In industrialized countries, we witnessed truly astonishing increases in life expectancy during the 20th century, which rose from about 45 years in 1900 to about 75 years in the year 2000. This phenomenal increase in average length of life was also accompanied by a substantial improvement in the quality of life for the elderly. Knowledge gained in basic research on aging, as well as ongoing advances in medicine, cultural studies, psychology, and economics, has contributed to this development. Will this historical trend continue as the population reaches higher and higher ages, as more and more people live to be 90 or even 100 years old? In recent studies, it has been shown that as people reach the older ages, they exhibit larger losses in physical, mental, and social functioning than those observed for the young-old. In fact, there is reason to ask whether the resulting state of affairs challenges our basic conception of what it means to live and die in dignity.

The Janus face of aging becomes apparent when we compare what are called the “Third” and “Fourth” Ages of life. The Third Age begins at about 60. The Fourth Age commences when half of the original “birth cohort” is no longer alive. In developed countries, this is generally around the age of 80. Recent advances in gerontological scientific research have centered on the Third Age and its potential or plasticity. In contrast, the Fourth Age makes explicit the biological shortcomings of the human organism - and based on current evidence there is little hope of the oldest ages becoming the veritable “golden age.” Under today’s conditions, the Fourth Age promises to create major problems for our society and to pose great challenges for research in the future.

Of special importance is new evidence that the increase in life expectancy also applies to the oldest ages and is not restricted to the younger age ranges. Today, 80-year-olds have a statistical life expectancy of another...
Wisdom and Experience - Strengths of the Aged

What about the relationship between life expectancy and quality of life? Often these go hand in hand. In the last century people lived longer and better lives. For instance, the 70-year-olds of today are physically and mentally about as fit as 65-year-olds were 30 years ago. The “young-old” have gained around five “good” years. Furthermore, when all people older than 60 are considered, today’s older population enjoys better health than people who did in earlier times.

There is much evidence supporting the good news about the aging mind. Researchers at the Max Planck Institute for Human Development, for instance, have found that the aging mind is not only physically but also mentally as strong as 65-year-olds were 30 years ago. Thus, the “young-old” have gained around five “good” years. Furthermore, when all people older than 60 are considered, today’s older population enjoys better health than people who did in earlier times.

Mental capacities that are particularly pronounced in the elderly - emotions, knowledge, and wisdom. Emotional intelligence is the ability to understand the causes of feelings such as hatred, love, and fear. It is also the ability to develop strategies to avoid emotional conflicts or to adapt to their consequences. Older people are usually endowed with more emotional intelligence than younger people.

Potentially one of the oldest is the most impressive characteristic, wisdom, or knowledge of the condictio humana, provides insight into how to combine virtue and knowledge in leading one’s life. Of course, simply growing old is not enough to become wise. When life experience is paired with the necessary personal qualities and thinking patterns, however, older people often perform extremely well when addressing wisdom problems. This applies to certain areas of art and professional expertise. Older composers and conductors, for instance, are often among the best in their fields. Specialist professional knowledge is also affected by age, as long as the aging person remains professionally active, is spared specific aging-associated illnesses such as a stroke, and the knowledge does not become obsolete from a societal point of view.

Another strength of the elderly is their ability to maintain their self-image and a satisfying life. Older adults possess an exceptional ability to adapt their lives in such a way that they feel about the way they think about themselves - despite increasing restrictions to their sphere of activity and physical abilities. They ensure a subjective feeling of well-being by adapting their expectations to reality. Many old people claim they feel just as healthy as young people, even though - objectively speaking - they are not. This “adaptive self-play” has an effect on everyday life and corresponds to the theory of selective optimization with compensation developed at the Max Planck Institute for Human Development. This theory states that, even if an ability should not be viewed as a single, homogeneous intelligence, it is still possible to let the human mind, and how both change with age. They have found that old people still have remarkable mental potential. Within the context of aging, the intelligence should not be viewed as a single, homogeneous intelligence; it is still possible.

Evolution Ignored Old Age

Wisdom and Experience - Strengths of the Aged

We are now faced with a new challenge: to conserve human dignity in the later years of life. Healthy and dignified aging has its limits. Gerontology’s imitativum, “add more life to years, not more years to life,” seems less and less applicable to very old age. There are also theoretical explanations that speak against an optimization of old age due to fundamental imperfections in the biological-genetic architecture of the life course as a result of evolutionary selection and optimization. One of the first things to suffer is the potential for its plasticity becomes smaller and smaller. It was selecting and optimizing the reproductive abilities of humans during early adulthood. Thus, with old age, the human genome gradually loses its efficiency and power. It starts making more and more mistakes, its self-preserving regulatory mechanisms deteriorate, and the potential for its plasticity becomes smaller and smaller. These bio-genetic losses of human aging are less obvious potential for its plasticity becomes smaller and smaller. It was selecting and optimizing the reproductive abilities of humans during early adulthood. Thus, with old age, the human genome gradually loses its efficiency and power. It starts making more and more mistakes, its self-preserving regulatory mechanisms deteriorate, and the potential for its plasticity becomes smaller and smaller. These bio-genetic losses of human aging are less obvious potential for its plasticity becomes smaller and smaller. It was selecting and optimizing the reproductive abilities of humans during early adulthood. Thus, with old age, the human genome gradually loses its efficiency and power. It starts making more and more mistakes, its self-preserving regulatory mechanisms deteriorate, and the potential for its plasticity becomes smaller and smaller. These bio-genetic losses of human aging are less obvious potential for its plasticity becomes smaller and smaller. It was selecting and optimizing the reproductive abilities of humans during early adulthood. Thus, with old age, the human genome gradually loses its efficiency and power. It starts making more and more mistakes, its self-preserving regulatory mechanisms deteriorate, and the potential for its plasticity becomes smaller and smaller. These bio-genetic losses of human aging are less obvious potential for its plasticity becomes smaller and smaller. It was selecting and optimizing the reproductive abilities of humans during early adulthood. Thus, with old age, the human genome gradually loses its efficiency and power. It starts making more and more mistakes, its self-preserving regulatory mechanisms deteriorate, and the potential for its plasticity becomes smaller and smaller. These bio-genetic losses of human aging are less obvious potential for its plasticity becomes smaller and smaller. It was selecting and optimizing the reproductive abilities of humans during early adulthood. Thus, with old age, the human genome gradually loses its efficiency and power. It starts making more and more mistakes, its self-preserving regulatory mechanisms deteriorate, and the potential for its plasticity becomes smaller and smaller. These bio-genetic losses of human aging are less obvious potential for its plasticity becomes smaller and smaller. It was selecting and optimizing the reproductive abilities of humans during early adulthood. Thus, with old age, the human genome gradually loses its efficiency and power. It starts making more and more mistakes, its self-preserving regulatory mechanisms deteriorate, and the potential for its plasticity becomes smaller and smaller. These bio-genetic losses of human aging are less obvious potential for its plasticity becomes smaller and smaller.
we need a constant increase in cultural development. And precisely here lies the crux of the problem. Cultural support mechanisms lose their effect as our biological potential decreases in old age. This is especially true for the oldest-old, for whom more and more cultural intervention is required. For instance, older people need much more practice than young people to achieve similar progress in aging. Hence, the private sector contributes to only a small fraction of the aging population. These factors are simply too complex and differ too greatly from individual to individual. Nonetheless, one can argue that in the long term only biomedicine has a chance of truly transforming old age into a “belle époque” of life. Important environmental conditions and age-friendly behavioral strategies alone will not suffice.

Our future lies in old age. For societal reasons, it is thus of utmost importance to pursue gerontology as a cornerstone of science in the 21st century. The United States has already recognized this fact: almost $2 billion in public spending is directed to gerontological research each year. The private sector contributes to another $1 billion. This total of close to $3 billion spent on gerontology each year amounts to more than the entire research budget of the Deutsche Forschungsgemeinschaft (German Research Foundation) or of the Max Planck Society. Notwithstanding a few excellent research groups, Germany has a great deal of catching up to do in the field of gerontology. This is a matter of top priority. In the future, the contributions of the science to the general welfare of the nation will also be judged by whether they benefit the state of people in old age. Research will be expected to provide its share of solutions to optimizing the Third Age and reducing the “unhappy days” of the Fourth Age.

What type of gerontological research is most promising? This question is currently the subject of intensive international debate. It will be important to address not only the positive potential of the Third Age, but also the vulnerability and obstinacy of the Fourth Age: “Hope for a mourning band” may be the motto best suited to this situation.

Age and aging encompass biogenetic-medical, psychosocial, and technological issues and, thus, require interdisciplinary research. Furthermore, gerontology makes a distinction between normal, optimal, and pathological aging. While the latter is a relatively new field of research, the first two are based on a multitude of biogenetic factors, including their interaction with numerous behavioral and environmental parameters. This makes things more complicated than with “simpler” monogenetic diseases for which gene therapy currently seems to harbor a great deal of catching up to do in the field of gerontology. This is a matter of top priority. In the future, the contributions of the science to the general welfare of the nation will also be judged by whether they benefit the state of people in old age. Research will be expected to provide its share of solutions to optimizing the Third Age and reducing the “unhappy days” of the Fourth Age.

Theoretical, there is hope of genetically altering the biogenetic architecture of the life course to make it more susceptible to cultural and psychological influences. However, such speculations put us on extremely shaky ground - not only in terms of research, but also in terms of the ethical-religious debate on human nature. From a sociobiological scientific standpoint, any kind of genetic engineering involves a number of unknowns due to the complexity of the human genome. Any attempt to intervene in this highly intricate system will have unknown side effects. Moreover, the aging process and many of its associated diseases are based on a multitude of biogenetic factors, including their interaction with numerous behavioral and environmental parameters. This makes things more complicated than with “simpler” monogenetic diseases for which gene therapy currently seems to harbor a great deal of catching up to do in the field of gerontology. This is a matter of top priority. In the future, the contributions of the science to the general welfare of the nation will also be judged by whether they benefit the state of people in old age. Research will be expected to provide its share of solutions to optimizing the Third Age and reducing the “unhappy days” of the Fourth Age.

The second economic incentive is the human capital of the young-old, which is presently virtually untapped. As the young generation increasingly shrinks in size, the human capital of the Third Age could experience a boom, also in economic terms. However, it will not suffice simply to extend the working age - say to 67. Although this might make sense economically, it can only be effective if an “old-age work culture” is developed at the same time. Such a culture of “old-age work culture” can only be effective if an “old-age work culture” is developed at the same time. Such a culture of old-age work culture can only be effective if an “old-age work culture” is developed at the same time. Such a culture of old-age work culture can only be effective if an “old-age work culture” is developed at the same time. Such a culture of old-age work culture can only be effective if an “old-age work culture” is developed at the same time. Such a culture of old-age work culture can only be effective if an “old-age work culture” is developed at the same time. Such a culture of old-age work culture can only be effective if an “old-age work culture” is developed at the same time. Such a culture of old-age work culture can only be effective if an “old-age work culture” is developed at the same time. Such a culture of old-age work culture can only be effective if an “old-age work culture” is developed at the same time. Such a culture of old-age work culture can only be effective if an “old-age work culture” is developed at the same time. Such a culture of old-age work culture can only be effective if an “old-age work culture” is developed at the same time. Such a culture of old-age work culture can only be effective if an “old-age work culture” is developed at the same time.