developments account for this. The first is the speed with which the group of older and very old people is growing. Increasing numbers of the large cohorts born in the years before World War I have been reaching their 65th birthdays. Just since 1900—less than a century ago—life expectancy has been extended by 26 years, from 49 to 75, and since 1950 the ranks of Americans 65 and over have more than doubled. People in this age group now number some 28 million—more than the entire population of Canada. Within the same 35 years, the number of individuals 85 and over has more than quadrupled, to a total of 2.6 million.

The second development is the long-term decline in the proportion of children in the population. At the beginning of the Nineteenth Century, as I just said, one inhabitant out of every two in the country was a child under the age of 16. By the onset of the Twentieth Century, this group had declined to 35 percent of the population. It dropped further, to 25 percent in 1940, rose temporarily to 31 percent in 1960, and has now receded to about 22 percent. In all probability, it will decline further in the decades ahead. We will then, relatively speaking, be on our way to becoming a “childless society”.

The United States is not alone in having experienced this radical change in the structure of its population. All of the developed nations of the world are aging, and many of those in Western Europe are older than we are. What is distinctive about our situation, however, is the enormous bulge in the population caused by the postwar baby boom. Other nations had baby booms too, but ours was unique in its size and duration. In the two decades from 1945 to 1964, we added 76 million children to our numbers—one-third of today’s total population and the equivalent of our entire population in 1900—as the total fertility rate climbed to a high of 3.7 in 1957.

After 1964, however, the fertility rate began to plummet, reaching a low of 1.7 in 1976, a figure that was below the replacement rate of the population. This phenomenon of a falling fertility rate produced the relatively small “baby dearth” cohorts of the past two decades. It is the advance onward through the decades that lie ahead on this demographic twist—baby boom followed by baby bust—that is cause for so much unease. Concern will be even more warranted if

the fertility rate, as may well be the case, does not simply remain low but falls even lower, with very few annual births becoming the long-term norm. But whatever happens, it will be well past the middle of the next century before the nation regains a more balanced population structure.

Pervasive Impact of Population Aging

Meanwhile, major changes in both public and private policy will be needed to cope with the effects of the interim skewed structure, especially after about the year 2010—only 25 years from now—when the first of the baby boomers, now approximately 20 to 40 in age, start to retire. During the 20 years from 2010 to 2030, all of the survivors among the 76 million-strong baby-boom army will have passed their 65th birthday and will then range in age from 65 to 85. Together with the past eighty-fivers of that period, they will form an unprecedentedly large elderly group in the population. Meeting the needs of the many among them who will not be able to provide for themselves will be a very substantial challenge.

The only thing that could affect the pattern of societal aging seriously, and that would be only over the longer term, would be a new baby boom. This, however, seems highly unlikely, given the proportion of women of child-bearing age who appear to have become a permanent addition to the paid labor force and other factors. Immigration will, the demographers tell us, have only a limited effect, because the number of immigrants at any given level will always be small compared with the number of annual births. In addition, immigrants tend to be of all ages (although somewhat younger than the population at large) while births, of course, by definition, all take place at age zero.

Population aging, thus, is an enormous social force grinding away under the surface of American life like giant tectonic plates under the crust of the earth. It affects every age group, from the very old down through children—and it will ultimately affect every individual and every institution, including the family, the health care system, the economy, education and politics. It has already produced astounding changes in the nature of the life course and large reallocations of resources from the young to the old. To understand the real nature of the aging society, one needs, I believe, to view it as a vast, complex, interrelated system, intensifying old issues, creating new ones and necessitating major attitudinal and policy changes and institutional adaptation.

Let me turn now to a consideration of some of the major issues one can observe in the aging of our population and suggest what I see as necessary responses to them. I mentioned just now the declining proportion of children in the population caused by the much smaller cohorts born after about 1965. It won't be very long before these smaller cohorts begin to have an appreciable impact on the

labor force in the form of fewer entry-level workers. This is not necessarily a bad thing, because, as I will come to shortly, it will necessitate public and private policy changes regarding older workers.

Investing in Other Age Groups

What we must all be concerned about, however, is the *quality* of today's youngsters, and the fact is that many of them are getting off to a very poor start in life. Thirteen million, one in five, are living in poverty. Four million have no health insurance and seldom, if ever, see a doctor. Many are undernourished. Many live in sub-standard housing in dangerous, run-down neighborhoods. Many are getting such a poor education they leave school functionally illiterate and virtually unemployable. What is more, an increasing proportion are of minority background, reflecting higher fertility rates among blacks and Hispanics, and such children are much more likely than whites to suffer the disabling conditions I have just mentioned.

Are children with backgrounds such as this likely to develop into effective adults capable of earning the national living, defending the nation and, most importantly, helping to support the hordes of elderly people there will be in the future? Clearly, many of them will not have such capabilities unless we begin investing far more resources in them than we have been. The size of such an investment would not be trivial, but it is certainly within the means of a rich nation such as this one. We could, indeed, make the investment and still have enough to meet the basic needs of other age groups.

Assuming that we can afford to meet the basic needs of all age groups, the question then arises of whether we can do this while still providing benefits to the elderly, as we do now, simply on the basis of age, irrespective of need. This is the second great issue of the aging society, and one that, despite our disinclination to face it, is becoming ever more critical. It was, of course, the principle of universal eligibility that generated broad public support for Social Security and Medicare, and, between them, they have greatly reduced poverty among the elderly—a tremendous achievement. On the other hand, the costs of these programs are becoming very high, and the regressive payroll tax that supports them is a heavy burden on lower income workers, raising the social equity question of whether such people should be obliged to provide benefits for well-to-do retirees who could well take care of themselves.

Nowhere will the general issue of how resources are allocated be more acute than in the health care field, where one third of the nearly \$400 billion the nation spends on health is spent by, or in behalf of, the elderly. As the outlay for the elderly grows, as inevitably it will, we may find ourselves forced to deny certain forms of expensive treatment to the very old. Can an ethically satisfactory basis be found for doing this? Age alone? Some arbitrarily assumed

number of anticipated years of a good quality of life? The social standing of the patient? His or her ability to pay? All present troublesome moral issues.

Reciprocity between the Generations

Clearly related to these issues of resource allocation is the question of how in an aging society relationships between the several age groups can be kept on a harmonious and constructive footing. This, of course, is an issue in any society but exists to a greater degree when a population becomes so unbalanced in its structure that small numbers of young people begin to feel that they are bearing too heavy a load for the support of an extraordinary number of the old or that the old have rigged things so as to benefit themselves at the expense of opportunity for the young. It is then that the unwritten code of reciprocity between the generations that characterizes all societies—in which the prime-aged workers support the generations above and below them in exchange for the support they have had as children and anticipate as elderly—comes under strain.

The most promising approach to maintaining intergenerational harmony, I believe, will be through an extension of the working life for many Americans, thus reversing the trend of recent years, especially for males, of earlier and earlier retirement. In this manner, older workers would help to relieve the burden on the young, not only by postponing their eligibility for retirement benefits but also by continuing to earn wages and to pay their payroll taxes. Will this then create direct competition between older workers and young, entry-level workers for jobs? It might, but most labor market specialists think that in the great majority of situations it will not. The accumulated experience, loyalty to the employer and sense of responsibility of most older workers sets them apart from new employees and gives them a special value.

Still another set of issues arises from the incongruity today of traditional attitudes and policies in regard to older Americans in the light of startling changes that have taken place in the nature of the life course. A person at the age of 50 today, instead of being close to the end of life, may have nearly half his or her life still to live, and can look forward to at least a quarter of a century more of intellectual and physical vigor. In many cases, newly retired workers can anticipate half as many years again in retirement as they spent in employment. Four-generation families have become commonplace, and most children of living parents are now adults. Every tenth person past the age of 65 has a child past that age. Some people are retiring at 60 to 65 to take care of an 85-year-old parent. These and other changes shed a totally new light on the planning of the life course.

Many prevailing attitudes, however, left over from earlier times, are completely out of kilter with these new realities. In the

popular view, a person past 65 is still considered to be “over the hill”, “past it”, “ready to be put out to pasture,” and so on—in short, already suffering from bad health, diminished physical vigor, and declining mental acuity. Such a person is also assumed, simply by reaching the age of 65, to have achieved the status of veteranship in the society, and therefore is entitled to various special dispensations and privileges. Finally, it is often assumed that the older person, by the very act of retiring, has automatically become impoverished.

Abolishing the Irrelevant “Age 65” Mystique

A person past 65 *may* be over the hill and *may* be poor. Some are. But for the great majority of this group the stereotype is obsolete and inappropriate. The conferring of veteranship on them is patronizing and demeaning—and certainly unwarranted. They regard themselves—and are—little different from Americans generally, except that they have more years of experience to their credit. What is needed is a fundamental change of popular attitudes to abolish the now-irrelevant mystique of age 65. Until such a change of outlook takes place, it will be difficult to put in place new policies appropriate to the changes that have taken place in the life course.

What is worse, in a way, than the stereotyping of the over-65s is the stereotyping by employers of their older workers, those who have, say, passed the age of 50 or are even younger, a stereotyping which assumes that, simply because of their age, they have automatically declined physically and intellectually, become less productive, are incapable of retraining and should therefore be eased—or pushed—into early retirement at the earliest opportunity. Such a view, of course, in the light of dramatic changes in the life course of the past two or three decades, is both wrong and unfair. The fact is, both research and experience show that older workers now, in relation to the great majority of jobs these days, are as physically and mentally able to perform their duties as most younger workers and are fully as capable of retraining.

Indeed, in regard to intellectual functioning, a series of studies supported by the Institute on Aging in Washington shows actual *improvement* with aging under certain conditions, namely, if the work situation is challenging, if people continue to use their skills, and if the social environment provides incentives and opportunities for learning.

Another misconception on the part of many employers is that it is not cost effective to retrain older workers, since the expense of their compensation, as a result of seniority, is greater than that of young workers. This, of course, is true only if one overlooks the value of experience and if one disregards the costs of benefits provided to retirees, especially health costs. The point here is that, as long as employees remain on the job, they continue to earn their benefits and play a part through their productivity in helping meet

the overall burden of the retired. Once they, too, retire, however, they simply become part of that burden. Finally, to the degree that a company pays federal taxes, it has a strong interest in seeing that as many older workers as possible stay in the workforce, thereby restraining the growth of federal spending on the elderly.

The Third Quarter of Life from 50 to 75

A helpful start, I believe, in establishing both in the public mind and among employers a new set of attitudes toward older Americans is to propagate a simple new concept that embodies, even if only symbolically, the new life-course situation. I have, accordingly, in a book on our aging society I have recently co-edited, proposed a new stage in the life course, which I call the “third quarter of life”—the years from about 50 to about 75. This notion assumes that everyone is now going to live to the age of 100—a somewhat whimsical idea, although more and more Americans are, in fact, going to reach something approaching that age. It also assumes that, for the great majority of our now long-lived population, the third quarter of life can, and should, be a productive period.

It rests also on empirical observation that significant changes take place in the lives of many people when they reach their early fifties. Their children have grown up and are leaving home. They have—given the pyramidal structure of much employment—probably advanced about as far as they are going to go in their jobs and have reached their highest level of real earnings. They may well be bored and restless and feel the need for a career change—a “repotting”—but feel trapped in their present employment because of a lack of financial resources to make a change, or by the prospect of a pension if they can hang on for a few more years. The result is dispirited workers who gradually become embittered as younger colleagues overtake them, loss of productivity, and problems for employers who would like to ease such people out but fear age-discrimination suits.

The upper end of the third-quarter concept, age 75 or thereabouts, is determined by the readily observable fact that most people today are fully capable of making a productive contribution until they are at least that age.

A significant proportion of the population, about 20 percent, or some 50 million people, falls within the third quarter today. What is really startling, however, is that by the year 2010—less than 25 years from now—some 85 million Americans will be in the third quarter of life, and at that time they will comprise close to one third of the total population! What the nation is going to do about this large group of citizens—what opportunities it is going to offer them to have meaningful roles and how it is going to make use of their wealth of experience constitutes both a public and private policy issue of immense magnitude.

Remaining productive during the third quarter need not, of course, necessarily mean continuing in full-time paid employment over that entire span. The third-quarter concept implies a new definition of productivity—one based on accomplishment rather than on monetary compensation and one that includes full-and part-time volunteer work, as well as full-and part-time paid employment. What is important is that all of the activity be *productive*—that is, that it contribute something significant to the economy or to the quality of life.

New Choices in Private-Sector Employment

If the third-quarter concept were to become generally accepted, it would stimulate a wide range of policy responses, both in the public and the private sectors. The principal purpose of this conference is to discuss appropriate private-sector responses in the area of employment. I cannot, in these brief comments, spell out what all of these responses might be, but they would certainly include retraining, part-time employment, phased retirement, job redesign, flexible scheduling, aid in transitions to new careers and rehiring retirees to meet special employer needs.

The third-quarter concept is not a universal panacea. Like all social ideas, it has its faults. It does, nevertheless, have the virtue of being infinitely more flexible than our present rigid ideas about the dividing line between productive work and retirement, and it opens up exciting possibilities for change. Immense social and economic pressures will arise in the early decades of the next century as a result of the explosion in the numbers of energetic, healthy, well-educated and self-confident older Americans, and these pressures will require major institutional changes in both the public and private sectors of our national life. Indeed, since the oldest of the baby boomers are already 40, it is none too early for employers to begin to experiment with new policies in regard to their older workers. The purpose of such experiments would be to find out not only how such employees can be used in ways that conform to their special needs but also how their morale, self-esteem and productivity can best be maintained. It is encouraging that some of the nation's leading corporations are already conducting experiments of this kind.

In many ways, third-quarter Americans are the key to our aging society. If they are productive, if they continue to contribute to economic growth and a better quality of life for everyone in the nation, the problems associated with continued population aging will, I believe, be gradually eased over the balance of this century and early decades of the next one. If, however, we continue on our present path and fail to make maximum use of the great resource our older citizens represent, the future could be bleak.

Should we be alarmed about the impact of population aging? Alarmed is perhaps too strong a word, but we should certainly have

a deep sense of concern about the impact it is already having, and will increasingly have, on the nation. I have just returned from Japan, where I co-chaired a U.S.-Japanese conference on societal aging. The population of Japan, of course, is aging at a tremendous rate, and by the early years of the next century it will be the oldest nation in the world. What impressed me immensely was the degree to which the impact of societal aging has already become a major policy issue there and is the subject of intense thought and planning in both the public and private sectors. In particular, the Japanese are concerned about their capacity to compete economically with younger nations in Asia, as their population ages further.

Challenges and Potential of an Older America

Economists here in the United States do not seem to be particularly worried about our ability to maintain our competitive position in the world and our current high standard of living as our population ages. They may be right, but I, for one, am considerably less sanguine about the future. To cope with the impact of population aging, we will have to overcome our present propensity to pile up enormous amounts of debt, both public and private, and increase substantially the national savings rate. We will have to make the investment in children necessary to see that they become the high-quality workforce we must have in the future to support an aging population. We must find a way to control our soaring expenditures on the elderly, especially on their health care, while at the same time treating them equitably and humanely, and, most important, we must begin to use our older workers as the resource they truly are.

These are four tremendous challenges, and, since I see very little progress being made today in meeting them, I am, myself, far from complacent about what lies ahead for our aging society. That is the negative side. There is, however, a positive, hopeful aspect to the present situation, and it is to be found in the nature of the third-quarter Americans of the future, who are going to be very different people from their predecessors. They will certainly be capable of making a major contribution to the economy and to the quality of our national life—and they are going to demand that opportunity.

Finally, we must remember that the future, even though the general structure of the population is now set for some time to come, is not otherwise preordained. The early decades of the next century may turn out to be the worst in our history, characterized by a faltering economy and intergenerational strife, or they may prove to be among the best. We have it in our power to determine what the nature of that longer run future will be by the policy decisions, both public and private, we begin to make now. The question is whether as a people we have the wisdom and the will to do so. ■

Aging America: Dilemmas for Public Policy

by Alice M. Rivlin

Director of Economic Studies Program
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An aging society is often spoken of as a problem—something difficult to be dealt with. But just as aging individuals are often heard to remark that getting older isn't so bad when you consider the alternative, an aging society looks pretty attractive once one considers the alternative.

An aging society, after all, results from two important successes. First, it reflects the combined triumphs of medical science, public health, and private efforts in reducing premature death. Second, it reflects family choices to have fewer children. As many developing countries have learned to their sorrow, if falling birth rates do not accompany falling mortality, the population explodes. If the United States did not have an aging society, we would be gathering in conferences like this one to wring our hands about exploding population growth and its dire consequences for the quality of American life.

As individuals age, they often find they have to come to grips with basic conflicts and choices that they were able, conveniently, to ignore in the exuberance of youth. Similarly, societies must face problems as they age. Indeed, the theme of my remarks today is that the aging of the U.S. population is forcing us as a nation to face up to some difficult public policy choices that could conveniently be avoided as long as the proportion of the total population considered elderly was relatively small.

I'd like to talk briefly about three of these public policy choices made more difficult by the aging society: (1) How should public policy influence the retirement decision, or the length of working life, (2) What should be the public responsibility for income adequacy in retirement, (3) What should be public responsibility for

medical and other types of care for the frail or disabled older population.

These are questions that come up in all societies. Poor societies have few choices and have to let families cope as best they can. As a society's income rises, it can afford more adequate public programs to improve the life of older people. An affluent society with a relatively small number of older people and a growing workforce can indeed afford quite generous answers to these questions without much strain. As such a society ages, however, generous public provisions for older people get increasingly expensive. Strains begin to show, and the answers to the three questions need to be thought out again.

Fortunately, our society is not aging very rapidly—yet. We have time to hold conferences like this one to rethink our answers to these questions and consider the options. But we had better not delay too long.

Length of Working Life

The question of how long people should work—like most hard public problems—involves balancing conflicting objectives. Most people would agree that it is important to enable people to work productively as long as they are willing and able to do so. Most people would also agree, however, that it is important to enable people to retire without hardship when they are no longer able to work or want to take some well-earned leisure. Public policy with respect to retirement rules and benefits, especially in a public pension system, has to balance these two objectives. It is a complicated balancing act in a world in which individual capacities differ greatly, as do job requirements, while individual behavior is clearly influenced by the alternatives available.

If public policy is designed to encourage people to work as long as possible, it clearly runs the risks of imposing hardships on those too ill or frail to perform their jobs adequately. If a public pension system is designed to keep people on the job as long as possible, it may burden employers with less than fully productive older workers and close off opportunities for advancement to the young. The opposite strategy of structuring public programs to encourage relatively early retirement runs the risk of separating large numbers of people from the workforce when they could still be active and productive. It is also a costly strategy if the proportion of older people is high.

When the United States was making basic decisions about its public pension systems—Social Security, federal civilian and military retirement, and most state and local pension systems—it chose to encourage relatively early retirement and to minimize the risk that people would be under strong economic pressure to keep on working at older ages.

If the United States wanted to encourage early retirement it has been dramatically successful. The labor force participation of older men, even men in their fifties, has dropped precipitously since the 1930s. If this drop had not been offset by women coming into the labor force in increasing numbers, we would have a substantially smaller workforce than we do now.

As long as the workforce was growing rapidly at younger ages and the older population was relatively small, the United States could easily afford this luxury of early retirement. The loss of product was not enormous, and lots of young people were eager to move into the jobs held by retirees. The fact that output per man hour was increasing rapidly in the period following World War II made the luxury of early retirement even easier to afford. As the U.S. population ages, however, policies toward the length of working life need to be rethought. Can we still afford to lose from the workforce so many people in their fifties, sixties, or even seventies?

That this rethinking has already begun was obvious in the recent debate over Social Security reform. As part of the package of Social Security changes enacted in 1983, the normal retirement age is scheduled to rise in the future from 65 to 67. The issue also arose when President Reagan proposed reducing benefits for those who take early retirement between 62 and 65. The President's proposal, which involved immediate cuts in benefits for those already at retirement age, was rejected by Congress, but a more gradual approach to reducing the incentives for early retirement might well pass. The issue is likely to be debated in one form or another for some years.

As the population ages, it seems likely that the idea of a single, "normal retirement age" for everyone will become more and more untenable. Retirement systems will have to be designed to take account of the fact that some jobs are unsuitable for older people—heavy construction and professional sports—while others provide opportunities for continued employment well beyond age 65. The solution may require both substantial increases in training for second and third careers and a flexible retirement system that provides options for retirement at ages that might vary from 55 to 85. It is a very challenging problem in public policy program design.

Assuring Income Adequacy in Retirement

Deciding on the role of the public sector in assuring an adequate income for older people also involves balancing conflicting objectives. Most people believe that there is a public responsibility to make sure that older people have at least a minimum income so they are not destitute in old age even if they have been improvident or unlucky. On the other hand, most Americans believe that people should take the primary responsibility for providing for their own retirement. Generous public retirement programs run the risks of reducing the incentives of individuals for providing for themselves.

In the 1930s, when the United States set up the Social Security system, two choices were clearly open. One option was to set up a means-tested program to insure a minimum income for the elderly poor—in modern parlance, a “safety net.” The other option was a social insurance program in which workers would pay a percentage of their wages during their working life and receive benefits in retirement strictly related to their contributions. The latter approach had great appeal because it gave people the feeling they were paying for themselves and avoided the humiliation of means tests. However, if benefits were made strictly proportional to wages the poverty of low-wage earners would be perpetuated in inadequate retirement benefits.

In the 1930s, the United States chose not to choose. In essence, it opted for the best of both options: a social insurance system with a large redistributive element. Social Security preserved the form of an insurance system into which people paid during their working life and received benefits related to those payments. But the system was set up so that those at the low end of the wage scale would get considerably larger benefits in relation to their payments than would those at the high end.

It was a really neat system because it facilitated aiding the elderly poor without revealing that part of their Social Security benefits was really public charity. The system worked well as long as the labor force was growing rapidly and supporting a relatively small number of older people. Under these circumstances it was possible for all retirees to get more than they paid in—by a long shot—and no one minded that the ratio of benefits to prior contributions was even higher for low-wage workers than for high-wage ones. Almost all retirees were, in effect, getting a generous transfer from the working-age population that almost all regarded as their just due.

This ingenious solution was enormously successful in raising the economic status of the elderly. A generation ago, elderly people were far more likely to be poor than the rest of the population. Now poverty is no more prevalent among the elderly than among other age groups.

In our aging society, however, strains are beginning to appear and will intensify in the future. If the social security system is to preserve its strong redistributive element, it will become less and less advantageous to the middle-and upper-income workers. As the retirement bulge hits the system after about 2010, the strains will intensify.

What can be done? One option is to keep the current system, but raise payroll taxes. The shock of sudden increases could be reduced by raising taxes before it is really necessary and building up a substantial surplus in the Social Security system. This makes sense if the surplus is used to add to national saving and hereby increase the potential for productive investment. It makes little sense to run a

large surplus in the Social Security system that is simply used, not to add to national saving, but to finance the rest of the government. But either way, the fact remains that a redistributive system will not be a good deal for high-wage groups. They are going to realize this and want to opt out. The second opinion is to reduce the redistribution in the Social Security system and make the benefits more nearly proportional to prior contributions. This would reduce the pressure on upper-income people to get out of the system, but would make it necessary to assist the poor with increased means-tested payments.

As usual, a compromise seems most attractive. We could keep Social Security in roughly its present form as a basic redistributive benefit, but reduce its importance gradually by letting the replacement rates (the ratio of benefits to past earnings) fall gradually in the future. People would then begin to realize they could not count on Social Security to provide so much of their desired future income and would have to make private provisions for retirement in addition.

Dilemmas of Care for the Aged

Older people need more medical care than the rest of the population. Moreover, frail or disabled elderly people need help with the daily tasks of living. Many, especially among the very aged, need long-term care either at home or in a nursing home.

At present, the most rapidly growing age groups in our population are those at the high end of the age scale—over 85 or 90, or even over 95. This means that the population needing long-term care is already growing and will grow much more rapidly as the population bulge hits the upper ages. By 2020, current projections show that four times as many people will need long-term care as do now.

Financing medical and long-term care for the elderly also involves balancing competing social objectives. Everyone would like to be sure that older people have adequate care, but no one wants to channel excessive resources into this effort. Unfortunately, the use of care is clearly related to its price and availability. Over-use can be extremely expensive. Under the impact of advancing medical technology, the cost of a day in the hospital has risen to undreamed-of heights, and both doctors and patients have strong incentives to over-use hospital care if the patient is paying only a small part of the bill. Similarly, although no one wants to put an elderly relative in a nursing home, if good quality nursing home care were available at low cost to everyone, its use would rise.

The United States has never looked at the problem of providing medical and long-term care to the elderly as a whole problem and designed a solution to it. The major legislation that created Medicare and Medicaid in 1965 simply glued three rather disparate approaches together. Medicare Part A created social insurance cover-

ing acute care hospital benefits for the elderly, but only certain short-term stays in nursing homes. Part B provided a voluntary insurance program for doctor visits financed by premiums of which the government would pay about half. Gradually, over the years, the government's share drifted up. Long-term care was covered rather accidentally for the low-income population under Medicaid, but not for the non-poor population. The growth of spending for nursing care under Medicaid was unexpected. Approximately half of nursing home spending is now financed by Medicaid although half the nursing home population is certainly not poor when they enter the nursing home. They become eligible for Medicaid after their assets have been depleted.

This patched-together system was never as neat as Social Security but it has been enormously successful in providing more and better care to older people over the last two decades. It has also proved expensive and generated both efforts to restrict payments to providers and attempts to limit total spending. As the society ages, these strains will force a rethinking of the whole system.

The solutions are not yet obvious. One possibility is to revamp Medicare so that it provides less generous benefits for short-term acute care and more generous benefits for long-term care. The role of private insurance also needs to be reevaluated. Hardly any private policies cover long-term care either in a nursing home or at home. Although it is not obvious to the layman that such care is less insurable than hospital care, the insurance industry is just beginning to take a serious look at the market for long-term care insurance.

In short, the aging of society will make all these choices harder. Is there a way of making them easier? Indeed there is: higher economic growth in the economy. This means more saving and investment and more innovation designed to create productivity. But even with an intensive effort to increase the growth rate of the economy as a whole, redesigning the public and private programs that embody society's policy toward the well-being of older people will be a difficult task. ■

Aging America: Private-Sector Impact

by Dallas L. Salisbury

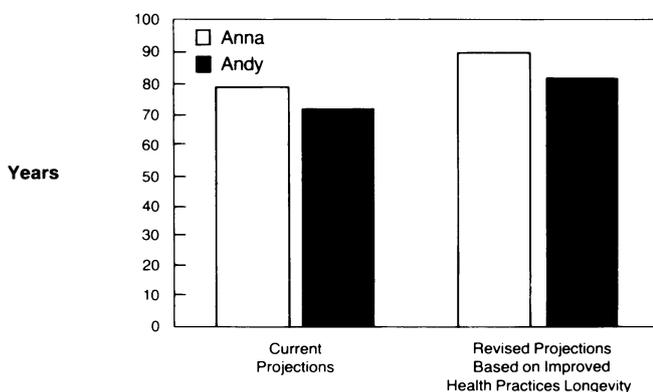
President, The Employee Benefit Research Institute
in Washington, D.C.

Like it or not, our nation is aging.

We have been saved from early problems by the women of America and by immigrants who have flooded the labor market in recent years to meet labor demands. As they have done so, older Americans have been able to continue to retire at earlier and earlier ages. The question that inevitably arises is whether these patterns can continue.

American Demographics carried an article in November 1985 titled "An Exercise in Life Expectancy." It discusses the prospects for two twins born in 1984. Anna was born with a life expectancy of 78; Andy of 71. Were progress against mortality to advance at the same rate as in the seventies, Anna will live to 90, 12 years longer than current projections; Andy would live to 81, a ten-year gain in the "official estimate." (Figure 1)

Figure 1: Progress Against Mortality-Increased Life Expectancy of Twins Born in 1984



The private sector might find it increasingly desirable to keep workers working longer, at least on a part-time basis. To make this happen, the data suggests that employers will have to make changes in their policies that will have the effect of changing worker attitudes so that they do not retire early and actually want to work beyond age 65. To do this, strategies will have to change for all "older workers."

The government views the workforce in different ways for different purposes. The Age Discrimination in Employment Act applies to all those over the age of 40. The Bureau of Labor Statistics uses age 45 for purposes of data collection. Policymakers focus more on those 55 and over, since this is the age group that begins to leave the workforce, and once out of the workforce has the greatest difficulty finding new work.

The Bureau of Labor Statistics projections of the 1995 labor force indicate that we have time to plan. (Table 1)

Table 1: 1995 Labor-Force Proportions

	1984	1995
Before 45	28.1%	29.7%
45-54	15%	19.5%
55-64	10.5%	8.4%

Retirement has been encouraged, and the older workers have responded. (Table 2)

Table 2: Retirement Age

Before 55	20%
Before 60	34%
Before 63	55%
Before 65	64%
By 65	86%
Before 70	97%
Mean	61.5 Years

Employers in both the public and private sectors have chosen to implement policies that encourage people to retire rather than to remain in the workforce. As Social Security and pension plans have matured, this becomes all the more true. Extensive research (Schiller, Weiss, Snyder, Burkhauser, Turner, Schulz and Lampman) documents

the direct relationship between the availability of pension income and the retirement decision.

A recent study by Mutschler looked at the impact of early retirement incentive programs. Such programs were offered by over 20 percent of large firms in recent years.

Employer attitudes come through in both surveys and through behavior: They prefer to induce turnover among older workers if they must adjust their workforce. Harris and others have found that employers believe that older workers are less flexible than younger workers and that they are harder to retrain. The same surveys indicate that older workers don't view themselves in this way.

Labor-force participation rates for all those over 50 are declining. A steady decline in labor force participation has been the rule for at least the past 45 years for those of older ages, particularly those over age 65. (Table 3)

Table 3: 1995 Labor-Force Participation

	1984	1995
Men 55 and Over	41.8%	33.1%
Women 55 and Over	22.2%	19.1%
Men 65 and Over	16.3%	11.0%
Women 65 and Over	7.5%	5.5%

At the Employee Benefits Research Institute, we have tabulated the March 1985 Current Population Survey data for age groups from 50 up, in different combinations for both sexes. These tabulations show the same trends, but with finer age detail. *Total March 1985 participation for the 50+ group was 41.5 percent.*

Part-time work increases as workers age. Full-time and part-time ratios for those under age 65 have remained nearly constant over the past 25 years (men, full time, 92 to 94 percent/part time, 6 to 8 percent and women, full time, 74 to 78 percent/part time, 22 to 26 percent) while for those 65 plus, part-time work increased dramatically.

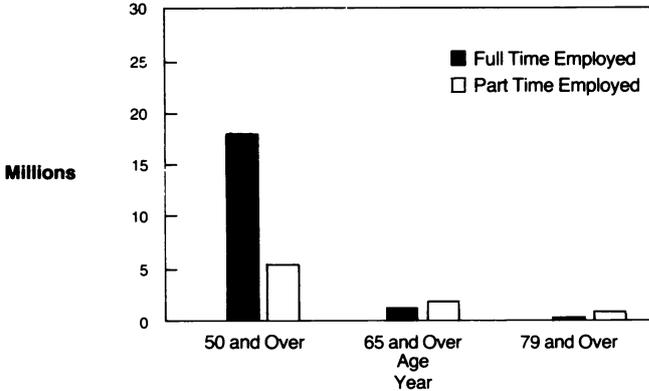
According to the March 1985 Current Population Survey, the shift has continued with more individuals age 65-69 and 70 plus working part-time rather than full-time. (Figure 2)

These data also highlight the need to look at age-segmented data rather than averages for large groups. While the participation rate for all those 65 plus was 13.95 percent, it is 22.58 percent for those 65-69 and 9.09 percent for those 70 plus.

Workers express a desire to work after retirement more often than they actually do.

Retirees don't report much job hunting.

Figure 2: Employment Status By Age



Yet, the 1974 Harris survey also found that only 10 percent of retirees 55-64 said they had looked for a job and could not find one (6 percent of those 65 and over). (Figure 3)

EBRI tabulations of the March 1985 Current Population Survey looking at job-seeking behavior confirms these low numbers. To get these persons back into the labor force will take significant employer effort. The jobs will have to find them; they will not find the jobs.

Private-Sector Costs of a Growing Retiree Population

The retiree population is growing fast, especially those 85 and older. (Table 4) The obvious mirror image of decreasing labor force participation by older persons is growth of the retiree population. And, as this occurs at lower and lower ages, it means a retiree population of individuals who will be retired for increasingly longer periods of time.

Figure 3: Proportion of the Population 65 and Over and 85 and over by Sex. 1960-2050

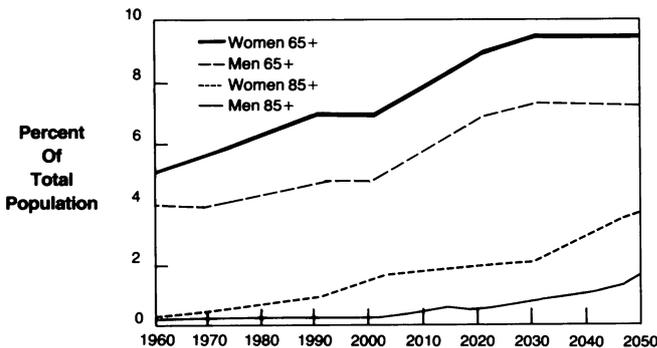


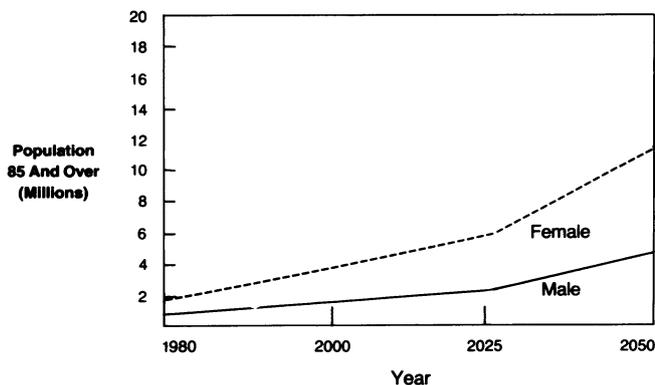
Table 4: Growth of the Very Old as a Percentage of the Elderly Population

Year	85+ as Percent of All Elderly	85+ as Percent of Total Population	Number of 85+ in Population
1900	4	0.2	123,000
1950	5	0.4	577,000
1980	10	1.0	2,200,000
2000	15	1.9	5,136,000
2025	13	2.5	7,700,000
2050	24	5.2	16,063,000

The retiree population is growing in both absolute numbers and as a percent of the total population. Those 65 and older will increase from just over 11 percent today to 13 percent as the “baby boom” begins to retire and 19 percent by the middle of the next century. The old-old, those 85 and over, will grow from 1 percent today to over 5 percent at mid-century. And, more significantly, those 85 and over will account for 24 percent of the 65 -and- over group as compared to 10 percent today.

The absolute numbers grab attention even more quickly when translated into the possible need for care: the 65-and-over population will grow from just over 26 million to more than 65 million with the 85-and-over component growing from just over 2 million to over 16 million. The first boomers will turn 85 in the year 2031; the last will reach 85 in 2045 as the numbers approach their peak.

Figure 4: Projected Demographic Trends for the Elderly. 1980-2050



The impact of these aging patterns will have varying effects on pension programs.

The impact on pension programs will be limited for those that have been conservatively funded and grave for those at the extreme of pay-as-you-go. Definitionally, this means that defined contribution plans will not be affected by the growing retiree population in terms of funding. These plans are funded at a fixed percentage of compensation, and the contribution is the promise of the employer. While inflation and longer life could have severe implications for the individual—not enough income—it does not have to affect the plan sponsor.

Defined benefit pension plans are a different story, since poor investment performance, high inflation, and length of retired life are generally the “risks” of the sponsor who has promised a benefit, regardless of the contributions required.

To the degree that a plan is well funded, and dynamically funded, the changes ahead will not cause major difficulties. There will, however, be exceptions.

The growing retiree population need not have an adverse impact on pension programs if they are advance-funded on a conservative basis. If, on the other hand, they are pay-as-you-go, they could face large escalation in the percent of compensation required to support them over time.

Health benefits will become a major financial burden as the retiree population grows, even if the law is changed.

The headline on the October 1985 EBRI Issue Brief on this subject noted:

“Estimates of the unfunded liability associated with employer-sponsored retiree health benefits suggest that unfunded liabilities of individual plans could be from 4 to 50 times the amount employers now pay annually for health insurance benefits.”

The provision of health benefits to retirees is an issue that will demand attention. As the retiree population grows, those that have not begun to review utilization of care will do so. Employers could also pay an increasing price for meeting the expense of long-term care.

An estimated 6.6 million Americans age 65 and older need long-term care. As the baby-boom generation ages and individuals live longer, the desire and need for long-term care will become even greater. It is projected that the number of elderly in need of long-term care will increase to 9.3 million by the year 2000, to 12.9 million by 2020, and almost 19 million by 2040.

Employers pay little of the bill directly. However, employers pay a good deal of the Medicaid cost indirectly, and they will receive the pressure to increase pensions or pay higher taxes to meet increased dollar needs in the future.

Employers will be urged to participate directly through the

provision of long-term care insurance and dedicated savings programs. Employers will see the pressure grow as the retiree population (1) ages and (2) grows. Employers who begin to deal with this issue early will be the biggest winners in terms of limiting future liabilities. But few have yet begun to focus.

Private-employer costs of a growing retiree population will run into the trillions of dollars.

Private employers today make annual contributions to pension plans of over \$100 billion. The current pay-as-you-go cost of retiree health insurance exceeds \$12 billion, and the unfunded liabilities are estimated to be between \$125 billion dollars and \$2 trillion.

Private employers can best handle that which is budgetable and can be amortized over a long period of time; that which can be effectively advance-funded. The more private employers do through private advance-funded programs, the less they will have to pay for through general taxes. The more private employers can get governments to advance-fund, the lower future tax burdens will have to be.

In sum, a growing retiree population will have a significant effect on the costs and profitability of private employers.

The Costs of Employing Older Workers

While income increases with age, income growth slows after age 35. Pension expense may be greater for older workers, but isn't always. Workforce age and its relationship to the cost of pension programs depends upon the type of program offered. The design flexibility available to an employer allows a plan to be designed to be age-cost neutral if that is desired. Due to other objectives of pension plans, however, this has never been an overriding factor. A final pay plan designed to provide a benefit that takes career inflation into account will be more expensive.

Were an employer to retain workers after age 65 the pension cost would vary depending on the accrual practices of the plan. If no post-65 accruals are granted, the employer/plan combination saves money; if accruals are provided but without a full actuarial adjustment, there is still money saved; only if accruals are provided with full actuarial adjustment is there a net cost.

Because employers are moving in the direction of relying more on defined contribution plans to provide a portion of retiree income, and are changing defined benefit programs to base more of the benefit on early years of earnings, the relative pension cost of employing older workers is dropping.

Health protection is more expensive for older workers, but the employer that also provides retiree health coverage may find cost savings in providing protection to the older worker instead of that individual as a retiree.

A new and interesting factor has now entered the decision environment: court cases that won't let employers reduce or adjust the

health benefits provided to retirees. This means that high cost plans may be locked in indefinitely, while plans for active workers continue to be adjusted to achieve cost containment. Employers may come to find it advantageous to keep people working under the active plan.

Were employers to stop providing retiree health insurance to future retirees they might find workers working longer in any case. The value placed on most employer retiree health plans runs from \$3,600 to \$6,300 per year per retiree. For many retirees this can be equivalent to the pension they receive from the employer, and where plans were integrated it could actually exceed it. Changes in the retiree health area could change the balance in retirement decision-making for both employers and employees in the future.

One means of slowing the rate of growth of the retiree population is to keep people working longer. As life expectancy increases many argue that it would be logical to keep people working longer so that the portion of an individual's life span spent in the labor force is maintained at the constant level. The dilemma as stated in the report on "Tomorrow's Elderly" published by the House Select Committee on Aging:

Studies argue for later retirement while acknowledging that most people want to retire as soon as they can afford to.

Studies find major impediments to keeping people working.

The consensus of the extant literature appears to be that we should expect that for the next 20 years the decline in labor force participation will continue to occur unless something major is done. Something major, for example, like significantly reducing retirement income promises in order to extend the point where financial independence is possible. No one of significance is advocating such a controversial course.

Studies don't quantify costs from the employer perspective.

None of the studies that I could locate (over 250 articles and books were reviewed) focused on the economics or cost/benefit from the perspective of the employer. The absence of studies which quantify employer cost/benefit make it difficult to deal with the question of "costs" to corporations of allowing and/or encouraging experienced and skilled workers to leave employment. Further, any quantification would depend on circumstances: does the employer have to reduce the size of the workforce anyway; does the employer have to find promotion opportunities for younger workers in order to keep them; how long would the older worker continue to work anyway; and could the primary expertise of the older worker be tapped on a part-time or consultation basis?

Where the workforce has to be reduced, cutting through retirement may be the least expensive long-term alternative.

Retirements can cause problems, and thus cost, when a company is still growing and must replace through a new hire.

Employee retention has always been a goal of employers to assure the recovery of recruitment and training costs and to retain the human capital value developed over time. Defined benefit pensions, for example, have traditionally been designed to create the famous “golden handcuffs” that are both loved and hated at the same time.

In spite of this tradition, employers also develop policies that encourage workers to retire after a career. When the population was generally young, and growing younger, as it did for the past 30 years, this policy probably made sense. As those trends now reverse with the aging of the baby boom, employers may have to fundamentally rethink their human resource strategies.

Turnover decreases significantly as workers age.

Retraining can and is done for older workers, but they generally don't seek it.

Work by both the National Commission on Employment Policy and the American Society for Training and Development document the fact that extensive training is provided to all age groups except those 65 and older. For those age 45 to 54 and 55 to 64, training is less intense than it is for those 25 to 44. The fall-off in older worker training may be due, at least in part, to older worker attitudes.

Older worker interest in being retrained to take on a different job could be viewed as crucial in the context of a discussion of hiring and retention preferences by employers. Harris found tremendous age variations in employee preferences in his 1981 survey (Table 5).

Table 5: Employee Attitudes About Retraining*

	18-54	55-64	65-Over
Very Interested	32%	15%	7%
Somewhat Interested	26%	23%	9%
Not at All	35%	55%	77%
Other	5%	7%	5%

*Harris Survey

Long-term human resource planning and career management programs are essential for an employer to take the retraining route.

The National Commission on Employment Policy sets forth seven reasons that employers should want older workers.

As published in “A Practitioner’s Guide for Training Older Workers,” they include: (1) attracting older consumers to their products and services; (2) stabilizing the younger workforce with older role models; (3) maintaining a desired image of the firm; (4) gaining

experience with a generally older workforce in anticipation of demographic changes; (5) responding to government policies; (6) ensuring productivity and controlling costs; and (7) influence of older workers' managers on personnel policy.

Conclusion: The Aging Workforce, Productivity and Profits

The average age of the workforce is still well below what it was in 1960 and will remain so for many years to come. The work ethic and employee desires are quite different, and this shift can be expected to continue.

The American worker over 40 looks forward to retirement from required employment at earlier and earlier ages. And, the desire to work after retirement is generally limited to a desire for flexible and part-time work.

Employers face a dilemma as a result of these movements: they may need to keep more older workers in the workforce in the future than the incentives now in place will allow them to retain. Employers will face a period between at least 1995 and 2010 when it is too late to reverse pension and retirement income policies, making the "continue to work" sale more difficult and potentially very expensive if older workers must be induced with cash payments to continue working. Today's continuing retrenchments make this seem far away, but the demographics are already in place.

The extent of the challenge will depend on what directions the workforce takes and on the time period we focus on. As noted above, the current older population is opting to get out early. The current generations over 40 had empty nests and the accompanying economic freedom by their early forties, allowing them to think about early independence from work.

My generation, the "baby boom," is filling the nest later; finding the basics less affordable; facing the prospect of college tuition beginning at the age of 58 to 65; and, facing a reduction not only in the Social Security they can expect to receive but also in the amount that can be set aside in tax-favored employer sponsored retirement plans. In sum, even though the population is expected to age for the next 50 years, human resource challenges are likely to change several times during that period.

How much things change over time will depend upon a number of worker issues: (1) job patterns generally—full career vs. job hopper; (2) unemployment rates and the flow of newly trained/re-trained workers; (3) funded vs. unfunded programs, the mix of public/private programs, and the type of private programs; and (4) worker attitudes—economics versus the desire for greater motivation and increasing challenge.

Employers may find that the transitions ahead will combine to require longer worklife. Government policies, changing family ages,

and changing economic capacities will make it more profitable rather than less profitable to retain older workers. Productivity can be maintained and enhanced with training and effective human resource management strategies.

No longer will the ranks be able to be filled with the young and impressionable. Dealing with older workers is the new reality. As the job structure of the society is changing dramatically from manufacturing to service, the jobs will match more easily with the older worker. As the society changes to one of continuous career redefinition and retraining, with multiple employments, older workers will be more used to change.

Yet, neither the public nor the private sector looks at economic security and employment issues on a holistic basis. Changes in retirement policy and programs are considered in terms of their implications for employment today, but not for their mix with demographics twenty years hence. The private sector needs to make that change in orientation. Such a change will require alterations in benefit and compensation practices; modifications of work arrangements; more access to education and retraining; and a new educational effort aimed at workers who may want to emulate their parents and retire at 55, only to find out that the society can't let them go. The sooner we begin to deal with those issues, the better off we will be. The challenge is ours. ■

Dynamics of Population Aging: A Changing, Changeable Profile

by George L. Maddox, Ph.D.

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Ben Wattenberg (1984) is right. Informed Americans are drowning in a sea of numbers which often appear to threaten without informing. This is particularly the case regarding aging in America. Demographers and their allies, the epidemiologists and economists, flood us with numbers. In aging, we suggest following Wattenberg, we can benefit from identifying some SUPERFACTS about population aging in the United States, key facts which focus on turning data into information with personal and societal meaning and significance.

My three candidates for demographic SUPERFACTS about population aging are:

- I. Long life is now a virtual certainty in developed countries and very long life is increasingly probable.
- II. While death is demonstrably being delayed, we are less certain that disabling morbidity is being at least comparably delayed.
- III. Variation/heterogeneity in the characteristics and functional performance of older adults is the key SUPERFACT about aging populations.

While this information about aging is not unalloyed good news, the most notable characteristic of gerontology (the study of aging) in the past decade is the field's increasing evidence that the good news about aging is that some of the bad news is substantially wrong. Guarded optimism about the future of an aging society and its capacity to adapt constructively to its challenges is grounded in gerontological research and demonstrations which suggest the power of a

venerable maxim of experimental science: "If you want to understand something, try to change it."

Demographers and other behavioral, social, and biomedical sciences have been accumulating evidence that the characteristics and functional performance of aging populations are not only changing, they are changeable. Demonstration of the modifiability of aging processes and of the experience of aging is not the promise of a utopia of long, high quality life without disability. We do not know the limits of modifiability of aging processes. But we are beginning to test the limits.

As we observe the testing of the limits of our capacity to modify aging processes, human resource managers will want to watch three SUPERINDICATORS of the dynamics of population aging:

- I. Watch the key outcome indicator of population dynamics: The relationship among morbidity, disability, and mortality.
- II. Watch for evidence of successful interventions which are designed to move ("compress") morbidity and disability toward the mortality curve, to demonstrate the beneficial modifiability of aging processes.
- III. Watch for evidence of *personal values* of adults reinforcing healthful lifestyles and behavior; evidence of *organization values* stressing human resource development over the life course; and evidence of *sociopolitical values* encouraging public policies to ensure equitable distribution of resources over the life course.

These superindicators will provide some clues about how well we are doing in adapting to the challenges of population aging and in ensuring the future of our own experience of growing older.

Demography of Aging Superfacts

SUPERFACT I: *Long life a certainty, very long life is probable*— The genetic potential for long life is now being activated world-wide. (For a general review of the demography of aging worldwide, see Myers, 1985; see also *Aging America: Trends and Projections*, 1985-86 Edition). We do not know the maximum life span of human beings (that is, how long any human being might live). Biologists argue about whether this maximum life span is 110 or 120 years. But they are certain that average life expectancy at birth, which is now at or above 70 years in all technologically developed societies, is well below the maximum which is possible. In the United States, for example, the chances are three out of four that a person born in recent years will survive to age 65; one out of two for survival to age 75; and one out of five for survival to age 85.

In the world league tables recording the comparative performance of societies in ensuring long life, the United States tends to fall just outside the top ten for females (77.5 years, 1980) and just

inside the top 20 for males (69.9 years, 1980). The consistent league leaders are the Nordic Countries; but at the top is a new leader, Japan (average life expectancy at birth in 1982 was 80.2 for females, 74.5 years for males).

In aging populations, very long life is increasingly common. Just a few years ago, demographers paid little attention to persons 85 years of age and older. No longer. In all societies, demographers have documented a shocking fact: The fastest growing age category is "85 and older". In 1980 when 11.3 percent of the U.S. population was 65 and older, 9 percent of these 26 million adults were 85 and older. By the year 2000 the proportion of very old persons is estimated to grow to 14.5 percent and in the year 2050 to 23.9 percent. Demographers and epidemiologists pay attention to very old adults because, at advanced ages, the risk of significant dependency on others for survival approximates 50/50. The personal and societal cost of dependency are notable.

Also worth noting as average life expectancy increases is an age-specific estimate of expected years remaining for those who achieve age 65. In 1980, e.g., a male at age 65 in the U.S. would expect to live on average another 14 years, a female, another 18.4 years. In an era in which early retirement is the mode, males and females in our society can expect more years in retirement than years prior to entering the workforce. The consequence of this datum has not been lost on the managers of social security.

SUPERFACT II: *The dynamics of morbidity/disability curves*—Demographers and epidemiologists routinely note rates of morbidity, disability, and mortality. The dynamics of the relationship among these indicators over the life course has not, however, been well documented with adequate longitudinal evidence. Stanford physician James Fries popularized the problem and polarized demographers and epidemiologists with what is referred to as the Fries hypothesis about the compression of morbidity (Fries & Crapo, 1981). Very simply put, Fries argued two propositions: 1) that effective lifespan of humans is 85 years, at which age natural death, independent of disease, is likely to occur; and 2) that as the mortality curve reaches its maximum ("rectangularizes"), the onset of disabling morbidity can be delayed by appropriate interventions with the result that the quality of life of the average old age survivor can be increased. Fries first proposition is demonstrably contrary to a growing body of evidence. His second proposition is not demonstrably wrong but, on the other hand, has not been conclusively demonstrated.

A majority of adults remain independent in their capacity for self-care and self-management until they reach their 80's. Rates of functional dependence, which are about 3 percent at age 65, increase by a factor of 4 for those aged 75-84 and by more than a factor of 12 for those 85 and older. Morbidity and related disability observed

among adults 65 and older generate a demand for services which for the average older adult is two and one-half to three times greater than for adults generally. In the last year of life, an older adult on average will generate health care bills in the range of 8 to 10 times higher than such bills for older adults generally.

Optimists want to believe that Fries' second proposition is correct. But we have not been gathering appropriate evidence to resolve the issue confidently. Relevant evidence is just being gathered in Canada and Japan and the U.S. is moving toward gathering relevant evidence (see, e.g., Manton and Soldo, 1985).

SUPERFACT III: *Variation/Heterogeneity is the key fact of population aging*—The subtitle of this presentation emphasizes change in and changeability of the dynamics of population aging. Observed variations in older populations—heterogeneity among older populations over time, among populations in different societies, and among sub-groups within a society—are evidence of variations which warn against references to *the elderly* or to *universal, unmodifiable processes of aging*.

Comparative Evidence: Societies are natural experiments in the effects of differential allocation of resources on survival and well-being among older adults. The fact that average life expectancy at birth in less developed countries in 1980 was 55 years in contrast to 71.9 years in more developed countries has little to do with genetics and a great deal to do with nutrition, sanitation, and the availability of health care. The same may be said for explaining how an average life expectancy of 46 years in the United States in 1900 was transformed into over 70 years in 1980.

Socioeconomic status—Heterogeneity of older adults within a society is also notable. For demographers and epidemiologists, one of the most powerful predictor variables is socioeconomic status (that is, the outcome of a society's differential allocation of resources as indexed by income, education, and social integration). In a particularly good study of the effects of socioeconomic status within Canadian society in the late 1970s, adults with the highest income levels were found to have a life expectancy estimated to be five years longer than those at the lowest income level. And persons living in "middle class districts", according to the researchers, had a life expectancy nine years longer than those in "poor neighborhoods" (Wilkins and Adams, 1983, Ch.5).

Similarly, in my own recent research (Clark, Maddox et al, 1984, Ch. 8) on the Social Security Administration's Longitudinal Retirement History Study, over the period of a decade for adults initially aged 58 to 63, the probability of functional impairment is significantly a function of low income and few years of completed education. Intuitively, it is not too difficult to understand how money and education

translate into lifestyles and behavior which are healthful. But explanations aside, the evidence is clear: Income and education predict healthful behavior, a higher quality of life in the later years and a longer life expectancy (Maddox, 1985).

While there is a popular tendency to associate old age with poverty, the economic heterogeneity of older adults has been discovered belatedly. Recent new accounts have noted that the risk of poverty is greater among children than among older adults. And a recent study of the Census Bureau finds that 27 percent of households headed by Americans 65 and older perceive they have a very comfortable income, an excess of resources over need. On a per capita basis, the study concluded, *extra* annual income above perceived need was higher among older adults than any other age category. Note these findings but resist the temptation to over-interpret them.

Cohort differences—For demographers, the term cohort designates persons born about the same time. *Cohort* was initially a demographic convenience to differentiate populations into five year age categories (e.g., those from birth to 5; persons 65-69 and so on). In recent years *cohort* has taken on new significance as a way to capture the dynamics of a population as it ages. A population can be viewed as a collection of age cohorts in the process of succeeding one another. Imagine, if you will, the fact that each year those who are currently age 65 are succeeded by those born one year after them. This leads us to note that successive cohorts which arrive at age 65 may well have had different experiences—a war, a depression, greater opportunity for education, good job, improved health care, or whatever.

Recent cohorts arriving at age 65 have been notably and progressively different. Progressively the youngest currently older adults are, e.g., better educated, are more secure financially, and are in better health. Awareness of this fact constitutes a compelling reason for not referring to *the elderly*. The elderly constitute six or seven five-year age cohorts which are differentiated by social experience as well as by the passage of biological time and its associated changes.

Hence, one is well advised to differentiate among the young old, the old, or the “old old.” One is also well advised not to forget that educated, high income elderly are not to be simply equated with their less educated, poorer counterparts. Planners must never forget that the oldest old at any point in time are not necessarily an accurate forecast of the fate of the young old. The young old are not necessarily a reminder of what the oldest old were like when they were younger.

Further, Richard Easterlin (1980) has generated real excitement with his stimulating book on those post-World War II cohorts who have been intriguing us for several decades and who are the cohorts who will reach Golden Pond about the year 2020 in record numbers.

The size of a birth cohort, Easterlin argues, interacts with limited societal resources to produce distinctive cohort experience in aging over the life course. While the large cohorts of the Baby Boomers have had their problems of growing up, they nonetheless will approach old age with considerable resources for adapting to the challenges of later life.

These are the SUPERFACTS. These are the facts which direct us to the SUPERINDICATORS which warrant our careful attention currently as we anticipate the future challenges of an aging society.

Superindicators of Population Aging Dynamics

Human resource managers can be certain that the aging process and the experience of aging are changeable and changing. The dynamics of population aging will affect the availability and quality of mature workers, the probability of dependence, and the personal and societal cost associated with rates of dependence in the later years. Where should one focus to get the best reading of the current and emerging situation, the important information embedded in a multitude of data? Three foci are recommended.

SUPERINDICATOR I: *Dynamics of Morbidity/Disability/Mortality*—The personal and societal stakes are very high as the population aging dynamic relating morbidity/disability/mortality is played out. The mortality curve is demonstrably moving toward rectangularization (i.e., promising longer life expectancy). If the morbidity curve moves in parallel fashion and disability and institutionalization rates remain the same, we anticipate 2.4 million older adults institutionalized by the year 2000 and possibly 5 million by the year 2040. At these two dates, approximately twice the number institutionalized would be dependently disabled in the community (Manton & Soldo, 1985). The possibility that the morbidity, disability and mortality curves might become farther apart is too staggering to contemplate.

The possibility of “compression” of the curves (i.e., becoming closer together in the sense of Fries) as a result of the delayed onset or reduced virulence of chronic disabling disease processes is what must be strived for. The need to hope that compression can occur through interventions to promote health and well being must not seduce us into believing compression will occur automatically or easily. But watch this indicator. The stakes are very high.

SUPERINDICATOR II: *Successful interventions*—If the delay of onset or reduction of disabling morbidity is a critical characteristic of a favorable dynamic in an aging population, is there any reason to be hopeful? The answer is affirmative. (For a general discussion of the prospects of beneficial interactions in later life, see Maddox, 1985). As already noted, available data are inadequate. But such evidence as we have hints at, without demonstrating, a favorable dynamic. The

United States has committed substantial resources to health and welfare. The payoffs of these investments are reflected for most older adults in their improved economic security and access to health care and for younger cohorts of older people in their improved educational attainment. Improved income security and education for adults generally—two key socioeconomic indicators—expectedly are associated with adoption of beneficial lifestyles and behavior in the form of healthful diets, exercise, nonsmoking, and effective stress management. Successful encouragement of a pro-active approach to health among adults should pay dividends for future cohorts of older adults.

Consider also what we know about the importance of fitting individual characteristics of adults with environmental opportunities and demands (Maddox, 1985). Human Resource Development managers have understood the importance of person-environment fitting for a long time. Jobs as well as workers can be redesigned beneficially for older adults as Travelers knows very well. The same principle holds for older adults living in the community and in the special environment of a life care community or nursing home. Opportunities for education or training as lifetime affairs; accessible public transportation; appropriately serviced housing; and incentives for continued involvement predict maximal performance permitted by personal energy and ability.

Furthermore, it is never too later to benefit from training—exercise, cognitive skill development, interpersonal skill development. The regression lines which document age-related reductions in reserve capacity to perform important personal and social tasks independently are undeniably negative (slope downward). But the potential through interventions to move observed performance of physical organs, brains, and body upward and even possibly reduce the slope of the negative regression lines, can now be demonstrated.

My young colleague Jim Blumenthal at Duke has demonstrated the benefits of aerobic exercise for adults in their 70s not only in cardiac function but in reduction of depressed mood. Warner Schaie, Penn State psychologist, on the occasion of the tenth anniversary of the National Institute on Aging, documented the capacity through training to restore cognitive performance to a level recorded by individuals over a decade previously. Judith Rodin (1985), Yale physiological psychologist, has demonstrated that training very old, institutionalized persons to take more responsibility in caring for themselves can not only be done fairly easily but also can reduce their dependency and produce beneficial physiological effects.

SUPERINDICATOR III: *Personal and Societal Values*—At this point we are departing from science and confronting values and political processes. This is a necessary excursion since we are now in a position to intervene beneficially in behalf of improved functioning in

later life. We know more about achievable and desirable improvements than we implement. Implementation of useful improvement is a matter of applied politics. Watch, therefore, the indicators of values and the social political processes involved in implementing interventions likely to promote beneficial interventions to improve the morbidity/disability/mortality dynamic of population aging.

Among *individuals*, watch for indications that healthful lifestyles and behaviors are continuing to be adopted. Look particularly at indications that lower socioeconomic status individuals are making beneficial lifestyle changes.

Among *organizations*, watch for indicators that human resource strategies are emphasizing person/environment-fitting so as to encourage continued participation in the workforce for older adults who prefer a longer work life to early retirement.

At the *societal* level, watch for public policies which counter current incentives for early retirement and which reinforce societal investments which reduce the risk of ignorance, sickness, and isolation in the adult years in the interest of delaying or ameliorating the effects of disabling chronic illness. Watch not only what indicators of investment in the average adult but also in specific sub-sets of high risk adults, e.g., those with long-term experience in poverty or with unemployment. Past is prologue, and sub-groups of high-risk adults in the adult years predict very high-risk adults in the later years of life.

Remember, "If you want to understand something, try to change it". ■

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Health, Aging and Productivity

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You wouldn't know it by reading the newspapers but we are living through one great success story, the longevity revolution of the 20th Century—a 26-year gain in average life expectancy—a gain in a little over 80 years which nearly equals what had been attained in the preceding 5,000 years of human history.

This success story reflects positive aging, an increasingly vigorous, healthy and robust and potentially productive old age.

And yet there are the doomsayers, the purveyors of gloom, who don't see how we can afford an increasing number of older people. They haven't quite suggested that we stop all medical research, and give up the desire to conquer heart disease, cancer and Alzheimer's Disease. But we would have to do so if we were to pursue the logic of their position to the bitter end. I regard this thinking as a failure of social imagination.

What, after all, are health, aging and productivity (Butler and Gleason, 1985)?

Health, I suggest, as does the World Health Organization, must be seen as “a state of complete, physical, mental and social wellbeing, not really the absence of disease or infirmity,” (Public Health Reports, 1946). So much of the discussion of health in the United States and many other nations is really a discussion of medicine. Obviously the medical model is a very restricted one. Fortunately, there has been some increasing attention paid to health promotion and disease prevention and a movement toward a broader social definition of health.

Aging is a process or more precisely a series of processes of human development. Aging is to be distinguished from the end stage of life. It is not limited to a group defined, say, in terms of social entitlements. From the biological or biomedical perspective, aging is a predictable, progressive, universal deterioration in various physiological systems, mental and physical, behavioral and biomedical. At the same time, there is clear evidence, though more elusive and more difficult to measure, of concurrent psychosocial growth. I refer to capacities for sagacity, prudence, wisdom, based on seasoning and experience. The *practical* significance of these changes with age must be assessed separately from the laboratory observations. That is, loss in reserve capacities often makes no real difference to ordinary performance, certainly much less difference to the way people perform than ill-founded attitudes and policies.

There is no such thing as “standardized aging”. Age-related changes are quite varied among individuals and within the individual. With age, science finds greater diversity. There is an increased standard deviation from the mean when we measure behavioral and biomedical functions of an aging cohort.

We must distinguish between population aging and individual aging. The age structure of a society is a function of birth rates, death rates and net migration. Birth and death rates, in turn, are a function of socio-economic conditions including the stage of medical progress and its application in public health measures. In a sense, population aging begins in the bedroom and is reinforced by the laboratory and the clinic.

We must also distinguish between cohorts. Today’s aged have less education than today’s youth but more than yesterday’s elderly. Comparing today’s young and old may lead to fallacious implications about processes of aging and capacities of the elderly. We must get the right balance in depicting the elderly.

Productivity as an economic term refers to individual or collective creation of a product or service over a unit of time. We usually speak of the kinds of productivity that societies perceive they benefit from. What we typically measure may not represent the whole productivity picture. For example, there is the Gross National Product. The GNP includes positive and negative “products”—not only cars and

refrigerators but also equipment for air and water pollution.

However, GNP doesn't measure intra-family productivity. In an aging society, a major task is to reevaluate the very meaning of productivity. We cannot be satisfied with prevailing conceptions but must move to encompass unpaid as well as paid work in various contexts, industrial, family and larger community. The relationships between personal, industrial and societal productivity are critical. They may be out of harmony with one another with counterproductive effects. Productivity cannot simply be confined to making objects. It must mean an increase in the basic wealth and health of the country. Jobs are one way to confer wealth and a healthful living standard.

Piercing the Facade of Aging

My own first inkling of the need to look behind the facade of chronological aging came about through my work as a principal investigator in the National Institutes of Health/National Institute of Mental Health/Human Aging Studies, 1955 to 1966, (Birren, Butler, Greenhouse, Sokoloff & Yarrow, 1963). The sample studied was composed of 47 healthy, community-resident older persons. They had no trace of major disease or only the most trivial when the study began. By any measure of the time, they were "super healthy."

The summary of this work in an article, published in 1963, is appropriate today. In essence, it points out the serious misattributions to aging of diseases, disabilities, psychosocial adversities, and atrophy by disuse.

Let me quote:

"Our broad conclusion may be stated as follows: As a consequence of a careful multidisciplinary pilot study, we have found evidence to suggest that many manifestations heretofore associated with aging *per se* reflect instead medical illness, personality variables, and social-cultural effects. It is hoped that future research may further disentangle the contributions of disease, social losses, preexistent personality, so that we may know more clearly what changes should be regarded as age-specific.

"Indeed, various types of investigations, complementing one another, would be useful. Intensive studies involving frequent contact over considerable periods of time, based upon the growing personal relationship between the investigator and the older person, would contribute to our understanding of the subjective experience of aging and approaching death. Longitudinal studies, of course, would enhance our opportunities of classifying changes as to whether they are age-specific, disease-linked, etc.

"If we can get behind the facade of chronological aging we open up the possibility of modification through both prevention and treatment. In our lifetime (if at all) it is not likely that the inexorable processes of aging will be amendable to human intervention but it

cannot be too greatly emphasized that it is necessary to be able to recognize those factors which are open to change."

Changes with age may be due then, to a variety of causes. Here we will describe those that are of importance to human performance and productivity and appear to be related to fundamental biological processes of aging, not the accompaniments of aging due to diseases and disabilities.

Loss of speed of reaction—Slowed reaction time occurs with age because of reduced speed of response within the central nervous system, not within the peripheral nervous system. The work of James Birren has enhanced our understanding of this aging phenomenon. Even so, depression and central nervous system disease (for example, Alzheimer's disease) further reduce speed. There is also a correlation between blood pressure levels and slower speed.

Central Nervous System—The 1955-1966 NIH Human Aging studies of healthy community-resident older persons revealed normal cerebral blood flow and oxygen consumption and minimal decline in glucose utilization (the significance of which was not then or now entirely clear). The Kety-Schmidt technique available at that time measured total brain physiology. With positron-emission tomography, Stanley Rappoport of the National Institute of Aging has substantiated the earlier findings. PET scanning provides precise local measures of Central Nervous System function.

The NIH studies also failed to reveal major decrements in the intellectual functioning—assumed then, and by many even now, both among the public and among scientists—to be characteristic of old age. Now we know that any primary effects of aging on intellectual abilities occurs much later in life and are much less notable than had originally been thought. Central Nervous System decrements usually reflect disease not aging. We can no longer accept the notion that senility is inevitable with aging.

Moreover, there are now surprising data that the brain is capable of continuing growth—this is called "neuro-plasticity". Recircuity—that is, the hooking up of new synapses (loci of nerve transmission)—can occur. This tremendously exciting finding suggests that in time, with understanding of the brain's basic neurochemistry, we will be able to help repair damage following stroke, Alzheimer's disease, etc.

All of this conflicts with the traditional thought that, once the Central Nervous System was fully established in infancy, growth did not occur and repair was essentially impossible.

Preservation of function—Many of the decrements attributed to aging, described by pioneer gerontologist Nathan Shock, have now been found to reflect disease and disability. There is a message of hope in this. It points to the fact that preservation of the various biological

functions and their restoration is not uncommon.

There is no denying the accompaniments of aging and there is no question that about the fact that the fundamental biological processes of aging do proceed. There is after all a limit of life, an intrinsic lifespan. There's no doubt that growth, differentiation and senescence actually occur throughout life from its very beginnings. In other words, the chance of mortality increases with age. This was first described mathematically in terms of logarithmic functions by Henry Gompertz, a life insurance actuary. Age is an antecedent of disease and disabilities. Aging predisposes to these changes. (As well as to remind you, too, that aging also predisposes to psychosocial growth). Over 80 percent of cancers occur after 50 years of age.

Aging also alters the body's ability to respond to a variety of external challenges. Thermal hazard comes about because of a change in the thermoregulatory apparatus of the brain. Exposure to hot and cold may lead to hyperrexia (heat stroke) and accidental hypothermia (a drop in core body temperature).

Because of changing host factors, both the presentation and the course of disease may be different in older and younger adults. For example, an older man may not experience heart pain, despite myocardial infarction; appendicitis may not be associated with an elevated white cell count.

Illustrative of body characteristics that alter with age are skin, muscle, bone, blood pressure, and glucose tolerance. Muscle protein declines with age but once again it is important to note that such a decline can be due to poor physical conditioning. Exercise may maintain lean body mass. This is important regarding pharmacologic response. Many medications are fat soluble. As protein converts into fat, we see increased tissue concentration of fat-soluble medications. This lengthens the duration of drug effect and enhances the possibility of adverse reactions. (By the way, serum-albumin declines with age. That, too increases the possibility of adverse reactions—unless the physician has geriatrics training and varies the dosage appropriately.)

Very interesting recent work by Edward Lakatta of the National Institute of Aging has demonstrated that cardiac output does not decline with age in the healthy heart. This is reminiscent of the 1963 report of the National Institute of Health Human Aging studies related to cerebral physiology. Neither the cardiologist nor the neurologist can attribute declines in function to old age independent of disease.

I would now like to describe what I have called "the gray land" of gerontology (no pun intended). Bone may become thinner with age. This is called osteopenia. At a certain point, the thinning may become pathological. It is then called osteoporosis. Bones can be brittle and break easily, especially the wrist, vertebra and hips.

Systolic blood pressure rises minimally with age. This may

function to preserve blood flow to the brain.

The response of the body to glucose challenge (measured by the glucose tolerance test) declines with age. If one were to diagnose diabetes on the basis of the glucose tolerance test as standardized on the young, diabetes would be over-diagnosed in the elderly.

We also see changes with age in the sensory system. Presbyopia (loss of sharpness of sight) and presbycusis (a similar loss in hearing) are surprisingly little studied.

In addition to what is going on inside the person, there are environmental factors to be considered in what we call, or have called, "aging." Some remarkable studies have been conducted in Sweden on the health and functional status of successive birth cohorts. These people were first examined as they reached 70 by Dr. Alvar Svanborg and associates of the University of Gothenburg. The first entrants to the study are now 80, their immediate predecessors 75, and the newest, 70. Even in the brief five-year intervals separating the cohorts, it is clear that the newer 70 year olds are in better health than their predecessors were at age 70. I think this study so far holds optimistic messages for us. Whatever intrinsic aging may be, extrinsic factors play a major role in shaping that aging. Social, behavioral and biomedical interventions are possible. A further suggestion is that responsibility for health and functional status in old age must be shared among individual, organizational, societal and other forces. Dr. Svanborg and associates are now investigating the extent to which environmental and behavioral changes can influence morbidity and mortality in the study group. They have already identified immobility and social isolation as major reasons for early death in a cohort.

Personality—Does personality change? Dr. Paul Costa at the Gerontology Research Center at the National Institute on Aging has examined participants in the Baltimore Longitudinal Study on Aging. He finds a stability of personality throughout life. However, in science we must be wary of our instruments of measurement; it could well be that the personality instruments employed by Costa do not change with age whereas personality does. Many observers (myself included) believe that people do continue to grow and change; this does not deny a fundamental and enduring character structure, but it does allow for the fact that dramatic personality changes do occur.

Certainly with the passage of time and attainment of later life, considerations of death, of losses of loved ones and grief are quite obvious. I have observed the development of what I call "the life review", a resurgence of memories and the apparent psychological process of resolution and reconciliation with regard to the way in which one has conducted one's life.

The New Gerontology

With the clarification of the multi-dimensional character of aging comes the new gerontology. This includes the necessary revision of stereotypes and false images of aging—such as sexlessness, unproductivity, unavoidable need for institutionalization, and inescapable dependency, among other extraordinarily negative views that have been characteristic in our society. From a practical standpoint, perhaps the more important revision lies in ceasing to view diseases as inevitable and in ceasing to express therapeutic futility or nihilism (e.g. in the form of custodialism).

We now know that various interventions are possible. We can retard various deleterious features of aging. Both psychosocial and biomedical approaches related to prophylactic and therapeutic efforts are available. One example from the psychosocial sphere is the purposive creation of support systems to help people adapt to and survive losses. One illustration is the response to bereavement provided by the “widow to widow” program invented originally by Phyllis Silverman of Boston. Biomedical interventions include the use of calcium and exercise as preventative to osteoporosis. A therapeutic example is the treatment of type 2, maturity-onset diabetes.

One could also look for evidence of innovations in the world of work. One example of course, is retraining. All of our knowledge of people’s changing intellectual abilities with age makes clear the continuing capacity to learn and solve problems and to be innovative as well. If a longer work life is required by socioeconomic reality, why should education be limited to the beginning period of life and retirement to the end? Work, education, and retirement—or refreshment, if you will—are three massive blocks of life cycle activities. They should be more clearly and flexibly interwoven.

Continuing education and retraining surely can help avoid programmed obsolescence of individuals. This is quite different from the impact of intrinsic aging. A strategy tailored to our knowledge of aging can also help enhance the quality of the aging work force.

These are just the tips of the iceberg of what will become the new medicine: geriatrics. New in that it goes beyond traditional body-oriented, case-oriented medicine to a broader person-oriented medicine more interested in function than specific organs or procedures. Geriatrics is inter-disciplinary in its approach, utilizing nursing, social work, advocacy, behavioral technologies and various branches of medicine to provide prevention, diagnosis, care and treatment of older people and their diseases and disabilities. Geriatrics requires a different organization of the health care system.

Work Ability and Age

What have we learned about the relationship of work ability to age?

I will answer by reference to two public policy issues that I confronted during my tenure as Director of the National Institute of Aging.

In 1979, the U.S. Congress passed the Experienced Pilots Act. It mandated the National Institutes of Health—which turned to the National Institute on Aging—to answer the following questions:

- (1) Is the chronological age 60 medically justified as the mandatory age of retirement for commercial airplane pilots?
- (2) Is any chronological age medically justified?
- (3) Are the present medical examinations adequate?
- (4) What should be their frequency?
- (5) What is the impact of aging upon human performance?

These were nearly impossible to answer: Pilots over 60 have not been permitted to fly since 1959, and there are precious few data concerning the impact of aging upon human performance. However, what the issues taught us is that we need to invest in longitudinal studies that would eventually provide us with sensitive techniques for *individual* assessment. Please note “individual”. It is true that statistically—as a population—we become more vulnerable to disease with age. But this is not enough to predict when this or that individual will have trouble, or the extent of it.

Let us make this point absolutely clear: certain biomedical and behavioral events may increase in frequency with age of a population. We can be talking about cancer, development of auto-immune phenomena, the likelihood of psychological reactions of grief. How one will respond as an individual to these events of old age must be subject to individual assessment. What applies to the class in general may not apply to the individual.

The second public policy example of the issue of the relationship of work ability to aging derives from the 1982 National Commission on Social Security Reform. The Commission posed this question: since 1935, when the Social Security Act was passed into law, there has been a dramatic gain in average life expectancy. Has there been a commensurate gain in work ability, enough to justify delaying the age of eligibility for full Social Security Benefits—for example, up to age 67, 68, 69? Data from the National Center for Health Statistics show that, for each decade of life, there has been an increase in disability rates in recent years. This is partly due to “medicated survival,” e.g. a teenager survives a motorcycle accident but requires lifelong nursing-home care. Thus, an arbitrary elevation in the Social Security entitlement age in the absence of more sensitive measures of individual function—and of course in the absence of effective job generation—would be punitive to older people. (Butler, 1982; Feldman, 1982).

We desperately need measures of specific capacity to function that will be predictive for the individual. The recent disputes over Social Security support for disabled persons show how hard it is to measure disability objectively. We need specific *non-lethal* markers that are highly predictive of general health in the absence of disease. Cancerous growths in the lung would be a lethal marker. Forced ventilatory capacity—the ability of the lungs to push air—is one of the few promising non-lethal predictors that we have. The National Institute of Aging has entered into a 10-year contract for development of “biomarkers of aging” in animal models, with the expectation that the findings would be useful to research on the human experience.

The other great issue relating work ability and age is that of “senility” in its various forms, most predominantly Alzheimer’s Disease. Here, clearly, we have the critical importance of memory subserving work ability. At last, science has made a good start on memory and on Alzheimer’s Disease. The research is still only minimally funded. This devastating disease will be preventable eventually through the findings of basic and clinical research, I am sure. Research on “senility” including multi-infarct dementia as well as Alzheimer’s Disease, should be given a big boost through support by federal and state governments and by private-sector funding. Unfortunately, funds available are not in line with the fact that Alzheimer’s Disease is the Nation’s number 4 cause of death.

We need to be interested in memory not only in terms of its dysfunction or its decline. We need to know about healthy memory and techniques for improving memory. We have only the very beginning of knowledge about neurotransmitters that relate to memory—the cholinergic system, vasopressin.

Another approach to discussing work ability and age is to focus upon changing the workplace and the tasks of work to better fit age changes, or to put it a little differently, to better fit the residual capacities of aging people. Such work has been done in Canada and the Soviet Union. For example, to accommodate delay in reaction time, more time can be provided to perform the task. In full form, payment can be made by service or piece (“piece work”). Much more needs to be done.

Retirement is primarily a Twentieth Century phenomenon. In the past, the sailor became a sail-maker, the toiler in the fields began to work in the granary. Technology changed the way one worked. It can also be applied to altering the work burden in accordance with the accompaniments of age and various diseases and disabilities.

In this century, fewer jobs require great muscle strength. This change in occupation sets the stage for greater participation of older persons in the work force.

We have also seen the dramatic increase in the service sector. As The Travelers has demonstrated, retired persons can be brought

back economically into the workforce, for example, to fill important temporary and part-time jobs. There are many in the middle and later years who are attracted to the care of disabled, ill and older persons and can fill a growing need for personnel in this area of service.

One must also develop means of relating new technology (including robotics), the human work force and the conditions of the work place and the tasks required. Present and future research directions must certainly include a massive effort to better understand human performance in various occupations over time. This can only come about through establishment of careful comprehensive longitudinal studies. A mechanism for developing such studies could be the creation of a national populations laboratory.

Gerontology and Geriatrics which have emerged as Twentieth Century fields still are significantly underfunded. It has been very hard to launch these fields at a time of perceived austerity.

The Aging-Productivity Axis

Do we have data that convincingly demonstrate the work and productivity increase or maintain health? No, we do not have the necessary longitudinal data here to affirmatively answer what appears to be the case.

Health, aging and productivity would appear to be inextricably related. Each component and the combination can be modified.

We must look to the year 2000 as a conventional marker and especially to 2020 when the main cohorts of baby boomers reach "old age". In 2020, one out of five Americans, or 20 percent of the population, will probably be over 65. It is obvious that we cannot wait until 2020 to make the necessary investment in research and development and education to find new ways of supporting a productive, vigorous, dignified old age.

For the gloomy ones, let me note that in the year 1900 when the average life expectancy was 47, people would have said we can't afford to have people living on into their 50's and 60's. This was long before the 85-plus age group was the fastest growing age group. Had we listened to "gloomy ones" in 1900 we might not have exercised our social imagination in developing a variety of private sector and public sector programs to deal with late-life and its financial basis; for example, Social Security and private pensions.

Nor would we have pursued a biomedical research agenda so heartily, including the invention of the National Institute on Aging in 1975.

From my perspective, we are experiencing a "longevity revolution", a great sea of change as remarkable as the Industrial Revolution of which it is a spin off. The elderly are a market and a source. The "longevity revolution" is among the great social events of the century. It is not usually possible to adapt immediately to massive

changes. It takes time. Corporations, trade unions and other private organizations along with government at all levels will have to take leadership to explore the multiple meanings of the longevity revolution and to advance effective forms of adjustment to it. We must especially advance and support productive aging. ■

Improving Productivity in the Aging Workforce

by Anthony Carnevale

Chief Economist and Vice President for
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Training and Development

It's my assigned task to discuss employer policies and strategies to improve or maintain productivity in older workers. When I first began to prepare this presentation, that particular task struck me as an answer that begged several questions. First, among those was that, in general, we seem to be uncertain as to the extent to which employers may really want to retain older employees. Advocates of retention themselves seem to be divided on the rationale for discouraging retirement. Some propose retention because they believe employees will actually need the productivity and contributions of older employees. Others make quite a different argument. They claim that we'll need to retain older employees because the cost of paying retirement, medical and other kinds of benefits will be so high. Of course the rationale for retention has a great deal to do with selecting among alternative programmatic approaches to human resource management and human resource development. Before we can clearly assess appropriate policies for responding to an older employee population, we're going to need to find out, as time will certainly tell us, what the specific need will be.

Older Workers in an Uncertain Environment

In short, we discuss the issue of older employees in an environment of uncertainty. The most serious uncertainty that affects the prospect for older employees is the overall performance of the American economy. What is the future of the American economy? Well, anybody's guess is as good as mine. On balance, however, there is reason to be optimistic. The good news is that the things that plagued us in the late 1960s and early 1970s have, essentially, gone away. And we didn't have to do a thing. Energy inflation and inflation from commodities appear to have passed us by and show no signs of reappearing. Wage inflation is being held in check by foreign competition now, not high unemployment. The baby boom is already in the workplace and the number of new job seekers is declining rapidly. The net effect of these trends should be, and perhaps will be, to drive the unemployment rate to levels that we as a nation have not experienced since the late sixties. The resultant labor scarcity should force employers to develop current employees rather than buy the new skills they need in the open labor market. If employers need to make skilled and productive employees rather than buy them, older employees, I suspect, will be major beneficiaries.

The bad news, of course, is that most of the things that are within the ambit of our control, we're not handling very well. I'll just list them off and not discuss them at any great length: oversized federal budget deficits, oversized credit liabilities among the general population, high interest rates; the lack of an international economic policy; third-world debt, unfair trade practices and so on. All these pieces of the economic pie, all of which are, essentially, under our control through policies public and private are really not going well. And they are the major wild cards in America's economic future. What we do with each of those particular problems, I think will, more than anything else at this time, determine the prospect for retaining older workers.

Credibility Problems

Uncertainties aside, there is a second and more profound impediment that we'll have to deal with, with respect to providing effective human resource management policies for older workers, and that's credibility. Our consideration of the subject of the aging workforce and the problem-solving style that's essentially being exercised here today is planning. Planning has lost much of its status since its heyday in the late 1960s and early 1970s. The older employee problem is an estimated problem. As such, it probably won't be solved until we actually confront it some year down the road. And that's not necessarily a bad strategy in and of itself. Employers and policymakers have been bombarded with estimated problems for some time now. The urban crisis, the energy crisis, the limits to growth crisis, the

automation crisis and a dozen other more mundane crises have come and gone, usually with a whimper and not with a bang. That may be part of the reason why the aging of America and the trade and fiscal deficit crises that are among the current crop offered to us in electronic media and breathless prose are not being responded to aggressively by public leadership or private leadership. The current style among public and private leaders is to keep one's powder dry, to cross bridges as they appear, not to fix what ain't broken.

We have a still more serious credibility problem and it's closer to home for most of us in this room. And that's the overall credibility of human resource planning, human resource management and human resource development as a tool for leveraging productivity among American employees in general, and among older employees, in particular. Ours is an economic culture that relies essentially on machine capital for its productivity improvements. It is also an economic culture that has formed its policies and expectations in the context of persistent labor surpluses over the past forty or fifty years, especially since the baby boom thrust itself into American society over a decade ago. The notion of an emerging labor scarcity does not square with the experience of most employers. In fact, most of our current employer policies are the creation of persistent surplus. They presume that human resources can be bought outside the company in the external labor market more cheaply than they can be made inside the institution. They encourage retirement and discourage alternative work arrangements and they promote a "one size fits all" approach that tends to assume every employee is a 35-year-old, male, family head.

What is most startling to me about the negative attitudes toward human investment is that they run squarely against the prevailing theory in growth economics and the prevailing opinion among economists in general. The economic literature is clear. The human resource is the primary economic resource. It acts as the economic catalyst that changes the material and imaginary stuff of our world into useable goods and services. Machines, after all, are human artifacts.

The credibility of human resource investment in older employees suffers doubly. Doubts as to the ability of employers to leverage productivity through human resource development, are exacerbated in the case of older employees because they don't figure that the older employee will be around long enough so that they can realize significant returns on the investment. These arguments ignore the fact that turnover among older employees is much lower than it is among 25 to 44 year-olds. Research with respect to the learning abilities, the cognitive and physical abilities of older employees is also reasonably clear. Much of it has an advocacy tone, much of it is somewhat obscure from an employer perspective, but on balance it is extremely positive and suggests that older employees are willing

to be trained and developed. And they do have the capacity to continue to perform at increasingly high productivity levels at least through 70 and 75 years. What's more, older employees, themselves, say over and over again that they want training. What they don't want is formalized training that is not compatible with their prior experience. What they want is training that is delivered in less formalized kinds of medium, that is self-directed, concrete and complements their prior experience. Many employees also say that they would like a good deal more autonomy and flexibility in working arrangements.

Investment Disincentives

Finally there are other factors that discourage employer human resource investments, in general. Primary among them is the simple fact that we don't really understand what we know. We know that human resources are a primary economic resource and that the returns to human resource investments are high. Studies of individual earnings demonstrate that formal education, for instance, accounts for less than 20 percent of the difference in earnings among Americans over their lifetime. That means that the other 80 percent is accounted for by what people learn in the labor market, on the job. We also know that the most effective learning is in the workplace and occurs in groups of people rather than among individuals. Workplace learning is a team phenomenon. Employer productivity and the earning power of individuals is driven by the ability of working teams to learn together. Plant level data is sparse but tends to verify these more aggregate analyses. For instance, an analysis of 1984 census data shows that those who received informal training on their jobs, improved their earnings by 5 percent more than their peers. Those who received formal training improved their earnings by 13 percent more than their peers in the first year after the training was delivered. The effect of workplace training on institutional productivity also appears powerful. For instance, after adjusting for inflation, the productivity returns to on-the-job training was 12.6 percent for those who were college educated, and interestingly, 19 percent for those without college. A 1984 study found that employees were 32 percent more productive after 12 weeks on the job than they were at 3 weeks on the job.

What we understand is a lot less impressive than what we know. We know that human resource investments produce productivity returns but we don't understand how. Everything seems to work on someone and nothing seems to work on everyone. That is the standard evaluative conclusion of training and development programs both in the public and private sectors. Moreover, our investments in education, health and other human development services are essentially a crap shoot from an economic point of view. In the case of education, for instance, there is no way of knowing who

among the mass of young people will be economically productive and who won't. Indeed, analysis of entrepreneurial behavior demonstrates that the majority of the nation's economic creators are middling students at best. This conundrum extends to workplace learning as well. We know that learning in the workplace is the most powerful determinant of human economic productivity and individual earnings. But we don't know how to make it happen. Not really.

Intergenerational Issues

Now let me turn to another set of issues, those to do with the intergenerational kinds of problems that may arise as we try and develop specific programs for older employees. The challenge is to build a system of human resource management and human resource development that is not discriminatory in a legal sense. And from a productivity perspective, one that does not violate basic principles of team productivity and create intergenerational strains among employees.

Some intergenerational strain may be unavoidable. The prospect for intergenerational tension, I think, is suggested by a growing complexity in the workplace demography of the United States. Tensions are likely as the workplace population experiences an unprecedented three-part demographic twist. The first difficulty is that there are likely to be shortages at entry-level. The 16-to-24-year-old age cohort is dropping off rapidly, precipitously. And eventually, employers will be looking at entry-level labor supply shortages. Entry-level labor will be scarce both from a quantitative and a qualitative point of view. As the unemployment rate moves downward below 6 percent, we will discover that the entry-level employee is somebody with human capital deficiencies. Underinvestment in those people between the ages of 5 and 24 results in a performance potential that is much lower than the current average entry-level employee in the United States.

Entry-level scarcity will create competition between employers, the military, higher education and other institutions that draw on that labor pool. Employers will have to pay higher entry-level wages. Employers will also have to devote more training and development resources to that entry-level cohort to sort among them, to make them job ready and to provide them with development essentially as an employee benefit in order to attract the best hires.

The second difficulty is that while we're going to have scarcity at the entry-level, there is likely to be a surplus of employees and mid-career plateauing in the 25-to-44-year-old age cohort. By 1990, over 50 percent of the labor force will be 25 to 44 years old. The baby boom is now in the workplace. It seems likely that the baby boom will not realize its expectations for earning and career mobility. In fact, their expectations will be frustrated in a fairly aggressive way over the next 15 to 20 years. And so we'll have entry-level scarcity

and we'll have plateauing and mid-career frustration among the mid-career cohort.

Avoiding Intergenerational Tension

The difficulty for employers is that policies targeted simultaneously at entry-level scarcity, mid-career plateauing and retention of older employees are likely to collide. Higher wages and more promotions at entry-level, lower wages and fewer promotions at mid-career and a drive to retain older employees can result in strategic and intergenerational tensions if they are not thought out carefully.

In any event, what needs to be done, it seems to me, is to find some set of policies that do not violate antidiscrimination laws by sequestering out certain portions of the employee/employer workforce and do not violate team productivity by giving special advantage to any one segment of that workforce.

- In closing, I have no little green pill to make the problem go away but I do have a dozen rules of thumb. First is some advice I deliver to you from Dizzy Dean. In the mid 1950s when the Yankees lost the World Series because they changed their pitching rotation, Dean's comment was they hadn't "danced with who brung 'em." In the case of any individual employer institution, you have to "dance with who brung you." You have to be loyal to the older employees that you have. Even more important than that, you've got to find some means for customizing the generalized human resource management and human resource development practices to the specific strategic posture and profile of your own company and your own institution. There are no silver bullets. Each individual company has a different strategic niche. Each requires different sets of policies. Each company workforce will have a different demographic profile. Each will have a different need for older, entry-level and mid-career employees.
- The second rule of thumb concerns human resource planning. It's an obvious one and most people don't disagree with it. That is, you need to do age audits. But not simply quantitative age audits. Qualitative age audits as well, that give you some sense of what the current developmental status of your employee workforce is and what its developmental potential might be.
- The third rule of thumb is to prepare to meet with some early failure with respect to older employees. We'll all have to pay for the accumulated failures in our human resource planning, human resource management and human resource development systems. We'll have to make up for the resources that were not devoted at entry level and mid-career for these people. The price of neglect rises with age and shows itself most vividly, I think, in older employee attitudes and productivity. I think, for the most part, when

one finds older people in any institution or life situation who are embittered and frustrated and cynical, what one sees is the accumulated negative effects of life experience and underinvestment.

- Rule of thumb number four is that when you meet with failure, avoid falling for the self-fulfilling prophecy. Don't convince yourself or let others begin to believe that older employees are not or cannot be a productive resource.
- The fifth rule of thumb is to emphasize communication. One strategy that accomplishes multiple objectives, I think, is some form of systematic briefing and education of managers and supervisors. Briefings of this kind can avoid age discrimination complaints, they can discourage counterproductive biases and avoid intergenerational tension among employees. A briefing strategy that is accompanied by some specific companywide statement of age policy is also a good idea.
- Rule number six is to try and avoid intergenerational strain. In order to avoid legal entanglements, operational complexity and strains on team productivity, employers need to develop comprehensive strategies that do not make invidious distinction among employees. Such policies are possible. Available data suggests pretty clearly that there is a fairly substantial basis for agreement among all employees in terms of their complaints about current human resource management systems and in terms of the kinds of remedies that they would propose. We find that older employees are not loath to surrendering positional authority to mid-career or entry-level people if they don't lose income and are compensated with more autonomy and flexibility in their work. We also find that entry-level and mid-career employees are looking for similar kinds of autonomy and flexibility and participation.
- Rule of thumb number seven is to avoid over-promising to yourself and your boss. As I said before, there is no silver bullet and no green pill. While it is true that entry-level and mid-career and older employees share a common set of complaints, and a common set of preferred remedies, it is important to keep in mind that there are limits to what one can do on any employer initiation to avoid strain. Much of the current discontent that is consistently measured among employees in the workplace is characteristic of all institutions in American society. Our ethnic, geographic and religious heterogeneity guarantees a certain amount of tension. There is also a natural antagonism between our individualistic culture and participatory polity on the one hand, and the hierarchical organization of work, on the other. To a fairly large extent, the sources of that discontent and irritation with managers and supervisors has been found to begin in broad-scale kinds of social causes. Some of our public and private failures have resulted in a generally low opinion on the part

of Americans with respect to any large institutions, whether it be big business, big government or big labor. And we're going to have to live with those kinds of frustrations for some time to come. There are limits to harmony in employer institutions and there are limits to what can be done to achieve harmony.

- For rule number eight, I would suggest two processes to cope with older employees and increasing demographic complexity. The first kind of process is already emphasized in the human resource management and human resource development profession. It is the process of cooperation. It is the idea that undergirds most HRD and HRM disciplines. The second idea is more implicit in the industrial psychology and industrial and labor relations literature. It is the process of bargaining. Neither of these processes will be sufficient by itself. Each tends to recognize important aspects of the workplace reality, but ignores others. Strategies emphasizing cooperation recognize the reality of team productivity. Bargaining recognized inherent tensions in the workplace. And the heterogeneity of the American population and the real differences that there are among us.

- Rule number nine is to be fair. Americans tend to understand that they are a motley crew, but the one standard that is continually raised in this country, I think the standard of fairness is a result of that heterogeneity. Americans are willing to accept less than perfect solutions so long as they believe those solutions are fair.

- Rule number ten is, as employers develop strategies they will also have to distinguish, carefully, between those things that improve productivity and those things that make work more pleasant. Fortunately, much of what entry, mid-career and older employees seem to want from employers are the kinds of productivity-enhancers that employers will want themselves. Recognition and reward based on effort and quality is a primary demand in all age cohorts. Autonomy, job security, independence and increased participation in decisions can be productivity-enhancing if handled correctly. Productivity-enhancing strategies of this kind need to be balanced carefully with the "satisfiers." Those things that make work less onerous and demanding but may deny basic realities in industry or become counterproductive in the economic sense of that term.

- Rule number eleven, is to remember that the watchword in providing HRD programs for older employees is complementarity. The essential competitive advantage among older employees is their experience. The best way to leverage HRD investments with older people is to provide training and development that complements their experience over the years in particular employment situations. To the extent that you can do that, you can realize much higher return on HRD investment in older people than you can with 25 to

44 year olds. The notion of complementarity also suggests that the kinds of HRD treatment that are best for older employees are those on the cusp of formal and informal training, not quite formalized and not quite informal. The creation of HRD responses that are closer to the point of production and to the point of sale, where competitive change impacts first and most aggressively, are the kinds of HRD treatments that are most successful with older employees. They tend to be those HRD practices that are closer to the work station and are more based on experience and concrete stimuli than classroom and other more formalized kinds of training.

- Finally, the last rule I'd like to leave with you is a piece of advice. And that is, be optimistic. What we have developing here is, what I would call a happy problem for human resource management people. Thus far, the aging workforce issue hasn't been treated as a very happy problem. The subject of the aging workforce is one among many recent issues that have received national attention that is also evocative of a mood. That mood, I think thus far, has been anxious and pessimistic as to the American prospect. It seems to center around the notion of loss of control to titanic, demographic, economic and technological forces. The latter mood tends to support a scenario where employers will have very few reasons to retain older employees and insufficient resources to retire them. Broad acceptance of the latter view is not surprising, given our recent history on inflation and unemployment. Happily, however, as we look ahead, inflation is out of sight, if not out of mind and the glut of entry-level employees is trailing off rapidly. Labor scarcity is not without its problems, especially from an employer's point of view. Scarcity of any economic factor is not good news for employers. But from the HRM perspective, the news is definitely good. That which is scarce has value, and for the first time since the brief period in the late 60s, people will have high economic value to employers. Employers will have to make, rather than buy, productive employees. Employers will have a genuine economic interest in the quality of the workforce, including both older and entry-level populations. Economic incentives that have heretofore encouraged employers to buy rather than make employees, I think, will disappear rapidly in the foreseeable future.

On balance, while labor scarcity will surely produce significant problems, in my judgement, they will be happy problems for those in the HRD and HRM fields. Thank you. ■

Corporate Practices: Personnel Programs and Management Strategies for Older Workers

by Malcolm H. Morrison

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This section will explore what can be done now to maximize productivity in light of the changes in aging discussed so far.

Before launching into my formal remarks, I will give you a brief background sketch of the context in which I'm going to make these remarks. First, I am an unabashed supporter of older worker employment in this country and throughout the world. I believe that this is important for our society, for our economy and for human beings as individuals. Second, I bring you a perspective that is based on experience in private industry, particularly with consultation related to older worker employment, and the practical problems that it poses for managers and senior executives who want to improve efforts in this direction. Third, I bring a perspective from government in terms of regulatory and legislative activity, as well as from the university, studies and research. You will not hear very much from me this morning about research, but it has conditioned some of the remarks I will make.

Fourth, I will tell you that this problem is not only one that we face in our country, but that other countries are grappling with, as well. And I think you will hear more about this towards the end of this symposium.

We have now arrived at a point in the symposium where it is appropriate and necessary to discuss policies and programs that will maximize productivity and health in an aging society. This is both an exciting and optimistic endeavor because it is based on the idea that business organizations can and must gradually adopt existing poli-

cies and create new policies to provide employment opportunities for older persons. My role is to provide you with some information on programs that have been successful with older workers and their short- and long-term costs and benefits. I will also provide you with some ideas on the directions of future policies and programs, which are feasible and realistic in light of changing demographic, social and economic circumstances which this symposium has so well identified. Let's begin with a brief synopsis of some important facts and characteristics about the "prime life" population.

Thirty-five percent of the U.S. population is now age 50 or over. Between now and the year 2,000, 33,000,000 people age 50 to 64 will be approaching retirement, which will probably constitute one quarter of their entire lifetimes due to increased life expectancy. Persons 50 and over control more than 75 percent of financial assets in this country. The upcoming generations of older persons will be better educated, and in some ways, have better health than in the past. Most of the upcoming cohorts of older people will be able to afford to retire early, but many more will seek second and third careers or part-time employment during their retirement. Preferences for employment after retirement are growing, and today more than half of the pre-retired and retired say they want to work part time during their retirement.

The widespread recognition of a lengthening retirement period will lead to an increasing desire for independence and self-sufficiency throughout older age. Finally, this new aging population presents an important challenge to management to develop policies and programs that will make use of the skills and experience of a trained and motivated workforce.

Nearly everyone is in favor of providing more employment opportunities for older people who want to work. Despite some of the barriers to employment and the contradictions in public and private retirement policies, most of us think that ways can be found to modify corporate policy and practice to permit older people to work. There are a number of innovative approaches which I will discuss which have been effective in achieving this objective in organizations. However, it is well known that corporate incentives for early retirement are now ubiquitous and are expanding, whereas incentives to retain or hire older people have received very little attention from management.

Reasons for Non-Responsiveness

Given the current low labor-force participation by older workers, it is doubtful that this lack of corporate attention is the result of direct competition for jobs between older and younger workers, certainly not workers over 65 and younger workers. It is important to recognize that early retirement and later-life employment policies are not necessarily incompatible, as the examples I will mention are going

to demonstrate. Yet there must be some reasons directly related to business policies and practices, and probably to what we now call the corporate culture, that limit the development of employment programs for older workers. I'm going to suggest four reasons that I believe are primarily responsible for the low level of corporate response to older workers.

First, negative stereotyping of older workers and the effects of these stereotypes on hiring, job assignments, training and promotions. Second, limited flexible work arrangements, new part-time work opportunities, new horizontal or downward job options, emphasis on early and complete retirement and no policy for hiring retired annuitants or other older workers. Third, relatively rigid employee benefit policies, pensions awarded at fixed early retirement ages, no continuation of pension benefits for work after the normal retirement age, no partial pensions and no arrangements for pro-rated employee benefits if rehired after retirement. Fourth, assumptions of higher costs for older workers, assumed higher wage costs, assumed higher employee benefit costs, resistance to investment in education and training and resistance to retention because of assumed higher overall costs. To varying degrees, most organizations that I have worked with exhibit these characteristics. Usually, the barriers occur together and this makes it extremely difficult for management to advocate, let alone implement, alternatives in practices and policies for older employees.

I will not take up your time with a point-by-point rebuttal of each of these approaches, but let me simply say, that on close scrutiny, every one of them can be shown to be inaccurate, counterproductive and unnecessary. I think much of the evidence you have already heard should have indicated that these types of approaches are simply not essential or effective management policies and practices today. Now, while I think it is relatively easy to question the need for stereotyping older workers, limiting their opportunities or maintaining inflexible work arrangements, some may raise questions about the cost effectiveness of older workers. In this respect, I think it is important to point out that empirical studies have failed to show that wages or training costs inexorably increase for older workers.

It is true that health-care costs do rise with age, although the factors which influence this outcome are not very well understood. It is also true that the relative cost of pensions can rise with age because the shorter time to retirement requires a greater pension contribution to produce a specific benefit. But until quite recently, the so-called cost issues have not been very important because so few older workers have remained employed. In the future, the cost issue may be more significant, but even in this circumstance there has been a tendency for management to take a static rather than a dynamic view of costs and human capital. That is, instead of consid-

ering the marginal cost/productivity trade-off for retaining or rehiring an older, experienced employee for a short period of time (a trade-off that will usually be positive) many have attempted to analyze the gross aggregate costs for retaining large amounts of older workers, a very unlikely scenario.

While all the empirical evidence is not yet available, it appears that retention or even rehiring of older workers for a few additional years would not raise employee benefit costs in any significant way. And there is the additional advantage of retaining skilled and experienced employees in your organization.

Continuing early retirement has already brought about some problems in many industries in the country. Thousands of trained and experienced blue- and white-collar employees have left your companies, taking with them their human capital, often enhanced by your investment in their training and education. While corporate flexibility to adjust to changing economic circumstances is certainly necessary (including the need to reduce overall staffing), too little attention has been focused on developing feasible alternatives to retain valuable, experienced older employees who have proven records of performance.

If this goal appears contradictory to today's emphasis on early retirement, this is only because there has been too little attention given to creating innovative alternatives for older workers. Overcoming the four barriers I identified a few moments ago, *primarily* depends on program development and implementation in the business community. This is not something which the government is going to do. In spite of the numerous incentives for full retirement (and the disincentives to work), there is ample evidence that when companies commit themselves to serious policy and program modification to attract older employees, the results are significant and mutually beneficial to the firm and its workers.

Corporate Programs For Older Workers

A national overview of corporate programs and practices for older workers discloses that programs involving flexible work options are growing significantly in small, medium and large companies and in all types of businesses in this country. Only a relatively small portion of this growth, however, involves major programs which encourage continuous work by older persons either full or part-time. Not long ago, a national survey was undertaken to identify and document corporate programs and practices for older workers. The survey disclosed fewer than 200 firms in the entire country which had implemented a variety of formal programs and policies. It is constructive to examine what these policies and practices involve. The majority, 37 percent, involve part-time work options; 10 percent involve training; 9 percent, full-time work; 8 percent, retirement transition and job placement, and 3 percent, job redesign.

In terms of industry, most of the programs (38 percent) were in manufacturing companies and about one-third in business service and finance and even smaller amounts for professional services, trade industries and government organizations. Most of the firms that had the programs were medium or large, more than half having 5,000 employees or more, and subsidiaries of firms may also have separate programs which were not always identified or observed in the survey. It is interesting and important to note that where the programs exist, management has successfully addressed a number of concerns: identifying the types of work options most suitable for their workforce; designing the specific options and communicating them to eligible employees; developing employee benefit policies (notably pension accrual and health benefit options) which were either more neutral with regard to retirement incentives or provided incentives for work, that is, coordinated personnel and employee benefit policies; developing programs to make employees aware of the options; and, monitoring utilization and modifying the programs so that they became more effective in terms of use of older employees and their productivity.

These steps may appear relatively simple, but the success of any older-worker program usually depends on effective corporate response to meet these concerns. What I am suggesting is that creating meaningful programs for older workers requires that a firm makes certain policy decisions and establishes the responsibility for their implementation, much the same as for other areas of business policy. There certainly are many firms that have retained and hired some older workers. Probably most organizations here today have done just that. But this does not constitute an older-worker policy or a program. This can only be achieved through planning. In a few moments, I'll provide you with some examples of how easy such policies and practices are to introduce and maintain. But before doing so, I want to comment on two issues which may be of concern to many executives here today.

First is the question of whether older-worker programs contradict or diminish regular or special early retirement incentive efforts. The evidence overwhelmingly suggests that there is no contradiction, actual or perceived. Regular early-retirement programs and early-retirement incentive programs have proven both popular and highly successful from a number of points of view. Your firms have been able to introduce these programs easily, and they have received the approval of employees in most cases. I know of few organizations that do not plan to maintain early-retirement programs in the foreseeable future. But the fact that many employees accept and support early retirement does not mean that they oppose or will be unresponsive to later life flexible-employment options. It is this type of option which many older persons seek but usually do not find. Firms which have introduced older-worker programs have fre-

quently been known to have early-retirement programs, such as ARCO, Control Data, Travelers Corporation, Wells Fargo and others. These organizations have found ways to successfully use older, experienced employees. So there is no contradiction between these programs and early-retirement incentives.

Second is the often repeated view that older-worker programs are too costly from the point of view of employee benefits, and administrative burden—in other words, that these programs are not a worthwhile investment. Valid data on older-worker employee benefit costs and administrative costs are not easily available. However, studies of organizations having older-worker programs have indicated the following: for options which involve older workers remaining as full-time employees, there is no evidence that employee benefit costs increase significantly on a year-by-year basis, that is, any increases are marginal and appear gradually over long periods of time, from age 40 or 45 on. And certainly, we are not going to dismiss workers at age 40 to 45; health benefit costs do increase with age, however, modest numbers of older workers will have no effect on aggregate health costs. For programs which involve older workers returning as reemployed annuitants working part time, employee benefit costs are usually reduced because of the pro-rating of benefits. For programs which involve the hiring of older workers through outside employment agencies, employee benefits are usually not paid by the firm at all.

There are few administrative costs in implementing most of these programs. That is due to the fact that procedures for both full and part-time employment are usually well established in the firm and need only slight adjustments to accommodate the options for older workers. Similarly, modifications to employee benefit plans are also usually easy to accomplish and involve few additional costs even if pension accrual is continued beyond normal retirement age and health benefits are continued.

Rather than focusing on costs in administrative requirements for older worker programs, it is more important for the firm to evaluate the advantages that will accrue if older workers can be retained, reemployed or newly hired. Thus far, establishment of appropriate policies and programs to employ older persons has not resulted in negative consequences for employers. On the contrary, older persons are viewed as high-quality employees, experienced, motivated and consistently productive.

There are several general issues that must be addressed, therefore, by management in developing these kinds of policies. These are as follows: First, top level executive commitment to development of policies and programs. Second, developing a coordinated approach involving human resources and employee benefits. Third, reviewing preferences of managers and employees regarding program structure. Fourth, experimenting with several employment op-

tions and evaluating feasibility. And finally, institutionalizing the policies and programs as an ongoing activity in the firm. I cannot emphasize too strongly that successful older-worker programs depend on top management commitment and staff follow-up to assure not only proper program operation, but also, and perhaps more important, program communication to the workforce. Many older-worker programs have not been successful because older persons themselves didn't know about the fundamentals of the program. People have then jumped to the conclusion that the programs were not feasible. That is probably not the case. It is simply a matter of lack of communication.

Creating Innovation – The Corporate Response

I am now going to cite a few examples of older-worker programs and I want you to keep in mind that in almost every case the programs have been developed to meet the specific needs of a firm for particular types of skills possessed by older employees. In other words, these programs were not developed just as a good will gesture by most of the companies. They felt that the skills and experience of these individuals were necessary for production.

A systems engineering and design organization with major defense contracting responsibilities instituted a variety of options including hiring and retaining older workers. Although having no mandatory retirement age, the firm retained incentives for retirement by age sixty-five. However, the firm required specialized expertise for long-term continuing projects. In responding to this need, the firm has developed several approaches. First, it retained people full-and part-time after age sixty-five. It rehired its own retirees as consultants. It permitted some older employees to work on reduced schedules. It provided older employees with continued training where it was necessary for their performance of the tasks assigned. And it instituted a flex-time program. The pension plan of the firm was structured to provide early vesting, but does not exclude workers hired over age sixty. In addition, people who work on reduced schedules continue to receive pension benefits.

A major oil and petroleum products firm noted that it had a critical skill need for employees, many of whom were retiring. The firm instituted major policy changes to encourage rehiring of retirees. The program involved hiring such employees while providing them with pension benefits, continued contributions to the plan based on time worked, and continuation of other regular employee benefits.

A major computer manufacturer has three approaches for hiring retired employees: as consultants; through a special retiree group of advisors; and through a pool of temporary employees—a technique used by many other companies. Workers are hired on a contract basis and salaries supplement pensions. The firm also has a

regular part-time employment program with pro-rated employee benefits and participation to the pension plan if workers exceed 900 hours each year. The firm also has extensive retraining and career/life-planning programs designed to provide assistance to older workers. This particular company is also exploring the feasibility of a phased retirement program.

The final example I'm going to cite involved a major business reporting firm. We all know about the importance of business reports because we read them every day, the Wall Street Journal, the Dow Jones reports and so forth. The firm needed people to collect and document business data from around the country. And after limited success with temporary employees, the firm decided to try an approach of hiring the retired as permanent part-time employees. The approach was extremely successful. The company filled nearly all the positions in 120 cities across the country, primarily with people who are in their 60s. Although the approach was somewhat more costly than the hiring of temporary workers, the efficiency and the productivity of the workforce substantially exceeded that of temporary employees.

These examples could be supplemented with many others from firms in every category and for employees with all types of occupations. However, the major types of policy modifications that most organizations have made to accommodate older workers are as follows: First, personnel policies; part-time employment, rehiring annuitants, consultants, job modification, training programs and, in some cases, tapering off programs. Second, employee benefit policies; continued pension accruals after the normal retirement age, pro-rating of benefits for part-time employment, payment of pension and wages for employment after retirement, provision of education and training benefits for older employees.

I am sure that many of you have already concluded that these types of policy modifications would not be difficult to implement in your companies. But there may be some question in your minds about whether the programs described actually have good results. While there are variations among organizations, in general, older persons have responded quite adequately when employment options have been provided. However, response has often been constrained because employees lack comprehensive information about the choices that are available. Firms have often left the crucial aspects of program management to informal communication approaches. For this reason, some very promising programs have ceased to function because of lack of participation by older employees. At the same time, programs with clear design and comprehensive communications efforts have succeeded in securing interest from hundreds of older workers—in many cases, more than can be accommodated at any given time. Therefore, there are two key areas where management must focus in developing successful older

worker programs, *program design* and *program communication*.

Future Developments

Finally, I'm going to do one of my favorite things and give you a few speculations about the future of retirement and employment. Throughout this symposium, you have been informed of the implications of an aging population, and an aging workforce for many aspects of our society. Some believe that our major problems have little to do with the workforce and instead, are related to the support burden for many more retirees who gradually became more and more debilitated. Others suggest that older workers are of little consequence because our policies are designed almost exclusively to encourage early retirement, and that the concept of many older persons continuing their productivity is not accepted or supported, despite statements to the contrary. It is not that these points of view are erroneous or inaccurate, rather, the problem is that these views are *incomplete* and fail to recognize the major implications of an aging workforce.

Long before it is time for the baby boomers to retire, approximately beginning in the year 2015, we will face a significant middle-aging of the American workforce. A gradual transition towards retirement will have begun for more than half the workforce by the year 2000. Here is a workforce having the highest levels of education of any in our history; better health, improved financial prospects and numerous goals and objectives. This is the group I often refer to as the "new aging"—educated, vigorous and productive. And this group, growing in number, faces the major challenge of very long periods of retirement before real old age is reached. There is little doubt that many of the new aging will choose early retirement so long as this option is available. However, we should not be lulled into believing this group will prefer total leisure, absent productivity; continued employment will be a felt need of the new aging and one that can be satisfied by business organizations. It is, of course, possible that such longer employment will be mandated by government policies. But even if this is not the case, or proves difficult to achieve, the desires of older persons will have to be met.

What I see in the future, then, is more of a dual emphasis for the aging, both retirement and continued productive employment on a flexible basis. This probably means that retirement will be redefined or used more as a time when pensions are received and other careers are pursued. Although statistics and studies are limited, we all know examples of this new approach to retirement for individuals that we know personally. This can only grow in the future. Yet there are some choices that we can make that will influence this future scenario. These choices could make a great difference to the aging and to our ability to support a growing older population. And it is important to make the choices actively so as to influence the

future of our society. I think that since we all recognize the aging workforce and know the implications of the support burden, it's time to begin implementation of corporate policies that are responsive to an aging society. Programs for older workers are not difficult to develop and put in place. They are not costly, can be very popular and can increase productivity in your organizations.

This role goes beyond charitable programs and touches the keystone of our society, *productivity and economic development*. Why should 30 to 50 million people in this country be denied access to opportunities to work and contribute to their own future and the national economic welfare? If we believe that this should not occur, the place to begin is revising and changing *corporate policies* so that they provide opportunities for older workers. You have the expertise and the authority to take these steps. As we all know, a good idea usually does not become meaningful unless it's put into practice. The examples are available that demonstrate the feasibility of programs for older workers. The full-scale development of these initiatives is, or ought to be, primarily, a private-sector responsibility. With your direction, management and perseverance, the development of choices for productive aging can become a reality. This is one challenge that can and will be met by American corporations based on your leadership. ■

Health Promotion for the Aging Workforce

by Donald M. Vickery, M.D.

President, The Travelers Center for
Corporate Health Promotion

Our image of the aging worker is clear: slow, forgetful, tired, perhaps cantankerous. Our image of the retiree is worse: Weak, sick, confused, idle, lonely.

But however clear our images may be, they do not serve us well. An aging American can be vigorous, vital, and energetic. Indeed, his or her performance may easily surpass that of a person many years younger.

Distorted images of aging obscure the fact that the effects commonly ascribed to aging are, in fact, due to three separate processes.

Processes of Aging

The first of these is the decline in body functions resulting from failure to use physical and mental faculties. "Use it or lose it" is not just a slogan, it is a biologic principle, a fact of life. As Dr. Walter Bortz, president of the American Gerontological Association, has observed, "If you make an Olympic athlete stay in bed, you make an old man out of him." That is, the effects of inactivity, even in the most superbly conditioned athletes, are remarkably similar to those generally ascribed to aging. World-class athletes subjected to forced bed rest become weak and have no endurance. They lose both muscle and bone mass and may even become anemic. Most strikingly, they are depressed and forgetful, seem unable to concentrate and have difficulty in performing simple mental tasks. If you would like to experience the feelings of being a sedentary 75-year-old, put yourself to bed for five days. You won't feel good.

The second process that contributes to the common image of the aged person is chronic disease. Many of the effects that we ascribe to being old are actually the result of arthritis, chronic heart

disease, chronic obstructive pulmonary disease, diabetes or one of the other common chronic diseases of old age. Most important, inactivity is among the risk factors for these diseases along with smoking and obesity. It is clear that disuse disease and chronic disease share roots in lifestyle: The border between disuse disease and chronic disease is often blurred.

The third process is cellular aging, the natural aging that we can't do anything about, at least not at present. As an old professor of mine was fond of reminding those who got carried away with the idea of staying young, the death rate is unchanged, it is still one per person. I see no reason to believe that this will change.

Disuse Degrades Performance

Disuse degrades human performance. To develop programs that properly counter disuse disease, it is important to determine which human performance characteristics and measurements have been demonstrated to be modifiable.

Physical performance has received the most attention, and endurance has been the greatest concern within the physical performance category. Michael Pollock and many others have demonstrated that the endurance of the elderly, as measured by substantial increases in oxygen uptake, can be dramatically improved through aerobic exercise. Smoking and weight are other factors that influence endurance.

Strength is increasingly recognized as an important part of health promotion. The reason that the old man has difficulty getting out of the chair is that he lacks strength in his quadriceps. But the strength of the quadriceps can be increased through weight training. The old man will never look like Rambo, but he will be able to get out of the chair easily. Dr. Everett Smith at the University of Wisconsin and others have demonstrated that pumping iron can be safe and beneficial in the elderly.

Flexibility can be maintained or improved through a variety of stretching exercises, best done in combination with aerobic and resistance exercise. Perhaps more surprising is the ability to improve agility as measured by reaction times. Spirduso found that individuals aged 50 to 70 who regularly played racquet sports entailing quick reactions had reaction times similar to sedentary individuals aged 20 to 30. Interestingly, a second study showed that older runners maintained the same quick reaction times despite the fact that running itself is usually not thought of as requiring quick reactions.

Physiologic measurements are related to physical performance factors, of course. They are included here because they are sometimes substituted for other physical measurements, and because they also relate to measurements often cited as demonstrating the inevitable consequences of cellular aging. Many of these measurements are, however, capable of being influenced in the elderly through various

interventions. We will consider these further when we discuss the concept of decreased organ reserve as an inescapable consequence of aging.

It is ironic that many would consider declines in mental performance to be the most important hallmark of aging, yet our ability to improve mental performance has received much less attention than the ability to improve physical performance.

Intelligence has been assessed in many ways. The I.Q. measurements are categorized in several ways, most often divided between fluid intelligence or cognitive flexibility, and crystallized or factual intelligence. Suffice it to say that both experimental and cohorts studies suggest that I.Q. scores may be improved by the elderly through specific training programs or through lifestyles that involve intellectual challenge. Most recently, Schaie at the Pennsylvania State University reported that at least 50 percent of elderly individuals who had shown significant declines in I.Q. performed better after being exposed to cognitive strategies during five one-hour sessions. One third returned to or exceeded their previous level of mental ability.

Problems with memory are perhaps the most frequently mentioned with respect to aging. Yet the "mediation imagery" or mnemonic devices of Cermak and others are a straightforward method for improving memory function.

Finally, there is that illusive mental function called wisdom. The lack of an appropriate measure for wisdom precludes a scientific discussion of its improvement. But I will suggest that it is highly valued in this society, that it is related to experience, and that perhaps we should value those with experience more highly.

Chronic Disease

Chronic diseases are the leading causes of morbidity and mortality among older Americans. Virtually without exception, there is strong evidence that each of these diseases may be modified in terms of its incidence, morbidity and/or mortality. Nowhere is this more evident than in the case of heart disease and stroke. In the last two decades we have enjoyed approximately a 50 percent decline in the death rate due to these diseases. This decline in mortality is primarily the result of a decline in the incidence of these diseases. A wide consensus of medical expert opinion relates this good news primarily to prevention, i.e., changes in lifestyle. We also have the capacity to decrease morbidity and improve the quality of life through lifestyle change for those who already have heart disease, but it appears that we have reaped relatively little benefit from this ability.

Cancer is a much less happy story. There is no question that we have the capacity to reduce markedly the ravages of these diseases, but we appear to lack the will to do so. We still spend a pittance on research into the prevention of cancer. Our good news/bad news

dilemma is illustrated by smoking and lung cancer. While men have markedly reduced their level of smoking since 1963 and we will soon see dramatic reductions in deaths due to lung cancer among men, we find that women, in general, have not done so and that women in the youngest and oldest age groups are the most reluctant to quit smoking and may even be smoking more.

Although a relatively rare cause of mortality, arthritis is a major cause of morbidity in the elderly and the second leading reason for hospitalization in that age group. Lorig and others have demonstrated that physical training reduces both the subjective and objective assessments of disease severity. The most dramatic improvements are in measurements related to quality of life: The arthritis does not go away, but the patient feels that he or she can function at a much higher level and does so.

Diabetes must be mentioned since it may represent our greatest opportunity to eradicate a chronic disease among the elderly. Dr. Ethan Simms of the University of Vermont and others have demonstrated that abnormal blood sugar levels in the elderly are likely to be related to obesity and inactivity. There even has been a new term suggested for this condition, *diabesity*. It seems likely that the vast majority of elderly Americans who carry the diagnosis of diabetes do not require insulin or other drugs; in fact, insulin makes their problem worse. But they would benefit from exercise and weight loss. A diagnosis of diabetes in such persons is probably unwarranted. Certainly it is not helpful if it diverts attention away from exercise and weight control and toward illness and drugs.

For each of the remaining major chronic diseases—chronic obstructive pulmonary disease, cirrhosis, infectious disease, depression, accidents, osteoporosis—there are health promotion interventions of known impact.

Cellular Aging

Subtracting the effects of disuse disease and chronic disease from the popular image of aging leaves us with a somewhat peculiar—and short—list of effects for cellular aging. Wrinkles are inevitable, if not forever: The value of cosmetic surgery is in the eye of the beholder. As for hair, despite the interesting developments with respect to the drug minoxidil and its ability to produce fuzz, for most of us it is best to hope that we are left with something and then look to Grecian Formula 16 or some similar concoction if gray is not acceptable.

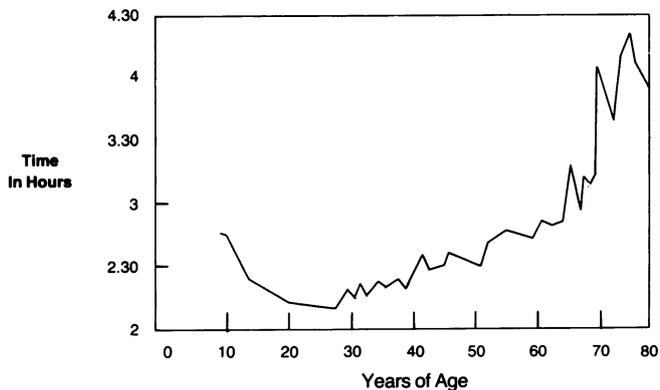
The more awkward but important terms, decreased peak performance capability and decreased organ reserve capability, are used in recognition of two aspects of our current state of knowledge. First, there is no question that there is some decreased cellular and organ capability that is an inevitable and irreversible part of aging. This is usually described as decreased organ reserve, a physiologic concept meaning that the organs' ability to respond to demands or

stress is decreased. By definition, such decreased reserve would have no effect on the organs functioning during a baseline state, but would be critical when responding to unusual demands such as illness. The difficulty with continuing to speak only of organ reserve is that it has now been demonstrated that organ reserve can be increased in many elderly individuals. Thus the term capability has been added to both peak performance and organ reserve to signify that there is a limit to which function can be improved in terms of both physical performance and physiologic capability.

This may be illustrated by looking at the world record marathon times for persons of different ages (Fig. 1). As for the achievements of the elderly with respect to this measure of peak performance—a very respectable marathon of three and one-half hours is not a world record unless the individual is well past 70—it is clear that there is an upward slope to the record times after the age of 30.

At the same time, it is most important to note that the slope of this curve is decreasing. It has already been several years since a 65-year-old man broke the 1908 world record, and I should remind you that the last Olympic marathon was won by the oldest man in the race, age 38. As training methods improve and more elderly Americans use them, we will see further flattening of the curve for peak performance. But there will always be a curve.

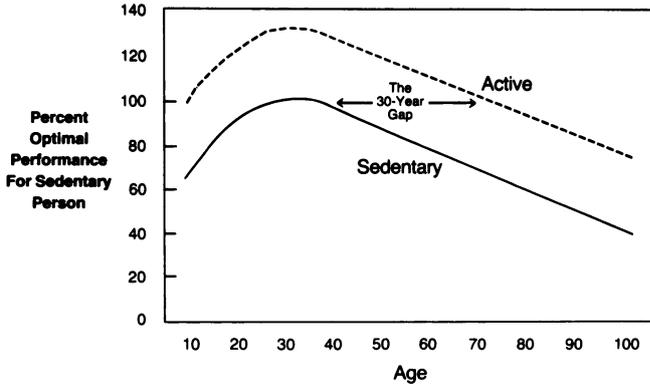
Figure 1: Human Performance: World Marathon Records



The Impact of Health Promotion Programs

We have reviewed a wide variety of human performance measures and our ability to influence them as we become older. These results can be conveniently summarized in two curves that compare human performance for active and sedentary individuals (Fig. 2).—This sometimes is referred to as the Euro-American curve since studies on both sides of the Atlantic have been used in its derivation. Simply put, for a wide variety of physical, physiologic and mental measures

Figure 2: Human Performance 1979 Data



of human performance, there is a pattern of an increasing proficiency until about age 30 and a continuing slow decline thereafter. However, while both active and sedentary individuals show curves with similar shapes, that of the active person shows approximately a 25 percent increase in ability over that of a sedentary person. This difference is relatively constant at all ages.

This difference can be phrased somewhat more interestingly. For any level of performance, there is a 30-year gap in the ages of the active and sedentary individual. That is, an active individual has the performance characteristics of a sedentary person who is 30 years younger.

Such a figure must be an approximation, of course, since it is a generalization derived from a large number of measures of human performance. Yet it is most intriguing that the same 30-year gap was detected in one of the most famous health studies of our time, the Alameda Study. You may recall that Drs. Breslow and Belloc studied the impact of seven simple health habits—no smoking, exercise, normal weight, alcohol in moderation, eight hours of sleep, breakfast every day, and three meals a day—on life expectancy and a measure of health status. The most frequently quoted figure from this study was that a 45-year-old man who had six to seven of the good health habits had a life expectancy eleven and one-half years greater than a man who only had zero to three of the good health habits. This is no small discovery, considering that total elimination of cancer as a cause of death would increase life expectancy by only about two years. But from our viewpoint, the more intriguing finding of the study was that Dr. Breslow's measure of health status, which included measurement of sick days and hospitalizations, showed a 30-year difference in health status between men who had six to seven of the good health habits and those who had only zero to three of the good health habits. That is, men who practice the good

health habits appeared to be as healthy as persons 30 years younger who do not.

Health Promotion and Cost Containment

Dr. Breslow's use of a complex measure of health status leads directly to a larger need with respect to older Americans. Currently there is no methodology for understanding the degree of dependence among the elderly. In many ways, dependence is *the* issue in aging. I would argue that the quality and quantity of life for older Americans is directly related to the degree of independence they experience, and that self-care, broadly defined, is the key factor in determining independence.

The broad concept of self-care goes beyond the lifestyle decisions so important to disuse disease and chronic disease. It extends also to questions of the use of medical-care services. It must be conceded that healthier older Americans may make even greater use of medical services if they believe that they are dependent on these services. And this may occur even though the consensus of expert opinion is that medical care itself has a relatively modest influence on health. The truth is that medical-care costs and health are disassociated. Improved health does not guarantee lower costs.

Self-care interventions that address both lifestyle and use of medical services have been developed and evaluated. The Medicare Study of the Cooperative Health Education Project (CHEP) was a randomized, prospective, controlled trial of self-care communication interventions within a population of Medicare beneficiaries who were enrolled in a health maintenance organization. In comparing utilization from the year prior to program inception to the year the program was in progress, it was found that those who received the communications program made 15 percent fewer doctor visits than a control group who did not receive the program. No negative effects of the decreased utilization were detected. Although total hospital admissions and hospital days were less for the experimental group, the numbers were too small for useful statistical tests of confidence on the difference between these groups.

A Model Program

We have discussed a wide variety of interventions to improve performance and quality of life for maturing workers. There is substantial evidence for the effectiveness of each of these interventions and they have been used in single or varying combinations in many corporate and community settings. Unfortunately, there are few corporations that have organized programs specifically for maturing workers and retirees. Among this select few are Campbell Soup Company, which has modified its Turn Around health promotion program for use by retirees, and Southern New England Telephone, which has conducted seminars on aging.

However, I have not discovered a comprehensive and integrated corporate health promotion program for aging workers. It seems appropriate then to outline a state-of-the-art program.

Concept and Content: Self-Care

As you may expect, the conceptual basis and primary determinant of content are self-care (Fig. 3). There are three principal issues within this concept: staying healthy, getting medical help when needed and having enough money to get along. Each of these is related to an aspect of self-care. The content of a financial self-care program is beyond the scope of this symposium, but I believe that the leading programs of tomorrow will combine the health, medical and financial aspects of self-care and focus on the larger issue of decision-making with increasing age.

Physical

Physical performance interventions are relatively straightforward and familiar. Tailoring these interventions to the maturing worker requires some measurement but can be accomplished readily with current knowledge. Mostly it requires common sense in recognizing the starting point of the individual and the need to avoid unrealistic training regimens.

Mental

Interventions to preserve and improve mental performance present a considerably greater challenge. As stated before, performance can be enhanced in experimental settings. There is no question that, in longitudinal studies, those who remain in environments that pose an intellectual challenge also retain their mental capabilities. However, some synthesis is required to obtain the best effects in nonexperimental settings, and to devise interventions that can be implemented in a wide variety of situations. Interventions should go beyond straightforward training and involve gaming and contest techniques as well as facilitating the formation of common interest and self-help groups.

Medical Self-Care

Medical decision making is a practical form of intellectual challenge. Minor illnesses are common: The average person has some sort of medical complaint on one out of every three days, and older Americans may experience such problems even more frequently.

Every competent physician knows that the management of chronic illness is in large part up to the patient or the nonprofessionals who care for the patient. The prevalence of chronic disease in the older population allows the program to link an individual's interest in chronic disease with self-care messages. Self-help groups for chronic disease have proven to be spectacularly successful in chronic diseases such as arthritis and alcoholism.

Finally, no group is more interested in the medical-care system

Figure 3: A Model program

<p>I. Concept and Content: Self-Care</p>	<p>A. Staying healthy—health self-care</p> <p>1. Physical</p> <table border="0"> <tr> <td>Endurance</td> <td>Aerobic exercise</td> </tr> <tr> <td>Strength</td> <td>Resistance exercise</td> </tr> <tr> <td>Flexibility</td> <td>Stretching exercise</td> </tr> <tr> <td>Agility</td> <td>Games, Dance</td> </tr> </table> <p>2. Mental</p> <table border="0"> <tr> <td>Intelligence</td> <td>Work, games, training</td> </tr> <tr> <td>Memory</td> <td>Work, games, training</td> </tr> <tr> <td>Social</td> <td>Work, common interest groups, self-help groups</td> </tr> </table> <p>B. Getting medical help—medical self-care</p> <p>1. Minor illnesses:</p> <table border="0"> <tr> <td>Diagnosis</td> </tr> <tr> <td>Home treatment</td> </tr> <tr> <td>OTC drugs</td> </tr> </table> <p>2. Chronic illnesses:</p> <table border="0"> <tr> <td>Management</td> </tr> <tr> <td>Drugs</td> </tr> <tr> <td>Lifestyle</td> </tr> <tr> <td>Self-help groups</td> </tr> </table> <p>3. Medical system:</p> <table border="0"> <tr> <td>Doctors</td> </tr> <tr> <td>Hospitals</td> </tr> <tr> <td>Emergency rooms</td> </tr> <tr> <td>Surgery</td> </tr> <tr> <td>Nursing homes</td> </tr> <tr> <td>Home health care</td> </tr> </table> <p>C. Having enough money—financial self-care</p>	Endurance	Aerobic exercise	Strength	Resistance exercise	Flexibility	Stretching exercise	Agility	Games, Dance	Intelligence	Work, games, training	Memory	Work, games, training	Social	Work, common interest groups, self-help groups	Diagnosis	Home treatment	OTC drugs	Management	Drugs	Lifestyle	Self-help groups	Doctors	Hospitals	Emergency rooms	Surgery	Nursing homes	Home health care
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Home health care																												
<p>II. Primary methodology—Communications</p>	<p>A. Effective—self-change corporate and community culture</p> <p>B. Deliverable—The participation problem Retirees, families</p> <p>C. Affordable—Reduced cost through replication</p> <p>D. Segmentation with coordination—ages 30 to 90</p>																											
<p>III. Management—Measurement</p>	<p>A. Purpose: Program management Personal motivation Intervention evaluation</p> <p>B. Principle: For every target behavior there is a measurement.</p>																											
<p>IV. Components</p>	<p>A. Health risk appraisal</p> <p>B. Physical</p> <table border="0"> <tr> <td>Endurance</td> <td>3-Minute step test</td> </tr> <tr> <td>Strength</td> <td>Dynamometry</td> </tr> <tr> <td>Flexibility</td> <td>Range of motion</td> </tr> <tr> <td>Agility</td> <td>Reaction time</td> </tr> <tr> <td>Body fat</td> <td>Skin fold or resistance</td> </tr> <tr> <td>Blood pressure</td> <td>Sphygmomanometer</td> </tr> <tr> <td colspan="2">Other screening as appropriate for age and sex</td> </tr> </table> <p>C. Mental</p> <table border="0"> <tr> <td>Intelligence</td> <td>I.Q. Tests</td> </tr> <tr> <td>Stress</td> <td>Heimler, Holmes-Rahe</td> </tr> <tr> <td>Personality</td> <td>A-B Scale, MMPI</td> </tr> </table>	Endurance	3-Minute step test	Strength	Dynamometry	Flexibility	Range of motion	Agility	Reaction time	Body fat	Skin fold or resistance	Blood pressure	Sphygmomanometer	Other screening as appropriate for age and sex		Intelligence	I.Q. Tests	Stress	Heimler, Holmes-Rahe	Personality	A-B Scale, MMPI							
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than the elderly. Perhaps the greatest challenge of the program is to create interventions that allow older Americans to substitute a self-care approach for one of dependency on the medical-care system. As indicated from the CHEP Medicare Study, it appears that such interventions are at hand.

Communications

The primary methodology of the model program is communications. This should not be confused with information alone. A communications program designed to influence behavior must accomplish five functions: It must raise awareness, provide information, teach skills, motivate, and maintain or reinforce the program's messages. There are a number of reasons for choosing communications. First and foremost, communications may well be the most effective way to influence individuals. Contrary to popular opinion, changing entrenched habits does not necessarily require methods that are intensive or costly. For example, more than 95 percent of the 35 million Americans who have stopped smoking since 1963 did so without enrolling in a group, seeing a doctor, being hypnotized or chewing nicotine gum. They did so on their own in response to communications about smoking. Studies by Schwartz have found that about 50 percent of those who attempt to lose weight or stop smoking on their own are successful. This percentage compares favorably with the results of the most intensive group or individual therapies. Finally, many believe that cultural norms must change if behavior change is to occur and be maintained in the long run. The primary method of influencing corporate and community cultures is through communications.

Further advantages of communications become apparent when the practical aspects of delivering the program are considered. Interventions requiring attendance at a course or seminar usually are able to attract only 5 percent to 15 percent of a company's workforce. This percentage may be increased by integrating group approaches with a communications program, by choosing the subject matter carefully, and by facilitating participation by employees. Even so, retirees and the families of both employees and retirees are unlikely to participate in group sessions, but they can be reached through communications.

Effective communications programs are expensive to develop, but per-employee cost can be low if the total cost can be distributed over a large population.

Finally, programs that address the aging phenomena must be spread over a wide age range and accommodate themselves to the different requirements of various age groups. By maintaining constant themes while varying the delivery mechanism and specifics in the content, a communications program can provide interventions that appear to be targeted for a relatively narrow age group while maintaining coordination of the overall effort.

Measurement

Measurement is desirable in any health promotion program, but it is critical for those dealing with aging. The difficulty of maintaining human performance levels increases with age. This requires that interventions be more carefully matched to the interest and capabilities of the individual. Some have argued that such measurements can be justified solely on the grounds of reducing risks to the individual. In truth, it is possible that their greatest utility is maintaining motivation by tracking effort and progress. It is likely that the greatest risk to the individual is discontinuing the program.

Relatively little of the measurement will be screening for a symptomatic disease. Although often desired by individuals and promoted by health professionals and voluntary health organizations, the unfortunate facts are that most screening programs are unjustified, appear to be counterproductive and may well do more harm than good. The older American is particularly vulnerable to the harmful effects of screening.

In addition to their other benefits, repeated measures over time establish a basis for continuing useful social contact with an aging individual.

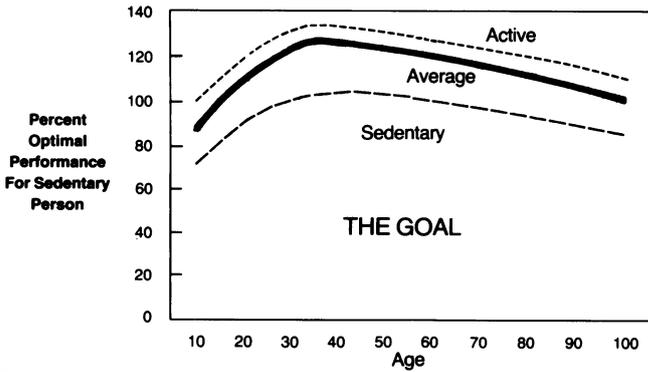
Finally, it should be noted that the use of facility-based programs is not excluded in the model presented here. In fact, the benefit of facilities increase with the age of program participants. This is for several reasons: (1) obtaining measurements is facilitated; (2) fear of injury and unfamiliarity with techniques may be overcome with supervision, and (3) attendance at the facility presents the opportunity for social interaction, a most important ingredient for successful aging. For most programs, the use of facilities will mean making arrangements with multiple, existing facilities in order to obtain the greatest possible access at the lowest cost. This is especially true when retirees are eligible for the program.

Goals and Expectations

Our overall goal should be to close the 30-year gap between sedentary and active individuals. By converting sedentary individuals into active ones, we shift the curve for the average worker up from that of the sedentary person toward that of the active individual (Fig. 4). Indeed, there is evidence that such a shift has already begun and that there is a clear and discernible difference between average and sedentary. There is, of course, plenty of room for improvement.

There is a second phenomena that must also be taken into account. It is becoming increasingly clear that the decline after age 30 for many measures of human performance is not nearly as rapid as had been previously thought. This has the effect of raising the end of the curve. The initial effect of the shift may seem a little depressing since it widens the gap between an active individual and a sedentary one. But a moment's reflection reveals a truly exciting possi-

Figure 4: Human Performance



bility: We may be able to slow the decline of human performance in active individuals to the point that it appears to plateau and remain nearly constant after the age of 30.

Our goal for the average workers, then, is twofold: First, we want to recapture most of the distance between sedentary and active individuals and eliminate most of the 30-year gap. Second, we want to slow the decline of human performance after the age of 30 so that the average American is looking at 60 or 70 years of productive endeavor after that age rather than the standard of 35 years that we have set for ourselves now. As illustrated here, this goal offers a most intriguing possibility: The 100 x 100 life. By tracing out the end of the average curve, we find that at age 100 there remains 100 percent of the optimal function for a sedentary man age 30 in 1979.

Is this goal too ambitious? Perhaps so, but clearly it is not impossible. With a bow toward symmetry as well as science, I will suggest a timetable. By the year 2001, we will have recaptured 15 years of the 30-year gap. In that year, 75-to 80-year-old individuals will be as healthy and productive as 60-to 65-year-olds are today. ■

Reflections on What We Know, Where We Are Going

by Robert N. Beck

Executive Vice President, Bank of America

I'd like to talk about aging from a couple of different perspectives. First, aging is not just a U.S. problem; it's a worldwide concern. I also believe that the private sector has a very important role to play in dealing with this topic. I hope we don't do what we usually do with most human resource issues—deal with problems after the fact. We wait until a crisis occurs, then learn how to solve it very well. Health-care costs in America are a good example. We let it become a national crisis, which makes it much more difficult to solve; but now we're solving it. The private sector is showing that we can help bring the cost of health-care down and maintain quality.

On the topic of aging populations, it's true we have some current concerns. But the real challenges lie ahead. Hence, we *can* do something about it. We can convert a potential problem into a real opportunity.

Over the last 10 years, I've been deeply involved in the issue, starting with the National Dialogue for the Business Sector. The Dialogue was the first time in recent American history that a group of executives got together and decided to contribute to the White House Conference on Aging. In the past, only the nonprofit and government people went to these conferences, out of which eventually came changes in legislation which we in business would complain about. Then, we decided to get involved. I participated in the White House Conference itself and then the North American Conference in preparation for the United Nations World Assembly on Aging. I've been on the board now with the National Council on Aging for a couple of years, as well. I'm also the chairman of the Business Institute on Aging at the University of Southern California.

No doubt, most of you are focusing on your own companies.

That's what you're paid to do. But I'd like to talk about the world-wide concerns because a lot of you are also multinational employers. When I first became involved with the issue, I was surprised to learn that the less developed countries had the same problem we do. I had assumed they wouldn't, because of shorter life expectancies, on average, and the quality of their health-care systems.

The real surprise is, their problem is far worse than the developed countries'. The U.N. estimates that in 1950 there were 200 million people over the age of 60 in less-developed countries. In 1975 that went up to 350 million, or 62 percent of the global over-60 population. By the year 2000, 590 million will be over age 60. And by the year 2025, it will be 1.1 billion, or 78 percent of the world's over-age-60 people. That's up 224 percent in the 50 years from 1975 to 2025.

In the developed countries in 1975, two-thirds of the aged lived in urban areas. By the year 2000, three-quarters in developed countries will live in the urban areas. But what about the developing regions? In 1975, three-quarters of their aging populations lived in rural areas. Why is this a concern? Because, as you know, even in this country there are fewer support services in rural areas to take care of those people. So they're in dire straits.

The U.N. considers that there are two main aspects of this worldwide problem. One is humanitarian issues, which relate to specific needs of the elderly. Briefly, there are health and nutrition, housing and environment, the family, social welfare, income security, employment and education. The nonprofit and government groups have been focusing heavily on those issues.

The other aspect, development issues, relate to the social and economic implications of an aging population. I believe we, as business people, have a direct interest in these issues, but I don't see much attention being given to them at any level. This group of issues deals with the effects of an aging workforce on production, consumption, savings and investments—therefore, the effects on the general social, economic, and business policies of a country or a company.

A Bipolar Decade – And a Different Workforce

I see a key shift in our society. Frank Cary, chairman and CEO of IBM, said to us in 1978, "We've got a new decade coming, another 10 years. Is it any different from the last 10, or is it just another 10 years?" After some study, we found that this decade, the 1980s, is unique. It's a bipolar decade. We've not seen that in the past. The first half of the decade was characterized by high unemployment, especially youth unemployment. In response, we focused on encouraging early retirement, whether through permanent changes in the retirement system by lowering retirement age, or through special "early window" plans to get people out of the business. We've seen a

change in the age of mandatory retirement, age 65 to 70 for many and unlimited for others. Yet, there has been almost no change in the average age at retirement. Controlling immigration and trying to limit overtime to create jobs hasn't achieved much. There's pressure on governments, corporations, and unions to create jobs. Those are the characteristics of the first five years of this decade.

The second half is characterized by a much larger retired population supported by a smaller workforce, greater longevity, and a shortage of skilled workers. I emphasize the word "skilled." We've seen a tremendous influx of people into this country, but not necessarily the highly skilled people we want. More are semiskilled or unskilled.

Remember one thing from your personnel planning: Anyone that you and I can hire in the year 2000 is already born. We can't change that. The problem is, we don't know what they're going to be or what they're going to try to be. But significant shifts are taking place. The postwar baby-boom generation is now moving into that 25-to-44 age range. And so by 1990, we will have 5 million fewer people in the United States in the 16-to-24 age group—the typical place we look for new entrants into our workforce. And we'll have 5 million more people in the 65-plus age group. Of course, by the year 2000, the shift will have become even more dramatic. Forty-nine percent of our population will be in the 35-to-54 age range; 11 percent will be over age 65.

So, we will see a reduction of new skills entering the workforce, coupled with our current and projected shortages of experienced employees in certain areas. I think this alone will force us to change our current personnel policies and practices.

I mentioned earlier my involvement with a group of CEOs who contributed to the White House Conference of Aging. We reached some interesting conclusions, and I'd like to highlight a few.

First, productivity is key to world competition. If we're going to win the world marketplace, we must improve our productivity as a nation. I think you all know that. But the key factor in productivity is management attitude and style—not the employee's attitude, but management's attitude.

That led us to conclude that the problem of productivity of the older worker is more a perception than a reality. Unfortunately, management and employees tend to share the perception. We make it a self-fulfilling prophecy. "You're getting pretty old. Don't you want to hang it up?" "It's about time you were thinking of retiring, isn't it?"

Organizations should ignore age in identifying new opportunities and measuring performance. Instead, we should focus on only two things: the competence to do a job, and the accomplishments, or in other words, the performance.

Obviously, we have to recognize degenerative diseases. If an

assembly-line worker has arthritis, we have to recognize that and deal with it. But the main pressure's going to be on human resource programs, particularly on performance appraisals and performance management. If we can't identify the job relationship, the competency, and the accomplishments, we're going to be in real trouble.

I suspect most of you are seeing an increase in age discrimination. As you know, those cases are treated a little differently from race and sex discrimination cases. They're tried by a jury. And most of us have yet to find a jury that will *not* rule in favor of an individual working for a big corporation, regardless of the facts. Those settlements can be pretty big.

The stigma of the older employee, along with the myth, must be eliminated. That's a management responsibility; and indeed, management's own lack of understanding in this area is a barrier in dealing with it. Older, more experienced employees must be viewed as assets and as major contributors in helping upgrade and train younger employees.

What should our action plan be? First, we must look to training—and I also underline retraining—as a new way of life. We should have programs for current long-term employees as well as those re-entering the workforce. Skill shortages are going to require companies to do this. You might ask, "Can old dogs learn new tricks?" Well, I don't know a lot about dogs, but I can tell you people can. The University of Southern California, Andrus Gerontology Center, has conducted considerable research on the training and retraining of older people. One thing we learned was that older workers *do* require slightly longer learning times than the younger worker. But, older workers can and do perform at comparable levels when given the instructions that accommodate their learning patterns. By the way, the research also showed that once older workers learned, they did well. However, they also tended to stay on the job longer, so you're more likely to get full return on your investment in the training.

Retaining Customers by Retraining Employees

More and more success stories are coming out in this area. I think we owe it to our profession to document and share our experiences. For example, at Bank of America we've closed about 300 branch offices over the last three years. We've cut our workforce by about 15,000 people, without layoffs, by controlling attrition and controlling hiring. That meant several thousand people had to be retrained into different jobs, many of them long-service people. We've done it successfully. Banking is built on getting to know the individual customer and establishing trust. Longer-service employees tend to know the customers better and to have their trust. For the 300 branches we closed, we retained 90 percent of our customers. I believe the way we handled those closings, particularly with the ef-

forts of our long-service people, was an important factor in keeping those customers. Now our line management sees the real value of retaining our more senior people.

Management and labor must work together. To adjust personnel policies and practices requires cooperation. Those of you who have third-party representation such as labor unions know that. Some say, "Well, that'll never work." But, in fact, it does work. In most of the meetings for the National Council on Aging, the University of Southern California conference, and other groups, I've sat with representatives from the United Auto Workers and International Association of Machinists, all interested in solving this problem.

The shift is already taking place in individual employee benefits, the cafeteria-style benefits. Why is that important to this topic? It permits tailoring the benefit package to allow the person to have a better trade-off between working or retiring. Pension costs in most companies are going out of sight. At Bank of America, we've received a lot of attention lately about shifting to something we call CareerAccounts, a cash balance plan.

The bank did not want to go from a defined benefit plan to a defined contribution plan. The bulk of our workforce has done very little financial planning, and to shift the entire risk and responsibility on them so quickly would be inappropriate. So we had to come up with a better solution. And we came up with a blended defined benefit—defined contribution plan. By the way, that change in 1985 saved the company \$30 million in funding costs alone. We're taking the same approach to health-care plans. We're working on the idea of a prefunded health-care plan that will put some of the financial burden and risk on our people. However, rather than shift 100 percent to them, we will share the risk.

Work programs will have to change to meet the needs of mature employees. The whole issue's going to come down to retraining versus hiring. The job sharing, job rotation you've heard about, part-time work, and flexible working hours are all ways to accommodate the different needs of the business and employees.

Part-time work is a good example. In the banking industry, we don't need a lot of 40-hour people, at least not right now. Banks don't stay open very long. For every four full-time tellers we lose, we replace only one. We replace most of them with a person who's interested in working from 10 a.m. to 2 p.m. There's an incredibly large labor force out there that wants to work that way.

Besides the employment category of full-time, we also have prime-time, which is part-time work with prorated employee benefits. Also, we have a category called Part-Time Plus, which is for people who want to work part-time but don't need the benefits. Often these are people who have retired from another company. So we pay a premium on the hourly rate in lieu of benefits. We also

started our own Bank of America “temporary agency” for people who want to work just as they would work for an external temporary-help agency. Our own retirees are also part of that process.

I believe there’s a broader need for community-based, temporary employment and placement centers for the experienced and the recently retired. These centers should be organized and supported by private and public donations. This would enable retirees to return to work if they wanted to. As an example in the San Francisco Bay Area, a group of companies got together and supported the start of an organization called Experience Works. It’s a nonprofit organization that collects the resumes of people over 40, screens them for skills, and matches them with employers’ needs. The center started with placing clerical workers, and now they have accountants and other professionals who retired but would really like to work either part-time or full-time during the summer or other peak periods.

The past emphasis on early retirement has to change. It’s going to be very difficult to do that, though. We’ve seen almost no effect following the change in mandatory retirement legislation. I believe change will have to be through encouragement rather than mandatory measures. We’re already seeing skilled worker shortages; tool and model makers are a good example in California. When the aerospace industry started to decline a few years ago, companies had a lot of attrition among their tool and model makers, and many were given early retirement. Lo and behold! With the Reagan Administration, the military-industrial complex came back, and all of a sudden they needed all those tool and model makers. Some aerospace firms in California wrote their retired tool and model makers and said, “If you will come back to work, we’ll let you draw your pension, and we’ll rehire you at the salary you left or the current salary.” That’s a pretty expensive way to do business. I think it’s going to require creative management now to resolve this problem. And that scenario is where I think human resource people must become creative.

Corporate Support for Personal Planning

It also concerns me that at the same time that we’re developing a long life expectancy, we’re also moving to less company support. We’re moving to lump-sum pensions where the company has no liability. We believe we have to do that for financial survival. Similarly, employees and retirees are going to be more responsible for their own health care in retirement years. And yet, we have almost no personal planning—which is what some call retirement planning—that gets employees ready to assume this responsibility.

Getting ready for those days is vital. We surveyed our retired people about their retirement life, and found some disturbing results. Those who said they did some personal planning said things like, “I don’t know where I found time to go to work. I love retire-

ment. I'm enjoying my life. This is wonderful. No, I don't want to go back to work. Yes, I might work part time, maybe out of my home; real estate or something else." But those who said they did little or no personal planning for their retirement said, "I feel bored. I feel useless. I miss my colleagues at work. There's nothing to do." People in the latter group are candidates for early death or at least a miserable retirement. We've got to help them get ready for whatever that next "career" is.

At this conference, we've mentioned health promotion and disease prevention. We need to do it early. The skyrocketing health-care costs demand it. We must get the consumers involved by educating them. We've now learned that the bulk of the illness in this country is the result of lifestyle, not disease. Our health plans and programs have to change to encourage staying well and to prevent disease and injury. Utilization review, case management, screening, and early-detection programs are needed. Alternative care, such as hospice, is important.

I'd like to talk for a minute about one age-related topic that wasn't on the agenda, though I really think it should be. That is, the marketing practices of your companies and mine. The 55-plus population is 46 million people—one out of three households. They have over \$400 billion in annual income, 28 percent of all the discretionary income in this country. More than one out of four of all consumer purchases will be by people over 55. That's an incredible consumer market that we seem to ignore. If nothing else, if we can go back from this conference and get our marketing people and our CEOs sensitized to a great marketplace, it will have been worth the trip. Let's use Revlon for an example. They're starting to look at this issue. Most of their ads in magazines are for, say, "passionate pink lip ice." There's a significant marketplace out there called the teenage market. It consumes a heck of a lot of cosmetics. Now, as you know, there are more people over age 65 than there are teenagers. I suspect a lot of 65 year-old women like that color, but they probably won't buy it if it's called "passionate pink lip ice." It has to be called something else, and the ads have to show women age 65 using it and looking glamorous, as well. It's that kind of sensitivity to the market that we need. Displaying older people in a positive fashion is good business. We also now understand that the elderly are not a homogeneous market; it's a heterogeneous market. There's a wide range of needs and a wide range of opportunities for us from a business standpoint.

Many good ideas are emerging in this whole area. The U.N. World Assembly on Aging came up with 65 recommendations for the countries of the world. The White House Conference on Aging came up with over 100 recommendations for change. This conference came up with many ideas, and there are more to come.

Action Planning for Marketing, Personnel, Management

No matter what the reason for or the source of the idea, action is essential. The private sector must act. Because if we don't start to deal with this issue in our country, our government will be pressured to act without business support. We saw that in the 1930s and 1940s, and it usually resulted in legislation that business didn't like.

An aging workforce will change the fabric of our current society. A meeting like this can't possibly cover all the topics. But one hopes it will stimulate your company to develop a plan to deal with the issues as they affect your company. I encourage you to project your demographics out to 1990. It sounds like a long way, but it's only four years. You might even go out to the year 2000. It's just 14 years away. If you see the shifts—and I think you will in your workforce—you may want to do some planning and develop action programs now. I suggest an "age audit" of every personnel policy and practice at your company—your pay practices, your benefits (especially health and retirement), recruiting, training, retraining, your work practices, economics, workplace design, your promotion policies, performance appraisal system and your use of retirees. For instance, do you think of your retirees as ambassadors? They can still help you get new business. We stay in close contact with our 10,000 retirees because they have the time and inclination to help us.

Also plan action on management education. What are we doing in management development to dispel aging myths? We have to look at our curriculums in management development.

Why wait until we have a problem? We really do have an opportunity for full utilization of the entire workforce, and we can do it successfully. I commend The Travelers for sponsoring this symposium. It was needed. It was certainly of high quality and valuable. But this conference won't be successful unless, when you get back to your office, you take time to develop an action plan. Ask yourself, "What do we need to do as a corporation?" And probably more than anything, *have a bias to do something about it*. As the prime movers in the human resources field working in enlightened companies, you can be the role models we need in this country for turning a potential problem into an opportunity.

Thanks for getting involved and caring. ■



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News Release

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NEWS SUMMARY: Travelers publishes monograph of leadership thinking on America's aging workforce.

HARTFORD, CONN., Dec. 17, 1986 -- "In aging populations, very long life is increasingly common. Just a few years ago, demographers paid little attention to persons 85 years of age and older. No longer. In all societies, demographers have documented a shocking fact: The fastest growing age category is '85 and older'."

So says George L. Maddox, Ph.D., of Duke University, one of the experts in medicine, social science and public policy whose views on the implications of an aging population and workforce are summarized in A Monograph of Proceedings From America's Aging Workforce, A Travelers Leadership Symposium.

Involved in the issue of aging for over a decade and known for its active retiree job bank, The Travelers and its National Accounts Group invited these influential thinkers along with senior executives from several dozen of America's largest corporations to Houston earlier this year to discuss the impact that an aging workforce will have on American business, and how management can respond to the challenges and opportunities it presents.

-more-

TRAVELERS...2

The Monograph is a compilation of major papers commissioned from speakers who appeared at the Houston Symposium that focuses the issues of the economic security and health of older Americans in terms of managing a changing workforce within large, complex organizations.

Dallas L. Salisbury, president of The Employee Benefit Research Institute, talks about the impact of a growing retiree population on pension programs, health benefits and corporate profits. Developing personnel programs and management strategies to maximize the talents, experience and strengths of older workers are discussed by both Anthony Carnevale, chief economist and vice president for Government Affairs, the American Society for Training and Development and Malcolm H. Morrison, Ph.D., of George Washington University.

Looking at how health education/promotion programs can increase the productivity of older workers, Donald M. Vickery, M.D., president of Travelers Center for Corporate Health Promotion, reviews a wide variety of human performance measures and how people can influence them as they grow older. Dr. Robert N. Butler, the first director of the National Institute on Aging who is currently at Mt. Sinai Medical Center, talks about the myths surrounding work ability and age and defines the multi-dimensional character of aging as the "new gerontology."

TRAVELERS...3

Alan Pifer, president emeritus and senior consultant of The Carnegie Corporation of New York, presents an overview of societal aging and discusses the third quarter of life from 50 to 75.

Alice M. Rivlin, director at the Washington, D.C.-based Brookings Institution, offers a public policy perspective of an aging America which challenges the concept of a "normal retirement age."

The Travelers has a long-standing commitment to the issue of aging and has instituted a number of programs that benefit older Americans. These efforts include a retiree job bank, several caregiving support and information programs for employees, The Travelers Geriatric Fellowship for medical students and The Travelers Center on Aging at the University of Connecticut.