

❖ ONE ❖

Perspectives on Aging

This chapter presents central theories of aging from different disciplines and describes the approach taken in the current book. By the end of this chapter you should be able to:

- Describe demographic changes that will occur in the next 50 years
- Describe the variability among older people
- Distinguish between biological, psychological, sociological, and life-span approaches to aging, and be able to talk about some theories of aging
- Understand the difference between a longitudinal and a cross-sectional design for studying aging
- Understand the difference between qualitative and quantitative approaches



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*Simply put I want to grow old,
Dying does not meet my expectation*

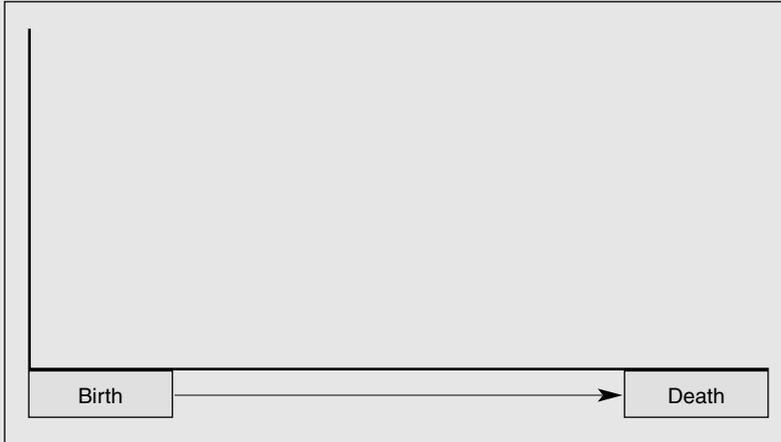
—Pavement, “We Are Underused”

So do *you* want to get old? Given the choice, most people do—it is better than the alternative! Benjamin Franklin is thought to have said that the only two things in life that are inevitable are death and taxes. Well, you can add aging to that list. *All* of us are getting older *all* of the time, and while modern medicine, cosmetics, and plastic surgery may mitigate some of the things that come along with aging, they don't change the course of time.

This book is about communication and aging. I am going to be describing how we talk about age and how our communication sometimes betrays our less-than-positive perceptions of aging. I will be exploring some of the pleasures and pitfalls that occur when younger and older people talk to one another. I will also be discussing broader issues of how whole societies communicate about aging (for instance, through mass media). As you read the book, it is important to remember that aging is something that is happening to all of us. If you are 60, you are probably well aware of this; if you are 20, you may not have thought about it so much. On the next page, you'll find an exercise that you should complete before reading any further.

I am going to use the term **aging** to refer to the passing of time for an individual—the inevitable chronological change in our age from year to year. You perhaps use “aging” to refer to other things—a progression of physical decline, a change in family roles (e.g., becoming a grandparent), a change in work status (retirement), or forgetting where you left your keys. While some of these may be *associated* with increasing age, to call them “aging” confuses the issue. Aging is not associated with physical decline for all individuals at all points in time, so we need to separate the two concepts. Likewise, I am going to avoid talking about how we “stay young” on the basis that it is impossible. We may want to stay fit, healthy, socially active, or in touch with the current music scene, but treating those things as equivalent to being “young” only serves to reinforce notions about aging that (as I will argue) are inappropriate. Staying physically fit is an excellent idea; “staying young” is impossible. This book

Exercise 1.1 Perceptions and Expectations of My Own Aging



1. Draw a line (like a temperature chart) across the page to depict the peaks and troughs that you have experienced and that you expect to experience in your life.
2. Use vertical lines to divide your lifeline up into important life periods, with as many or as few stages as you like.
3. Give each stage a name and indicate the approximate age at which it starts and ends.
4. Above each stage mark ++, +, 0, -, or --, depending upon how you feel about that stage.
5. Answer the following questions:
 - What is the shape of the line, and what does that tell you about your experiences and expectations? What does a peak indicate? Happiness? Wealth? Control over your life?
 - Are the peaks and troughs major or minor?
 - Is there more volatility (ups and downs) during certain periods of the life span?
 - How could you decrease the troughs, increase the peaks? What changes could you have made in the past (or might you make in the future) to make life better?
 - Might some positive results have emerged from the troughs, or negative results from the peaks?
 - Where are the divisions closest together? Further apart?
 - What are the important events/issues marking boundaries between stages?
 - Why did transitions occur at the time that they did? Are these transitions that lots of other people might experience at about the same time, or are they unique to you?
6. If you are working as a class, consider sharing your (anonymous) responses and discussing some of the differences.

SOURCE: This exercise is derived from Whitbourne and Dannefer (1985) and Harwood and Giles (1994).

focuses on older adults—the group that perhaps you’ve talked about as “the elderly.” However, it is important to remember that older adults don’t appear out of nowhere. They used to be younger adults and children, so to understand them, we have to consider the entire life span.

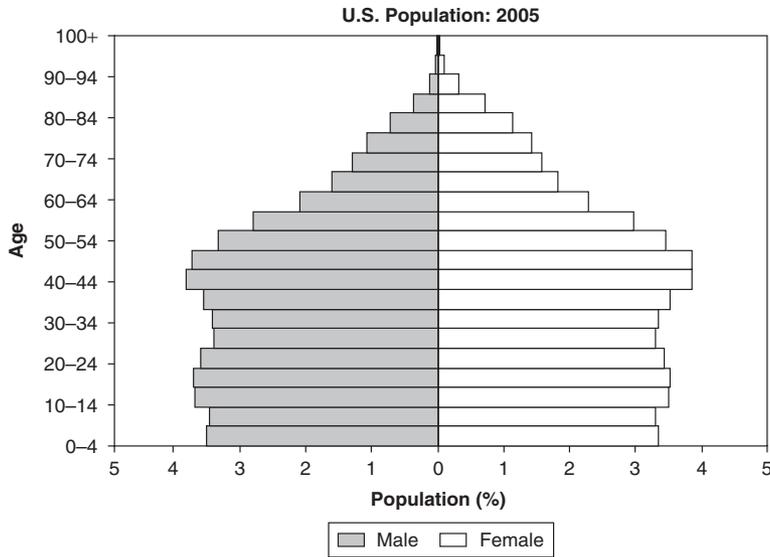
To begin, let’s think about why studying human aging is a valuable thing to do.

Why Study Aging?

Recently, the obvious answer to this question has been a **demographic** one. Following the Second World War, there was a worldwide surge in births (the **baby boom**). In part, this was because families had postponed childbirth until the war was over. But it was also a result of increased wealth and availability of devices like washing machines—it’s easier to have kids if you have more money and more time-saving devices! The elevated birth rates lasted into the early 1960s, and the baby boom generation is generally defined as those born between 1946 and 1964. Population change is also occurring as a result of **life expectancy**. Currently, individuals turning 65 in the United States can expect to live about another 20 years, and that number is increasing all the time. If we treat age 65 as the start of older adulthood, then the oldest baby boomers will enter older adulthood in 2010. They will continue to be a significant influence on the population well into the middle of the 21st century.

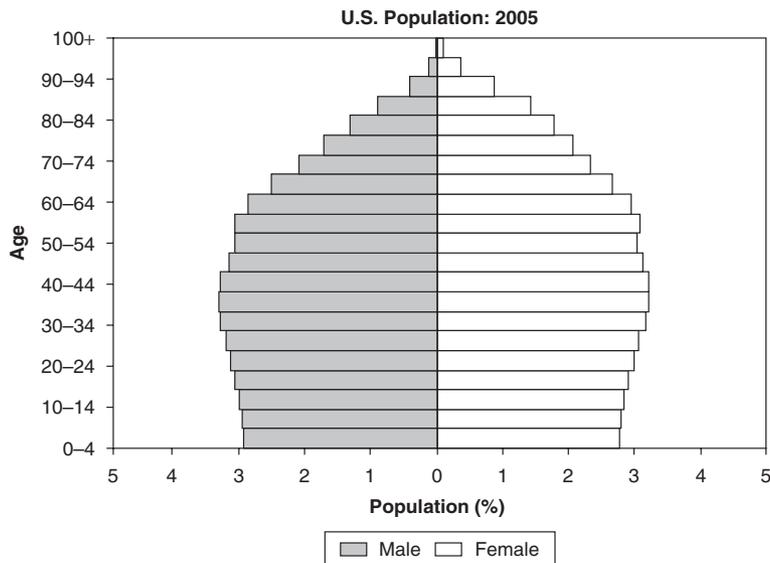
Figure 1.1 shows a **population pyramid** for the United States in the year 2005. Notice that it’s shaped something like a house with a pitched roof: Younger generations are roughly equal in size, but above the age of about 50, the size of the population begins to shrink (hence the term “pyramid”). In contrast, Figure 1.2 shows a projection of the U.S. population in 2050. Notice the bulging shape, and the fact that the slimming at the top of the pyramid occurs later (above age 60). In particular, it’s interesting to note a very substantial increase between the two figures in the number of individuals 90 years and older. Thus, simply the number of older people in the United States has made studying aging important. Similar trends exist worldwide—indeed the baby boom in East Asia is larger than in the United States. Figure 1.3 shows what the Chinese population will look like in 2050. Compared with Figure 1.2, you can see that the shape for China is even more “top heavy,” and that those 60 to 64 years old are the largest single age group in the entire

Figure 1.1 U.S. Population Pyramid: 2005

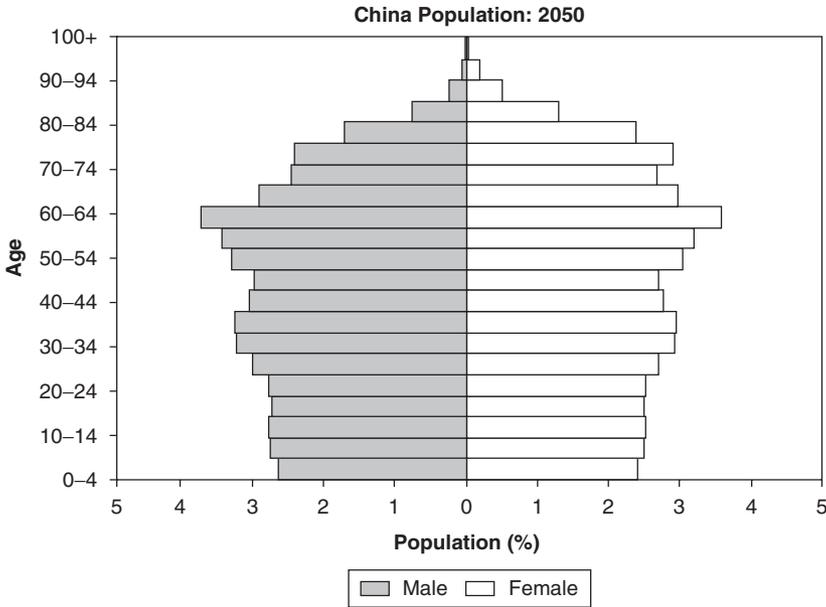


SOURCE: From United Nations Department of Economic and Social Affairs (2005).

Figure 1.2 U.S. Population Pyramid: 2050



SOURCE: From United Nations Department of Economic and Social Affairs (2005).

Figure 1.3 China Population Pyramid: 2050

SOURCE: From United Nations Department of Economic and Social Affairs (2005).

Exercise 1.2 Demographics of Aging

Pick a country. Go to <http://esa.un.org/unpp/> and download population data for that country for the current time and for the year 2050 (you'll need to click on "detailed data" and go to "population by five year age and sex"). If you are working as a class, compare some of the different patterns observed in how populations change over time for different nations. Consider South Africa, Russia, Zimbabwe, Nepal, or Brazil as countries with interestingly different profiles.

population. Exercise 1.2 shows you how to create a population pyramid for other countries and times.

Before moving to other issues, it is perhaps worth noting that the "tidal wave" of older people has been the subject of much social discussion in recent years, and this will probably increase as more boomers retire. Some of these discussions have fed the fires of prejudice against older people: "They" are

presented as an enormous and greedy mass who are going to strain our health care system, destroy pension funds, and generally disrupt how society functions. Hence, while it is important to describe imminent demographic changes, it is also crucial to exercise caution that such discussions do not reinforce prejudicial myths about the older population (N. Coupland & J. Coupland, 1999).

Demographics aside, there are many other important reasons why we should be interested in studying aging. All humans share the experience of thinking about their past and their experiences when they were younger, as well as contemplating possibilities for the future. Part of the study of aging is trying to make sense of what it means to be the same person inhabiting many different roles, bodies, and age groups with the passing of time. Aging is also interesting for some of the paradoxes it encompasses. For instance, one paradox is that most young people claim to love their grandparents, but in general they are not very fond of older people as a group (see Chapters 3–4). We often discriminate against older people, even though eventually we are going to become one (see Chapter 3). We often claim that old age is associated with great wisdom and knowledge, yet as a society we rarely listen to older people talk (and when we are forced to, we often don't enjoy it very much—see Chapter 5). Hence, we should be interested in studying aging so as to understand these paradoxes, and hopefully improve relations between older and younger people in society.

Finally, old age is also interesting because of the **diversity** in the older adult population. Far from being a homogenous group, over 65s are incredibly diverse (Dannefer & Perlmutter, 1990). Researchers are interested in uncovering the causes for that diversity: Why is it that one 70-year-old can end up as president, while another requires care in a nursing home? The variability among older adults becomes particularly clear with recent increases in longevity. Between ages 65 and 95 there is a huge amount of change in our bodies and minds. P. B. Baltes (1997) calls those 80 and older the “fourth age” and describes that age group as a new frontier for research. This is largely uncharted territory for scientists because people in this age group were extremely rare until fairly recently. When we compare people in the “fourth age” with the “young old” (roughly 65–80 years old) we can see some dramatic differences in physical well-being, social functioning, and the like. In Chapter 2, for example, we'll see the dramatic differences in the prevalence of Alzheimer's disease between 70- versus 90-year-olds. Finally, there are diversity implications related to sex and ethnicity. Chapter 10 will address some of the cultural variability in aging: Getting old is simply not the same experience for people in

different cultural groups. Similarly, getting old can be quite different for men versus women. For instance, women are much more likely to lose a spouse as they get older (because men die younger, and women tend to marry slightly older men). All of these examples point to the conclusion that older people are very diverse, and scientists need to understand more about that diversity.

Why I Study Communication and Aging

Jake Harwood (Professor, University of Arizona)



During my teenage years I became increasingly interested in issues of prejudice against people of other nationalities, ethnic groups, religious orientations, and the like. Why are such forms of hatred so widespread, and why do they seem so hard to get rid of? This interest was

stoked in my undergraduate classes (I was a Psych major)—there I learned about theories of racism, intergroup relations, and social identity. During this period, I also came to recognize that prejudice against older adults was similarly widespread, and similarly hard to get rid of. And over time I came to understand that this prejudice was just as wrong, and just as interesting from a communication perspective as any of the others. Along with this personal journey, my interest in aging was spurred by all of the great people who study communication and aging issues—you'll see and hear about many of them in this book. These people have inspired and encouraged me. Finally, my own aging has made me more directly aware of the personal stake that we all have in understanding more about aging, and in trying to change ageist attitudes.

Approaches to Aging

It is possible to study aging from biological, psychological, or sociological perspectives (among many others). The way in which you begin thinking about aging will probably influence the conclusions that you draw, so we will

consider a few of these perspectives. It should be noted that the field of **gerontology** (the study of aging) is relatively new, and hence most people in the area come from other disciplines (e.g., they are gerontologists who were originally trained as psychologists). Hence, the study of aging tends to be interdisciplinary—it spans a lot of the traditional boundaries established in universities. Below, I consider some of the most common approaches people have taken to studying aging, briefly describing the kind of knowledge that emerges when we take each approach.

Biological/Biomedical Approaches

For many people, studying aging is all about biological changes that are generally negative: illness, decline, and ultimately death. Attempting to understand the biological and biomedical processes that underlie aging can help us understand how to intervene in age-related illnesses, can spur the development of new and more effective medicines, and can improve the quality of life for older people. Biological theories of aging are complex and not central to this book. However, it is important to be aware that scientists remain somewhat uncertain about what causes physical symptoms associated with old age.

Some focus on the process of gene reproduction and mutation. Our genetic material (DNA) is being reproduced constantly, and during the process of reproduction, errors occur. One theory of aging suggests that the accumulation of these errors over time causes problems in the production of proteins (very basic building blocks of life) that make it more likely that crucial organs, like the brain, liver, or heart, will stop functioning properly.

Other biological approaches focus on metabolism rate (the speed with which bodies perform their basic chemical functions). These theories suggest that organisms that live longer have slower metabolism rates. Mice, for example, don't live very long and have exceedingly high metabolism rates (they almost literally burn themselves out very quickly: Flaming mice, Batman!). If physical decline associated with aging is a function of metabolism rate, then we should be able to extend our lives by slowing our metabolism rate, and such effects have been shown in some creatures. For instance, mice that are fed calorie-restricted diets (no Big Macs!) tend to live substantially longer than mice whose food intake is not restricted. Proponents of this theory have advocated seriously calorie-restricted diets for humans to slow the metabolism and thus increase the life span. Experiments on humans in this area are obviously challenging.

The **Free Radical** theory proposes that certain highly reactive agents in the body (“Free Radicals”) cause damage to all sorts of parts of our body over time. These free radicals are produced as a natural part of body chemistry. As the damage they cause accumulates, so are serious malfunctions in body functioning more likely (disease, organ failure, etc.).

Finally, cross-linking theories suggest that over time certain proteins in our body start to connect to one another when they shouldn’t. This is clearly evident in the skin, which even at relatively young ages begins to lose the smoothness and elasticity it had when we were babies. While skin is fairly superficial (only skin deep!), such processes occurring elsewhere might cause more significant problems. For instance, proponents of this theory explain vision decline with aging as a function of proteins cross-linking in the eye’s lens, which reduces the normal flexibility of the lens that allows our eyes to focus.

The common thread across all of these theories is that the body slowly wears itself out, whether as a function of internally produced complications or environmental damage. However, what is also clear from many of these theories is that some of the changes that we view as “inevitable” with aging could actually be addressed with preventative care. If metabolism rate influences our life span, we can eat fewer calories. If it’s free radicals, then substances like vitamin C may be very important, because they neutralize free radicals. Indeed, we need only look at the changes in longevity over the past 100 years to understand the impact of lifestyle on age-related processes. In Western nations, life expectancy increased from about 45 years in 1900 to about 75 years in 1995. In the United States, the National Center for Health Statistics (Hoyert, Kung, & Smith, 2005) reports life expectancy of 77.6 years in 2003, up from 77.3 years in 2002—so babies born just a year later are expected to have an average life span about 4 months longer. Such changes are a function of lifestyle developments (better diet, better understanding and treatment of disease, better education, and the like: P. B. Baltes, 1997). Therefore, it is clear that the nature of biological change that occurs with aging is distinctly “plastic”—it can be changed.

Nonetheless, some illnesses and conditions continue to be chronically associated with old age. Evolutionary biologists have discussed why “natural selection” hasn’t taken care of such problems. Didn’t Darwin say that over time the fittest would survive? So why do people continue to experience negative health consequences in old age (like **Alzheimer’s disease**)? Put simply, there is no **evolutionary selection** *against* genes that predispose us to Alzheimer’s

disease (or other physical problems associated with old age), and there is no evolutionary selection *in favor* of genes that might protect us against the disease. By the time the disease develops, we have already reproduced and passed our genes on to the next generation. Because old age occurs after we've had children, as a population we do not select against predisposing genes, or in favor of protective genes, in the way that we might for a disease that produced symptoms in the teenage or early adult years. Indeed, the evolutionary significance of old age is remarkably complex. Some have suggested that old people are detrimental to a species' success (because they use resources that could be used by younger, reproductively active individuals). These theories have not received a lot of support from researchers (or from those who advocate for older adults!). Other researchers have noted that the presence of older adults in a community has many positive effects. For instance, grandparents can serve a fundamentally important role in caring for grandchildren in societies where parents are involved in farming, hunting, or industry. At least one area of research has suggested that significant strides in human culture are directly traceable to the point in time when people's life spans reached the length that grandparenting was possible (Caspari & Lee, 2004; Hawkes, 2003).

Psychological Approaches

Like biologists, many psychologists focus on decline and deficit in aging. A great deal of attention in this area has focused on memory and the ways in which people forget more when they get old. While evidence has emerged showing that memory deficits can be a problem in old age, some work has also demonstrated that certain elements of memory are largely spared. Short-term memory appears to be more of a concern than long-term memory. So, for instance, as we get older we may have a harder time remembering a 7-digit phone number for long enough to find a pen and write it down. However, we are just as likely to be able to remember the state capital of Kentucky (if you're interested, it's Frankfort).

A second area of decline is that suggested by **disengagement theory**. This theory suggested that older adults disengage from society and their social networks as they approach death. This increasing isolation in older adults was suggested to be functional for older people and those around them (particularly in terms of decreasing stress and bereavement associated with death). This theory has been largely discredited. However, a more recent

theory makes somewhat similar predictions and has received more support. **Socioemotional selectivity theory** predicts that older individuals are more focused on the “here and now,” and hence will focus on the relationships that provide them with the most significant rewards, while reducing their investment in more peripheral relationships. This theory has received support, with evidence that older adults focus their energies on family, for instance, and are less concerned with collecting large numbers of casual acquaintances than younger people (Carstensen, 1992). Hence, while older adults’ networks of social relationships do get *smaller*, it is incorrect to view this as a *decline* of any kind. Rather, it reflects focusing and shifting emphasis (see Chapter 5).

Continuity theory is a theory of aging that downplays the changes associated with aging, and instead focuses on what doesn’t change. Research emerging from this theory has consistently uncovered patterns of stability in old age. Our personalities, our preferences and tastes, the activities we enjoy and those we don’t enjoy all remain relatively stable and predictable in old age. Continuity theory is a useful theoretical framework for those who are terrified of aging. In spite of the notion that everything is going to fall apart at age 65, in fact, things are going to remain much the same!

Activity theory is a psychosocial theory designed to explain successful aging. This theory suggests that those who maintain high levels of activity will be more successful in aging. Extensive support for this theory emerges in studies of older adults who maintain hobbies, develop new ones, and remain socially active. These older people are happier, healthier, and live longer than those who do not maintain their activity level.

A final substantial area of social psychological research has been on issues of attitudes about aging and stereotypes of the elderly. Because of the very direct links between this work and the study of communication, this work is described in considerable detail in Chapter 3. However, for now it is worth noting that psychologists and communication scholars have discovered a lot about why we aren’t always very positive about getting old.

Sociological Approaches

One substantial emphasis of sociologists has been on the demographics of aging. While some baby boomers were still in diapers, sociologists were already beginning to consider the impact of this group on the population as they entered older adulthood. Sociologists have been particularly concerned with the

ability of social institutions to cope with a large population of older adults. They are also interested in phenomena like the geographic mobility of older adults. For instance, here in Tucson we have a large older adult population that is only here for about half of the year—they very sensibly escape the city during the extreme heat of summer! For a sociologist, this raises interesting questions about the availability of social services for year-round older residents—either services are “stretched” beyond capacity during the winter, or they have excess capacity in the summer. There are also interesting questions here regarding the friendship networks of older people in this sort of context—do they maintain two separate networks of friends in their two cities of residence?

Another important demographic issue is the sex ratio among older people. Among people 65 and older, 58% are women and 42% men. This ratio becomes even more skewed with advancing age: 80-year-olds are only about 35% men. The implications of these disparities for providing services, financial planning, health care decision making, and personal relationships are, as you can imagine, substantial. To the extent that sociologists overlap with those interested in social policy issues, these scholars are concerned with the provision of services to older adults and government policies regarding aging. These are the experts you see on television talking about the Social Security system reform in the United States. Included in this group would be a cadre of people who examine, for instance, the influence of retiring baby boomers on the stock market—if older people sell their stocks to buy more conservative investments, will the market crash?

A few theoretical approaches are worthy of brief mention here. **Modernization theory** examines the ways in which societal changes influence the place of older people. Specifically, theorists in this tradition argue that more “modern” societies (think big cities and suburbs, Wal-Mart, computers) have led to a more peripheral position for older adults in society. Evidence for this can be seen in some traditional cultures where traditionally older adults live with their family members. With a move to city living, there is less space in the children’s homes, and the extended family living structure has broken down. However, some question the assumptions underlying this theory, particularly as even in very “modern” societies, children continue to provide extensive support for aging parents, albeit perhaps of a different nature from in the past. Others also question whether there ever really was a time when older people were fully integrated.

Social stratification theory concerns itself with the ways in which age, like gender and race, serves as an organizing principle for social life. Theorists

from this perspective would be interested in examining the extent to which societies are segregated by age. For instance, if you look around a university campus, you tend to find a large number of people in their late teens and early 20s, and not many people much older than that (except for the occasional professor, perhaps). In contrast, if you drive through certain neighborhoods, you may find them almost exclusively inhabited by families with young children, or in other cases by retired people. How this happens and its implications for the organization of social behavior would be of interest to stratification theorists. Is this extent of age segregation functional for society, or does it cause problems? Some sociologists advocate higher levels of age integration and experimental concepts like multigenerational living environments and schools.

Sociologists have also been at the forefront of criticizing how we think about aging as a society. In particular, those who focus on the **political economy of aging** are concerned with how social and economic structures maintain negative life circumstances for older people. Estes and Binney (1989) describe what they call the biomedicalization of aging. They discuss how we have come to see aging as an exclusively medical and biological phenomenon—it is something to be treated medically. This occurs because of the focus of the medical community on profit rather than health: For many medical institutions, it is in their interest to encourage older adults' dependence on the medical system, rather than encouraging older people toward health and independence. Thus, ill health and decline in old age can be understood as socially constructed phenomena: As a society we create the conditions in which it is easy for older people to buy into their own decline, and very difficult for them to maintain independence and health. Political economy theorists criticize spiraling health care costs and declining quality of care, and point to the ways in which government and private industry sometimes appear to collaborate to achieve goals that are in their mutual interest, but perhaps not in the interest of older adults.

Life-Span Developmental Approaches

Erik Erikson (e.g., 1968) may be the first social scientist to consider human development as a **life-span** phenomenon. Prior to Erikson's work (in the late 1950s), human development was something that stopped at the end of childhood—"children develop, adults don't" was the philosophy of the day. In contrast, **Erikson's theory** described various developmental "tasks" that we all have to accomplish throughout our lives. For instance, he said that people

in middle age are focused on issues of generativity: A successful middle age is one that is focused on creation and production. This might include productivity at work as well as creating and nurturing a family. Erikson argued that those who do not feel that they have been successful in producing something worthwhile during this phase will not “pass” one of the life span’s “tests,” and may suffer psychological problems (e.g., depression). Erikson’s theory is now a little outdated: His work failed to consider the possibility for continued developmental challenges late into old age, and his final stage of development puts too much emphasis on achieving a final resolution and “closure,” rather than engaging in a continued challenge. Nonetheless, his work has set the stage for a proliferation of theory and writing that has come in the subsequent years, and he really was revolutionary in drawing attention to developmental tasks and challenges that occur throughout adulthood.

A more recent life-span developmental approach that offers promise for all people interested in aging is the **Selective Optimization with Compensation (SOC)** model (P. B. Baltes & M. M. Baltes, 1990). This approach acknowledges that at all stages of the life span, there are things that we are good at, and things that we are not so good at. At all ages, we resign ourselves to dependence on certain fronts, in order to gain independence on other fronts. When we are very young, we focus on particular developmental tasks (e.g., learning to read, understanding social interaction) and happily delegate others (when did you last see a 3-year-old cooking dinner?). At other points in our life, the balance shifts—in middle age we might invest relatively little in furthering our education, while focusing a lot on our careers (“Show me the money!”). At this stage, we might have limited time or motivation for taking care of our yard, so we pay somebody to do that for us. In other words, we **select** particular areas of our lives, **optimize** our performance in those areas, and **compensate** in those areas where we lack ability or motivation. P. B. Baltes (1997) describes how the 80-year-old concert pianist Arthur Rubenstein accounted for his continued success in spite of his age. Rubenstein reportedly said that he **selected** fewer pieces to play, practiced them a lot (**optimized**), and **compensated** for declines in his own skill with clever strategies. For instance, he couldn’t play the fast bits of some pieces quite as quickly as when he was younger. So instead, he would play particularly *slowly* before he got to the fast bits, thus making his performance of the fast bits seem faster!

The SOC model questions our general inclination to view childhood as a time of gain, and old age as a time of loss. It introduces the idea that we

experience gains and losses at all points in the life span. Consider, for instance, the ways in which children become more inhibited and less able to engage in imaginary play as they get older, while simultaneously gaining technical and social skills. Successfully negotiating development is often a process of deciding which areas to select and optimize, and where and how to compensate for losses in other areas. The SOC model presents an optimistic view of old age as a time when we are continuing to do what we've done all our lives: Focus our energies on the things that are important to us, and look for help with the things that we don't have the time or ability to do ourselves. Table 1.1 presents a list of assumptions that underlie most "life-span developmental" theories. The SOC is a nice example of such a theory, but all such theory has similar sets of assumptions.

Table 1.1 Principles of a Life-Span Approach to Human Development

<i>Principle</i>	<i>Definition/Example</i>
We develop and grow throughout the life span.	Development doesn't just happen in childhood. It continues, and at any age we can still be learning new things, and adapting to environmental changes and challenges.
Development involves gains and losses on different dimensions.	Development is not just about getting physically stronger and intellectually smarter. It is about coping with what life throws at you. A time of physical decline may be a time of great intellectual accomplishment, or great social rewards.
Age constrains but does not control development.	The life-span approach does not deny that age influences development—it is unlikely that a 90-year-old will ever win the 100-meter dash at the Olympics. However, humans are immensely adaptable; there are almost infinite options available to us at almost all points in our lives, and successful development is a function of how we deal with those options.
Environment and history constrain but do not control development.	The specifics of our social and physical environment, and the period during which we live, shape our development, but do not control us. Some challenges kill us; others make us stronger. Social and cultural forces interact with the biological in profound ways.

SOURCE: Derived from P. B. Baltes (1987).

Of course, old age presents some unique challenges, in part because it is such a new phase of life in our culture. The numbers of older adults in society are unprecedented. Aging beyond age 70 was not something that society had to take seriously a hundred years ago. Now it is expected, and we will soon have almost a quarter of the world's population in that age range. We have not had time to culturally adjust to that change in our demographic profile, but it is interesting to ponder how society might change in the future to fully realize the potential of this group of people.

ACHIEVEMENTS IN OLD AGE

Lillian Jane Martin

Lillian Jane Martin was born in 1851. She defied the odds for women of the time and graduated from college, going on to teach high school for a number of years. She became increasingly interested in the field of psychology and quit her teaching job to study for a Ph.D. in Germany. In 1909 (aged 58), she was appointed as a Professor of Psychology at Stanford University and went on to be department head—the first woman to head any department at Stanford. After she retired (involuntarily!) at age 65, Dr. Martin went on to write some of the key works that founded the modern study of gerontology, as well as found a clinic for older people at age 78. In 1913, when Martin was 62, the University of Bonn awarded her with an honorary Ph.D.: As part of the award, the university noted that she was “the most distinguished, most illustrious woman . . . worthy both by name and reputation, philosophical, strenuous, strong, successful, most esteemed in experimental psychology and aesthetics.” Martin continued working and published books into her 80s, providing some key grounding for today's study of old age. Foreshadowing some of the perspectives presented in this book, she once said, “Age is an accident and nothing to pride oneself on. The important thing is to adapt oneself to the requirements of each successive age class and to function in each as an active participant in life, a fully adjusted human being.” Martin lived her own philosophy well: According to the official memorial resolution published by Stanford when she died, she learned to drive a car at the age of 78, and subsequently drove across the country twice. Learning new skills and contributing new ideas are clearly things that are possible even into advanced old age.

Methods for Studying Aging

All research methods that are applied to social phenomena can be used for studying aging. Researchers interested in aging processes use interviews and questionnaires to ask people about their experiences of aging, feelings about older adulthood, and the like. They also use experiments to manipulate various aspects of the environment to see if they have effects on our opinions about aging, or the actual experience of aging. In addition, a multitude of observational methods are used, such as visiting retirement communities and nursing homes to observe how they function, or asking young and old people to have conversations while they are videotaped. With aging, though, some additional considerations come into play—we become interested in how people are changing as they get older, and to understand that, we need some rather specific methods.

Some researchers employ **cross-sectional designs**. These are designs in which people from different age groups are examined at one point in time (e.g., by recruiting a group of 20-year-olds and a group of 70-year-olds, and comparing their scores on a memory test). These are relatively low-cost designs—all of the data can be gathered at a single point in time. However, we can't always interpret the findings. If the 20-year-olds do better on the memory test, is that because memory gets worse with age? If so, you have discovered a **developmental effect**—some fundamental change that occurs as we get older. However, it could be because people born 70 years ago ate less fish (fish is brain food, you know!), and so their memories are worse because of their diet. That would be a **cohort effect**—an effect that is the result of being born at a particular point in time. A cohort is any group of people born at roughly the same point in time, so a cohort effect is any difference between two groups of people that occurs because of *when* they were born, rather than because of how old they are. With cross-sectional designs, it is impossible to distinguish between developmental and cohort effects.

One partial solution to this problem can be found in **longitudinal** studies. These studies take a single group of people and track them over time. So, you start with a group of 20-year-olds and examine them every 10 years. After 50 years (at which point they will be 70) you will be able to see whether their memory has declined with age. If their memory is worse, you know it is *not* a cohort effect, because this is a single cohort. However, it is still possible that events specific to this cohort have caused the changes (for instance, air pollution during the intervening 50 years might have caused memory problems,

rather than anything inherent to the process of aging). So we are still not sure that what we have observed is a developmental effect that would apply to all cohorts. After spending 50 years on the study, you can imagine that it is rather disappointing to discover that you can't draw any firm conclusions!!

To fully disentangle cohort effects and developmental effects, researchers have come up with various complex designs, generally known as **cross-sequential** methods. One type is illustrated in Table 1.2. In this design, groups of people of different ages (in this case, 20, 40, 60, and 80) are recruited at a particular point in time (in this case, the year 2000). Whatever variables are central to the study are measured (e.g., memory). Then, at some fixed interval (in this case, 20 years) the people are contacted again, and the variables of interest are measured again. In addition, every 20 years a new cohort of 20-year-olds is recruited. Essentially, this is the equivalent of running multiple longitudinal designs side by side. The arrows in the diagram indicate the direction of each longitudinal wave.

By using the type of design illustrated in the table, it is possible to understand whether effects are caused by cohort or life-span developmental factors. Differences across rows indicate cohort effects. Consider, for instance, all of the different 80-year-olds studied (shown in the ellipse). If we find that 80-year-olds in 2040 have better memories than 80-year-olds in 2000, that difference would clearly be a function of when they were born. Both groups are 80, so the memory difference between them can't have anything to do with their age, and hence it is not a developmental difference.

Table 1.2 A Cross-Sequential Research Design

		Year				
		2000	2020	2040	2060	2080
People studied	20-year-olds	20	20	20		
	40-year-olds	40	40	40	40	
	60-year-olds	60	60	60	60	60
	80-year-olds	80	80	80	80	80

NOTE: Numbers in the cells of the table indicate age of subjects at the time of measurement.

In contrast, if you observe consistent patterns of differences between two age groups no matter when they were born, then those differences are probably reflective of stable life-span developmental patterns. For instance, consider the various 20- and 40-year-olds that we can compare (shown in the grey boxes on diagonals). If 40-year-olds always have worse memories than 20-year-olds across all of those time periods, then we can be fairly confident that this is a life-span developmental trend. It seems to happen no matter which cohort people are from. Clearly the time and energy required to carry out these designs is considerable, and hence they get used fairly infrequently. In contrast, cross-sectional designs are cheap and easy to perform, and they are used a lot, despite their limitations. Possibly the most valuable thing that considering these designs does for us is draw attention to the many different interpretations of a difference we might observe between two age groups. Properly interpreting “age differences” is a very complicated task! Box 1.1 describes a more in-depth and context-rich approach to aging research.

Box 1.1 Qualitative and Interpretive Approaches to Aging:
The Example of Reminiscence

While a traditional “scientific” approach to aging encompasses some of the designs described in the text, it is also possible to examine aging through a more “qualitative” lens. Qualitative researchers try to understand aging by listening carefully to what people say about aging, and by examining older people’s “real lives” (as opposed to their responses to questionnaires!). For instance, Buchanan and Middleton (1993) were interested in reminiscence activities in senior centers. In these activities, a facilitator (generally a nurse or social worker) works with groups of older people and encourages them to talk about their life experiences, ostensibly with the idea that this is psychologically functional for older people (e.g., it helps them achieve a sense of personal integrity). These researchers interviewed some facilitators and asked them how they felt about the groups. The goal of the research wasn’t to find out whether reminiscing is good or bad for older people. Rather, the researchers wanted to understand how everyday communication about reminiscence shapes our understanding of getting old, older people, and elder care. For instance, one of the facilitators indicates that she is actually quite skeptical about the use of reminiscence, suggesting that it encourages

older people to live in the past (“you gotta keep ‘em up to date”). Another facilitator, on the other hand, strongly supports the idea that it’s useful for the older adults (“you’ve got to remember your past ‘cos that’s a part of you”). A third person notes that it can be enlightening for those listening to hear reminiscence, thus focusing on the hearer rather than the speaker (“I feel very honored that I can learn so much about the past”). Thus, the care providers give different “versions” of what reminiscing is good for, and how it functions both for older speakers and the listener. These different versions are, in a sense, “theories” of reminiscence, and are used by the care providers to justify what they do or don’t do in working with older people. This kind of research is valuable in giving life to the real voices of older adults and people who have contact with older adults. It also challenges us to think about how people “construct” views of aging in everyday talk: It forces us to recognize that some of what we take for granted about aging simply reflects our conventional patterns of talking about old age.

Summary

As with most aspects of human social life, the study of aging is complicated. It involves contributions from the biological and medical sciences as well as from across the social sciences. Different disciplines have quite different theories to understand aging, and to fully understand old age we must consider all disciplinary perspectives. Increasingly, we will also rely on the insights of gerontologists—people specifically trained to examine aging. As the final portion of the chapter showed, some of the methods we use to study aging are different, and in some ways more complicated, than methods used in other areas. As we face the demographic realities of the 21st century, understanding the why, how, and who of studying older adulthood will become more important. For people making career decisions, understanding aging can be particularly important: The Bureau of Labor Statistics estimates that the number of jobs related to aging will grow by almost 40% by the time we reach 2012, and will continue growing after that point. People who understand more about human aging will have a huge advantage in the labor market over the next 20–30 years. The next chapter will expand on a communication perspective on aging, discussing the kinds of insights that communication scholars can bring to this fascinating part of human life.

Keywords and Theories

Activity theory	Free Radical
Aging	Gerontology
Baby boom	Life expectancy
Cohort effect	Life span
Continuity theory	Longitudinal design
Cross-sectional design	Modernization theory
Cross-sequential design	Political economy of aging theory
Demographic	Population pyramid
Developmental effect	Selective optimization with compensation
Disengagement theory	Social stratification theory
Erikson's life-span theory	Socioemotional selectivity theory
Evolutionary theory	

Discussion Questions

- How do changing population demographics influence individual lives? How might the aging of the baby boomers influence **your** life?
- What economic opportunities might arise as a result of the aging of the baby boomers?
- What are some ways in which you are currently facing issues of selection, optimization, and compensation in your own life?
- Why has “natural selection” not eliminated Alzheimer’s disease?
- What does it mean to say that genes (or anything else) constrain, but do not control, development?

Annotated Bibliography

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Rowe, J. W., & Kahn, R. L. (1998). *Successful aging*. New York: Random House. A very readable examination of myths about aging, and a great personal guide for how to maximize your own older adulthood. Buy it for yourself, your aging parent, or grandparent.