

Society and the Individual at the Dawn of the Twenty-First Century

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INTRODUCTION

Societies exert profound influences on the developmental paths of their citizens. Whether engaged or disengaged, satisfied or dissatisfied, socially embedded or lonely, healthy or disabled; whether people feel in control of their lives or view themselves as victims of circumstance, all are intrinsically tied to broad sociocultural contexts in which people come of age. Indeed, the historical era and related social norms into which we are born influence not only how much formal education we attain, when we marry, and how many children we have, but life histories also influence the efficiency with which our brains process information.

In the last volume of the *Handbook of Psychology and Aging*, Warner Schaie (2011) contributed an insightful historical analysis of the role of policies, such as the GI Bill, and public education in shaping life course trajectories. He also noted more elusive cohort effects such as steady and worldwide increases in (primarily) fluid intelligence, referred to as the Flynn effect (Flynn & Flynn, 2012).

In this chapter, rather than take a historical perspective, we document current trends in health, family structure, education, work, and retirement and consider how these changes may affect the wellbeing of future generations of aging individuals. Forecasting the long-term

future is perilous, and we do not aim to do so. Rather, we consider the ways in which important social institutions, like the family, work, and retirement, are changing and consider ways in which policies and social norms could help or hinder wellbeing in future generations.

Societies have long sought to shape the lives of their citizens. At the turn of the twentieth century governments, communities, and families crafted education in the early years of life to contribute to the growth of patriotic and capable citizens. It was a time when only a minority of boys or girls attended secondary school (Fussell & Furstenberg, 2005). Home economics was developed to teach basic household skills to young girls so that they would better manage family life. Boys were ushered into “shop” classes where they learned about woodworking and machinery. The research community studied how parenting and schooling affected adult outcomes (e.g., The Child Guidance Study, initiated by Jean McFarlane and her colleagues in the 1920s and the Oakland Growth Study by Harold Jones and Herbert Stolz in the 1930s). Although investigators have tracked some of the participants of these longitudinal studies into older ages, the studies were designed to focus on the early stages of life.

Now, for the first time in human history, societies are presented with the need for an even longer view of lifespan development. We

need to ask not only how to raise children to become productive workers and good citizens, but also what kind of *elderly* people we want our children to become (Berkman & Glymour, 2006). How do we delay illness until very advanced ages? What kinds of policies and social norms might encourage family stability, support, and caregiving when step-families are common and three and four generations are alive at the same time? How can we ensure that education continues throughout adulthood? How do we ensure financial security throughout long lives? In this chapter, we briefly overview the current status of health, education, family, work, and retirement in the United States. We also consider policies and practices that may optimize long-term outcomes.

A COMMENT ON LIFESPAN PSYCHOLOGY

From its inception, lifespan psychology has recognized that broad contextual forces powerfully shape individuals' lives. As lifespan theory emerged in developmental psychology in the 1970s, theorists including Paul Baltes, John Nesselrode, Hayne Reese, and K. Warner Schaie, articulated sociocultural, historical, biological, and social factors as key influences on adult development. Lifespan approaches encompass multi-disciplinary perspectives and are, therefore, well poised to benefit from the current emphasis on cross-disciplinary fertilization through team science, and inter- as well as multi-disciplinary collaborations. Current efforts at the National Institutes of Health, the National Institute of Aging, the National Science Foundation, and the Institute of Medicine are all promoting modern instantiations of this mission.

The present chapter is authored by members of the MacArthur Research Network on Aging Societies, formed in 2008 when the MacArthur Foundation charged John W. Rowe with the

formation and leadership of a new network. Its mission was to consider how population aging will likely change societies and how best to prepare for those changes. The Network on an Aging Society includes members with expertise in developmental and social psychology, demography, economics, medicine, neuroscience, policy, political science, public health, and sociology. The choice of Rowe to lead the Network was significant in that he had previously lead the MacArthur Network on successful aging which focused on aging at the individual level. In contrast, the unit of analysis considered by the current Network is *society*, as it transitions from a young age structure, represented by a pyramid, to an old age structure, better represented by a rectangle and including more older, than younger, people.

There is no question that population aging will change life in profound and far-reaching ways. The Network has authored a number of articles about societies and policies (Furstenberg, Hartnett, Kohli, & Zissimopoulos, 2015; MacArthur Foundation Research Network on an Aging Society, 2009, 2010; Ryan, Smith, Antonucci, & Jackson, 2012; Zissimopoulos, Goldman, Olshansky, Rother, & Rowe, 2015). In this chapter, we consider how the psychological wellbeing of *individuals* will be affected by the fact that today, and in the foreseeable future, people will be born into and grow old in societies with many more long-surviving elders than in the past. Greater longevity is a profound achievement. It also presents many challenges. Chronic health problems among seniors are on the rise (Martin & Schoeni, 2014). Disparities in old age outcomes are increasingly stark. Increases in life expectancy in the last quarter century are essentially occurring only among the college-educated (Meara, Richards, & Cutler, 2008) while reversing among those at the very bottom of the educational ladder; hope that all can achieve the American dream is diminishing (Olshansky et al., 2012). The importance of education is

increasing as a predictor of wellbeing and longevity, and the absence of education is more lethal today than it was just 20 years ago (Olshansky et al., 2012).

Population aging is not occurring in a vacuum. The diffusion of technology into virtually all aspects of life from social relations to employment means that education is becoming increasingly essential for accessing global opportunities. Education facilitates work attainment, which subsequently predicts how long and in what types of jobs people work. Employment, in turn, positively influences cognitive functioning. Thus, in our society today, education affects the entire course of life. Moreover, the nature of work has changed over the same period of time that life expectancy in adulthood has increased. Most people no longer work for a lifetime employer who provides a pension at the end of a career. The average American Baby Boomer holds multiple jobs over their lifetime (Bureau of Labor Statistics, 2012), a trend that is increasing among younger generations. Pensions have been replaced by 401k plans, shifting retirement saving responsibility and financial market risk from employers to employees, many of whom are currently saving far too little to retire comfortably. The family is changing as well; 40% of American children are born outside marriage, increasingly people are opting out of parenthood and multiple, serial marriages and cohabitational unions are increasingly common, creating complex families. At the same time, families now often include more generations. A 20-year-old today has a better chance of having a living grandmother than a 20-year-old one century ago had of having a living mother (Taylor, 2014).

All of these broad societal trends are connected to individual wellbeing. Physical health is a key predictor of psychological wellbeing (Naylor et al., 2012). A subjective sense of social isolation predicts mortality as well as smoking a pack of cigarettes a day predicts mortality (Luo, Hawkley, Waite, & Cacioppo, 2012;

Holt-Lunstad, Smith, & Layton, 2010). In contrast, social networks that support close bonds with others (Antonucci, Birditt, & Ajrouch, 2011) and emotional balance in daily life (Carstensen et al., 2011) predict how long people live. We maintain that the dramatic aging of the population calls for widespread changes in the ways that we live. Policies and practices that support longer lives can greatly improve the individual wellbeing of everyone in our aging society. However, if we continue to let social norms that evolved in response to shorter lives guide us, we jeopardize present and future generations.

To date there has been relatively little discussion about proactive policies and practices that positively shape long lives. Indeed, most public discourse about aging societies is focused on the potential costs and loss of productivity that aging societies may bring. Strategic policies and innovative practices could enhance education, strengthen families, and improve the quality of working life and retirement preparedness, while heightening the overall wellbeing of the population. Changes that increase educational attainment, extend engagement in workplaces and communities, and improve health practices, will benefit individuals, families, and communities in aging societies. At the same time, persistent disadvantage has been shown to affect societies at all levels and will exponentially affect the aging society. In the absence of efforts to reduce disparities in the population, entire societies will be negatively affected, not due to aging per se, but to the cumulative effects of inequality.

HEALTH AND HEALTH CARE

The health status of older Americans has greatly improved over time, with a dramatic reduction in premature death beginning in the twentieth century and continuing into the twenty-first. The healthy lifespan increased

over the same period with the physical health of older adults reliably improving as increasingly younger cohorts reached old age. For decades across successive age cohorts in the United States health span has increased as well. The physical health of older adults reliably improved as increasing numbers of people from younger cohorts are reaching old age. For decades, across successive age cohorts in the United States, older people, especially the “young-old” have been more fit than their parents were at the same age. For the period from 1980 to 2000, there was a significant and progressive reduction in the age-specific incidence of functional impairments among older persons. This includes the capacity to conduct basic activities such as bathing, dressing, eating, grooming, transferring from bed to chair (i.e., activities of daily living—ADLs) without assistance and also more complex activities such as shopping, using a telephone, and cooking (i.e., instrumental activities of daily living—IADLs) (Freedman et al., 2013). The changes were so great that by 2000 there were several million functionally independent older persons who would have been counted among the disabled had the disability rates of 1980 prevailed. This steady positive progression continues today among the oldest old. Disability rates continue to decline among those over 85 years of age, a likely effect of educational attainment in today’s 85-year-olds compared to the prior oldest-old cohorts. However, as noted below, there have been some disturbing new trends in younger ages (Freedman et al., 2013).

Psychological wellbeing and functioning in day-to-day life are tightly linked to disease, pain, and disability. Good physical health is an important resource for older persons to be engaged in society, either through paid work or volunteering, both of which appear to have beneficial effects on wellbeing (Ajrouch, Antonucci, & Webster, 2014; Bonsang, Adam, & Perelman, 2012; Carlson et al., 2009), as well as the cost of health care at the individual and societal level.

Because the incidence of most diseases increases with chronological age, population aging demands serious attention to the maintenance of functional health in aging individuals and the prevention of disease. Mental health in today’s older cohorts is relatively good compared to middle-aged and younger cohorts (Blazer & Hybels, 2014), although both caregiving and institutionalization are associated with substantial psychological distress, as well as increased morbidity and mortality (Schulz & Beach, 1999). Moreover, like diabetes, increases in psychiatric disorders in younger cohorts, particularly depression and anxiety, raise concern about future generations’ ability to manage the long-term sequelae of early-onset psychiatric disorders, as well as adapt to age-related losses and disease (Greenberg et al., 2003).

News about the physical health status of younger Americans bodes poorly for the future. Although the incidence of acute diseases is relatively low compared to earlier periods, the incidence of chronic disease is increasing. The global rise in chronic diseases (WHO, 2003), is especially evident among Americans and now represents the leading cause of disability and death in the United States. It is not simply due to a lack of health insurance coverage. A recent study that compared the health of middle-aged white Americans who had health insurance—in other words, relatively privileged Americans—with middle-aged British citizens concludes that even these Americans were sicker across a range of measures (Banks, Muriel, & Smith, 2010). A study by Seeman, Merkin, Crimmins, and Karlamangla (2010) observed increases in every type of disability measured in people aged 60–69 years. The increases are evident across social class and are exacerbated in ethnic minorities, particularly African Americans and Hispanics, as well as people who are overweight and obese. Even more disturbing is evidence that substantial numbers of young American children are experiencing peripheral biology that precedes diabetes and hypertension (Lee et al., 2009;

Seeman, Epel, Gruenewald, Karlamangla, & McEwen, 2010). Childhood obesity and resulting diabetes rates have risen dramatically. Because the effects of diabetes generally worsen over time there is great concern that early-onset diabetes may lead to an epidemic of kidney failure, amputations, and blindness later in life.

Even though the age of disability onset has been pushed back as health status and longevity have improved, late life disabilities remain common. Indeed, one direct consequence of reducing premature death is that people are more likely to survive into very advanced ages at which point large numbers of survivors experience multiple and concurrent disabilities leading to the loss of independence and the need for supportive care. There is a distressingly high probability that elders will lose some functional abilities and need supportive services as they live into their 80s and 90s (Freedman et al., 2014). By the age of 90, for example, only 4% of the population remains completely free of impairment in either instrumental or physical function.

Supportive services for those with some form of limitation will be increasingly needed with greater longevity. Today while 11% of those aged 65–70 need assistance from others, 42% of those over 85 do. Family members, especially spouses, are typically the first to be affected. A range of home- and community-based services now accounts for half of all Medicaid spending. Finally, institutional care is declining, but is still needed for those most severely disabled, typically those 85 years and older. Three major conditions that lead to institutionalization in late life are urinary incontinence, hip fractures, and dementia. Mental incapacity associated with Alzheimer's disease and other dementias is particularly distressing, as individuals slowly lose their identities and caregivers are pushed to exhaustion. An estimated 80% of supportive care is provided by family members or other informal caregivers, resulting in an often overwhelming burden on

the caregiver (Sherman, Webster, & Antonucci, 2013). Late-life disabilities and the resulting loss of independence and autonomy are the major causes of stress and depression in late life, not only for the one experiencing the limitations but also for caregivers, especially spouses (Schulz & Martire, 2004). The fluid nature of contemporary marriage and childbearing results in numerous caregiving fault lines, including the lack of a sense of responsibility and obligation, the lack of effective lines of family communication, and the lack of strong affectional ties (Ryan et al., 2012). As a result, future generations will need to be more strategic and create innovative solutions to address their caregiving needs.

Policies and Practices

There are significant opportunities to enhance health as people age. A reduction in smoking has been and continues to be important in reducing associated morbidity and early mortality. Enhancement of established public health efforts, such as vaccination programs for pneumonia, shingles, influenza, and other preventable or modifiable diseases, along with cancer screening, can further enhance health, especially among older people. To date, the CDC reports that only 25% of individuals entering late life are fully up-to-date with these programs (CDC, 2014), so there is clearly room for improvement.

Aside from these concrete public health efforts, however, very sedentary lifestyles, now typical among Americans, are strongly associated with epidemic levels of obesity, and are especially prevalent among relatively disadvantaged subgroups of the population (Lee, Andrew, Gebremariam, Lumeng, & Lee, 2014). Reductions in the risk or severity of chronic diseases will require considerable increases in physical activity, reductions in sedentary behavior, and improvements in dietary habits and nutrition. Policies that target schools and workplaces are ideally suited for programs that

establish life-time healthy behaviors (Antonucci et al., 2012).

There is also great need for life-long intervention programs that target high-risk populations. Evidence suggests that intervening, even late in life, can be highly effective (Bherer, Erickson, & Liu-Ambrose, 2013). The Diabetes Prevention Program (DPP) lifestyle intervention, targeting those at high risk for diabetes, reduced the rate of developing diabetes by 58% when compared to placebo. The age group that benefitted most was the elderly, demonstrating clearly that secondary intervention is effective even at advanced ages (Tsigos et al., 2013). The National Institute of Aging has created a publicly available program, launched in 2011, called Go4Life (<http://go4life.nia.nih.gov>). This is an intervention program that specifically targets physical activity for the elderly by providing health information, sample exercise programs, as well as links to available support materials and partnering organizations.

Long-term care is one of the major challenges facing an aging society and will affect increasingly more families as the large Baby Boomer generation begins to age past 80 in the very near future. Unfortunately, the United States lags behind other advanced countries in responding to the need for affordable long-term services and supports, especially the lack of family incentives. A multipart strategy is necessary. This should include greater support for family and other informal caregivers, encouragement for community-based care programs as alternatives to institutionalization as well as support for the expansion of research into ways to prevent and cure the leading causes of disability in old age. We must also encourage advance planning for end-of-life decisions so that the wishes of individuals are respected.

It is clear, at this point, that we will not have anywhere near the number of gerontologically or geriatrically trained psychologists, physicians, other health care or public health professionals that we will need to offer specialized

medical and preventive care to elderly people in the future (IOM, 2008). Hoge et al. (2015) have recently outlined the severity of the issue for psychologists and how it might be addressed. We need to prioritize the gerontological and geriatric training of all health care providers so that they recognize age-specific needs of younger and older people. Just as children have different health needs that require different treatments, appropriate types and dosages of medications, and respond differentially to treatment regimens, the elderly face distinct medical issues and require remedies which often are different from those appropriate for young people. One example is frailty which is more frequent among older people and alters responses to treatments and recovery. Another example is obesity which in childhood and early adulthood carries an increased risk of chronic diseases such as diabetes, hypertension, and stroke as well as increasing disability and morbidity. On the other hand, among older people carrying additional weight appears to be less harmful (Clark et al, 2014).

Ultimately, we need to discover ways to prevent or delay serious late-life disabilities. Although a century ago, many of the scientific breakthroughs came from medical science, there is an urgency now to make progress in the social sciences, particularly the science of behavioral risk modification, aimed at delaying and preventing chronic conditions. The United States has been the clear global leader in the biomedical sciences, and the caliber of American scientists continues to be superb. Serious reductions in science funding over the last decade, however, are eroding the potential of new breakthroughs in prevention and treatment of disease and disability just as population aging is rapidly unfolding. There is keen interest among biomedical scientists, for instance, in the prospect of slowing the biological processes associated with aging that increase the risk of a range of diseases and frailty. Slowing these processes could mean that some effects of aging

may be avoidable and even reversible. Recent breakthroughs in stem cell biology, for example, show clear evidence that age-related changes in the hearts and brains of animals can be reversed by exposure to the circulatory systems of young animals or by treatments with proteins which circulate abundantly in young blood but are largely absent in late life (Rando & Finkel, 2013). Similarly, progress in reducing frailty by preserving muscle mass offers similar reasons for optimism (Elkina, von Haehling, Anker, & Springer, 2011; Lu et al., 2014). Goldman et al. (2013) recently reported economic analyses comparing the costs and value of interventions that delay specific diseases with the costs and values of delaying the aging process. They conclude that these broad preventive approaches would be far more cost-effective, not to mention less devastating to family, friends, and community.

Similarly, preventing or even delaying Alzheimer's disease can potentially save billions of dollars and relieve the suffering of millions of victims and their families. The decrease in funding for science across the board, however, has slowed progress in research on brain disease. In 2010 the estimates of total monetary costs of dementia were roughly \$150–\$200 billion annually (Hurd, Martorell, Delavande, Mullen, & Langa, 2013). Although the National Institute on Aging is investing heavily in Alzheimer's disease research and the coordination of research findings, funding shortages continue to slow the pace of new knowledge. Further, there are breakthrough insights about community-based approaches that may offer new approaches to prevention (Carlson et al., 2009) which deserve aggressive follow-up.

EDUCATION

Educational attainment influences lifestyles and, importantly, length of life (Olshansky, Beard, & Börsch-Supan, 2012). Many argue that

educational attainment and its subsequent relationship to employment is at the core of social advantage and disadvantage in the United States. The level of educational attainment individuals achieve places them on starkly different life-course trajectories that subsequently influence access to jobs, partners, stable families, health care, housing, and social networks. Education predicts functional health even better than life expectancy. The strong positive correlation of education with physical health and fitness is well-established (Goldman & Smith, 2002; Jürges, Kruk, & Reinhold, 2013), with highly educated groups holding an even greater advantage in terms of healthy life expectancy than in terms of total life expectancy (Crimmins and Saito, 2000; Crimmins & Hagedorn, 2010). In short, lower levels of education are associated with more years of ill-health and fewer years in good health (Crimmins & Cambois, 2003), thereby limiting work capacity as well as engagement with families and communities.

Rather than shrinking, differences in long-term outcomes between those with and without college degrees have been widening in recent decades (Crimmins & Saito, 2000). Among white men with less than 12 years of education, life expectancy *dropped* by an average of 3 years between 1990 and 2008. Among white women, education-based gaps are even starker (Cutler, Lange, Meara, Richards-Shubik, & Ruhm, 2011). Life expectancy *declined* by 5 years between 1990 and 2008 among women with less than a high school education. When race and education are combined, the disparities are even more striking. In an article published in 2012 in *Health Affairs*, the MacArthur Research Network on an Aging Society updated estimates of the impact of race and education on past and present life expectancy. They examined trends in disparities from 1990 through 2008, and observed disparities in the context of a rapidly aging society (Olshansky, et al., 2012). To put it concretely, in 2008, white men and women with 16 years or more of schooling

had life expectancies far higher than African Americans who had fewer than 12 years of education—14.2 years more for white men than black men, and 10.3 years more for white women than black women. In 2008 men and women in the United States with fewer than 12 years of education had life expectancies only slightly higher than the general US population in the 1950s and 1960s. Declines in life expectancy—especially of this magnitude—are alarming. Even though the size of the least educated subgroup in the United States is shrinking, the life experiences and lifestyles adopted by the least educated appear to be more lethal than in previous decades.

The causal pathways responsible for the association of social advantage to health and quality of life are complex. Rather than a single mechanism of influence, there are multiple pathways influencing health advantage. Social disadvantage involves environments with greater exposure to toxins, carcinogens, and violence; fewer resources (parks, libraries, supermarkets); lack of access to health care; health-damaging behaviors such as smoking, excessive alcohol use, and lack of exercise; and psychological states such as anger and low sense of control autonomy, and trust, all of which occur more frequently in socially disadvantaged populations (Adler, 2013, p. 680; see also Jackson, Knight, & Rafferty, 2010). Conversely, education appears to protect against disease, especially chronic diseases related to lifestyle, along with the ability to manage diseases, which often requires adherence to reasonably complex treatments, involving medication, diet, and self-care (Goldman & Smith, 2002). Although some controversy remains about whether education protects against the *rate* of age-related cognitive decline (Christensen et al., 2001), there is no disagreement that *level* of educational attainment is a powerful predictor of long-term outcomes.

Education is associated with greater subjective comfort and interest in learning new skills

(Charness & Boot, 2009; Ellis & Allaire, 1999), as well as perceived self-efficacy (Zimmerman, 2000). Given the dramatic acceleration of technology transfer in the twentieth century—which continues today—education-based differences can be expected to become more salient in the future due to their mediating effects on technology adoption. A 2014 Pew report found that 87% of college graduates aged 65 and over were internet users, compared with only 40% of those who did not go to college. Other findings also suggest more widespread use of technology and continuing education. For example, Miller (2013) found that fully 48% of Generation Xers—people in their late 30s—reported some form of continuing education including courses, in-service training and workshops, often involving internet access. Military service, which for decades served as a vehicle for advancement among people with relatively low levels of education, now demands considerable technological skill and, according to a recent report from military leaders, low education and obesity combined exclude 75% of young Americans from military service (Christeson, Taggart, & Messner-Zidell, 2009).

Policies and Practices

For reasons noted above, education will be essential to wellbeing in the coming years. Rapid technology transfer is increasing the need for individuals to be cognitively able and motivationally inclined to adapt to new technologies. As modern economies are increasingly based on cognitive skills, a combination of limited education and a global economy marked by fast-paced changes in technology may result in substantial numbers of Americans unable to compete. All the while, college graduation rates remain stagnant.

In the past, US policies have been very successful in increasing educational attainment (Schaie, 2011). In the early twentieth century, public education greatly increased basic

reading and math skills in the population. Not only did public education help to prepare young people for jobs, longitudinal studies now suggest that early educational attainment is associated with preserved cognitive performance late in life (Glymour, Kawachi, Jencks, & Berkman, 2008; Glymour & Manly, 2008). The GI Bill made college accessible to a broad segment of the population, especially after World War II given the large numbers of American veterans. The influx of veterans into colleges and universities also changed the nature of higher education, making it more practical and streamlined. The nation also invested millions of dollars in education policies, such as the National Defense Education Act, which actively targeted and recruited talented children so that the United States could maintain a scientific edge during the Cold War.

There is growing evidence that life-long investments in education pay off. Investments in public education are important in order for people to effectively prepare for knowledge-based jobs. Early childhood education improves performance in subsequent grades and may be especially beneficial for non-cognitive skills that help people work effectively with others (Heckman, 2000). We need superior higher education that can train new generations of talented young people in science and technology. It is just as clear that we need to provide ways for young people who are not college-bound to attain sufficient technological proficiencies and skills that they can secure good jobs and make viable contributions to society. Paradoxically and especially troubling are the increased threats to education as a public good, despite accumulating evidence documenting its multiple benefits for individuals and society. Longer working lives, which we turn to in the next section, also demand heavy investments in life-long education and professional training that continues throughout careers, especially in light of the increasingly fast pace of technological change.

Improving the health profiles and life expectancy of people with low levels of education is especially challenging for those who have already passed the phase in life when formal education normally occurs. Workplace education, as well as programs that allow people to return to school at regular intervals throughout adulthood, would allow people to continue to attain abilities and skills post-formal education.

Educational attainment in childhood, adolescence, and early adulthood begins a cycle that continues throughout life. Education determines access to the range of available jobs, and subsequently to work environments that differ in the degree of ongoing learning and physical safety. Highly educated workers earn more and enjoy occupations that are more cognitively demanding. They tend to participate in the workforce longer and are better prepared financially when they retire. The most educated workers become the most productive workers (at least when productivity is indexed by pay) and the most highly paid workers are the most likely to continue working into later life (Burtless, 2012).

WORK AND RETIREMENT

Work life varies enormously for Americans, largely as a function of education: from tedious jobs to dedicated careers, from activities that hold little relevance for personal identity to jobs that play prominent roles in identity and self-concept. Overall, Americans are relatively satisfied with work and older workers are the most satisfied of all age groups across income, education, gender, and race (NORC Center for Public Affairs Research, Benz, Sedensky, Tompson, & Agiesta, 2013). Of course, there is a great deal of variability in work satisfaction. Jobs that offer little in the way of identity and demand monotonous activities are far less satisfying than ones that offer autonomy and flexibility. Prospectively, engagement with work

is associated with positive spillover effects on general satisfaction with life. On the other hand, job burnout predicts depressive symptoms, while depressive symptoms do not appear to be causally predictive of job burnout (Hakanen & Schaufeli, 2012). In other words, work influences psychological well-being for better or worse, depending on work practices and conditions.

The wellbeing of women, for example, is challenged by traditional work practices that put women at considerable disadvantage relative to men. Workplace structures and policies have changed relatively little since the 1950s, despite large-scale changes in workforce composition. Subsequently, the juxtaposition of work and family life now presents considerable challenges for workers, especially working families (Christensen & Schneider, 2010). Work stress in the first year of marriage has been shown to be related to marital tensions and divorce among couples 16 years later (Birditt, Wan, Orbuch, & Antonucci, 2014). Working mothers are especially affected, since they often juggle demands of home and work simultaneously. Indeed, the least satisfied workers are parents of young children. Reduced job security, job demands that extend beyond the work day, and the lack of control over schedules create considerable strain. In addition, and often unrecognized, population aging is creating new demands for workers to support older family members, and once again, these demands are falling predominantly to women (Sherman et al., 2013).

In recent years, Americans have begun to work longer (Toosi, 2012) and the trend is expected to continue (Helman, 2014). Studies that control for health and other factors that influence continued active engagement find that work in paid and volunteer positions during later adulthood contributes to physical, social, and emotional health (Bonsang et al., 2012; Carlson et al., 2009; Fratiglioni, Paillard-Borg, & Winblad, 2004; Jenkinson et al., 2013;

Rohwedder & Willis, 2010), presumably due to the way such work facilitates engagement physically, cognitively, and through social integration (Börsch-Supan & Schuth, 2014; Fried, Ferruci, Williamson, & Anderson, 2004). In a comparison of countries spanning a broad range of retirement policies, older people in the countries with the least generous pension policies, who thus retired later, scored higher on tests of cognitive performance even after correcting for the fact that workers with below average cognition leave the workforce earlier (Rohwedder & Willis, 2010). These larger positive effects of working longer underscore the need for policies and practices that increase flexibility and accommodate family needs so that people who would otherwise work are not pressured into early retirement.

Workforces are not only aging, they are becoming more age diversified than ever before in history. Industrial psychology, which in the past has focused largely on ways in which personality traits and motivations of workers predict work performance (Kanfer, Wolf, Kantrowitz, & Ackerman, 2010), is beginning to study how employers can adapt to increasingly older and more age-diverse workforces (Finkelstein, Truxillo, Fraccaroli, & Kanfer, 2015). Although there is a great deal of concern about the productivity of older workers in the popular press, the small body of research addressing cognitive fitness of older workers suggests that expectations about loss of capacity are overblown. Despite evidence of a decline in processing capacity, knowledge and expertise appear to compensate well. In a recent study of German autoworkers, productivity increased up to retirement age, and though there was considerable variability in physical functioning within age groups in adulthood, the majority of people were sufficiently fit to work into their 70s (Börsch-Supan, 2013). With thoughtful changes, the melding of the expertise and strong work ethic of older workers with the speed and efficiency of younger

workers could yield substantial increases in organizational productivity (Carstensen, Beals, & Deevy, 2015).

Nonetheless myths and misconceptions about older workers have pernicious effects. Employers report that they are unlikely to invest in training older workers and, once unemployed, workers over 50 are significantly less likely to find employment (Johnson & Park, 2011). There is also considerable public discussion that working longer will mean fewer opportunities for younger workers. Economists refer to beliefs about older workers taking jobs from younger workers as the “lump of labor” fallacy. At the macroeconomic level, the opposite is true: countries with greater concentrations of older people in the workforce also have lower rates of youth unemployment (Börsch-Supan, 2013; Gruber & Wise, 2008). There is no evidence that Baby Boomers are taking jobs from younger workers (Munnell & Wu, 2012).

Not surprisingly, economic preparedness influences retirement satisfaction (Bender, 2012) but concerns that retirement is associated with widespread discontent and a loss of identity have not been substantiated by research. A recent meta-analysis concluded that retirement is associated with positive effects on emotional wellbeing, related to a reduction in stress, and opportunities to spend more time with family and friends (Luhmann, Hofmann, Eid, & Lucas, 2012). The same meta-analysis revealed a slight and temporary negative effect on life evaluations, which they interpreted as anxiety or uncertainty concerning retirement. By 1 year into retirement, these negative effects were no longer observed. Although there are clearly circumstances associated with retirement that affect wellbeing negatively, such as ill health and involuntary separation from work, retirement per se appears to be favorably related to emotional wellbeing.

In part, the absence of negative effects is related to continued social engagement post-retirement. Although paid work declines as

people age, volunteer activities do not (Moen & Flood, 2013). Civic engagement offers a way to harness the human capital represented in older people for communities as well as benefits for individuals. For others, retirement represents a chance to pursue “encore careers” or “second acts,” where workers opt for lesser pay but greater satisfaction in social entrepreneurship (Fried et al., 2004; Freedman, 2007). In addition to the camaraderie and sense of purpose that volunteering can provide, increasingly evidence points to potential physical and psychological benefits for individuals (Fried et al., 2004). While higher levels of education are often associated with higher rates of volunteerism, in a recent study by Ajrouch, Antonucci, and Webster (2014) social networks that promote bonding through more contact and proximity were shown to substitute for the lack of human capital, such as education, to increase rates of volunteerism, thereby enhancing the probability of obtaining the positive effects on health.

From a psychological perspective, work and family life are both essential to wellbeing. Given the amount of time that people spend at work, work environments represent ideal settings for large-scale interventions in mid-life. Working longer can hold important benefits for physical and cognitive health, yet work stress can take a great toll. There is ample potential for policies and practices to improve work life.

Policies and Practices

There may be no area of life where policies are more influential than in the domain of work and retirement. Policies that encourage longer working lives can significantly change productivity trajectories and employers can help prepare people for retirement. A great many workers never enroll in financial retirement plans, and those who do often fund them inadequately. Many benefit administrators and policymakers have become alarmed, and have increasingly looked to behavioral economics

research for remedies. The most effective reform in recent years is default enrollment, where employees must affirmatively “opt-out” of contributions through payroll deductions as opposed to “opt-in” (Beshears, Choi, Laibson, & Madrian, 2009). A second reform is the use of a gradually increasing contribution schedule, designed to get workers used to funding the account at low contribution levels, then allocating growing portions of future raises in order to reach more adequate contribution levels over the course of their careers (Beshears et al., 2009).

A second area for policy innovation concerns job flexibility and employer-based wellness programs. Whereas younger workers often face conflicts between childcare and work, older workers are likely to have adult family caregiving responsibilities. They often seek more optimal work/life balance. More flexible work schedules, including part-time work, 4-day work weeks, and job sharing can often extend work years. Many “retired” employees can be asked back as contingent workers to help with high-demand situations. Although there are isolated examples of attempts to accommodate older workers—for example, CVS Caremark has a snowbird program where older workers can move to warmer regions of the country during harsh winters (Sloan Center for Aging and Work, 2012) and BMW (and Ford) put comfortable chairs and larger computer monitors on assembly lines—there remains tremendous need to further investigate the advantages of age-diverse workforces (Loch, Sting, Bauer, & Mauermann, 2010).

Arguably, the most important program that influences retirement is Social Security. Today, a majority of workers claim benefits before age 63, even though benefits are reduced by 25% compared to benefits at the “normal,” statutory retirement age, now 66. When Congress faced the need to strengthen the 1983 Social Security Amendments, many policymakers were determined to change the incentives related to early retirement decisions. As in many other

countries, raising the statutory retirement age—even though broadly unpopular—was seen as the most effective way of doing so (Kohli & Arza, 2011). The retirement age for full benefits was raised gradually in the hopes that people would work longer. However, the continued availability of benefits at 62, even though substantially reduced, results in the great majority of workers taking early retirement in the months before turning 63. The availability of benefits at 62, albeit at lower levels, continues to trump messages about the economic virtues of working longer. This is usually short-sighted, net of health reasons, as the lower monthly benefit levels often prove grossly inadequate at older ages, when supplementation is less possible and health care costs increase. This is particularly true for older women, especially spouses who have longer life expectancies than their husbands and who may have only survivor benefits as widows.

Economic security in retirement is one of the foundational elements for late-life wellbeing. Work beyond early retirement ages, physical and mental health, healthy behaviors, prudent retirement planning, and full Social Security benefits are critical factors that support the quality of life for older Americans, today and in the future.

FAMILY LIFE

Families have historically changed and adapted in response to altered ecological conditions whether they are the result of economic transformations, technological advancements, wars, or dramatic shifts in cultural values (Antonucci & Wong, 2010; Furstenberg, 2014). These adaptations rarely come easily as they usually involve altering cherished practices.

Over the past half century, the rise of post-industrial economies throughout the world led to changes in the structure and composition of families, divisions of labor, and daily

practices in all wealthy nations as they underwent what demographers refer to as the Second Demographic Transition (Lesthaeghe & van de Kaa, 1986) consisting principally of a decline in fertility below replacement levels along with an increase in life expectancy, as well as a change in societal expectations or values. When families were large and life expectancies short, the rearing and launching of children was managed mostly by relatively young adults. When older family members needed assistance, there were more younger family members available to help them. Today's families, with fewer children and growing odds of having many grandparents and great-grandparents alive at the same time, may be expected to provide support to multiple elderly relatives for extensive periods of time.

Other important societal changes contributed to evolving strains on families. As women's work moved outside the home, the demand for early childcare increased. The anticipated negative effects on children did not appear; indeed, research shows that high-quality early preschool attendance has lifelong beneficial effects on child outcomes. Strains between work and home life did appear, however, absorbed mostly by women (especially single women and poor women) who juggled demands of work and household duties simultaneously. Institutions, like work and school, continue to operate on implicit assumptions that a primary homemaker is available to care for schoolchildren mid-day and to be flexible during evenings, weekends, and holidays. Wage differentials between women and men today are accounted for primarily by relatively low wages for working mothers.

Some have argued that these transformative changes resulted in the weakening of marriage and the family as institutions. Childbearing is less likely to take place within marriage and other stable parental unions. In most wealthy nations, rates of childlessness among women are approaching one in five. Moreover,

first-births are occurring later than they did in the 1950s and 1960s and are associated with smaller families—often not begun until the fourth, and even fifth, decades of life (especially late for fathers). This pattern of deferred childbearing, which increasingly begins outside of marriage, is likely to shape the family life of the elderly and their relationships with younger generations. The postponement of childbearing has taken place in wealthy countries that are rapidly aging as the large Baby Boom cohorts enter old age. This poses a significant challenge for the provision of informal care and support to the elderly at advanced ages by family members at the same time that public systems of support are being strained to breaking point. Just as the ranks of the elderly are growing and the families on whom they depend are becoming smaller, families are growing less stable (Ryan et al., 2012).

The generation in the middle, charged with caring for elderly parents while being expected to provide growing levels of support to young adult offspring, is already under considerable financial, social, and time pressures (Brody, 1981). The children of Baby Boomers, birth cohorts from the last decades of the twentieth and the first two decades of the twenty-first centuries, will be especially likely to feel enormous pressures as they enter mid-life, when they are most likely to have children living at home at the same time that their living parents begin to experience health problems and seek assistance from them. Social scientists and gerontologists refer to middle-aged parents with elderly parents as the "sandwich" generation. But the composition of the sandwich itself (i.e., the size of each of the generations) is rapidly changing, creating more crust and less filling, figuratively speaking. The middle generation enters parenthood 5–10 years later than it once did and the parenting contract has been extended, especially if young adults are more likely to seek higher education or are unable to find employment and remain in the home.

Thus, middle-aged adults between 45 and 64 are much more likely to be supporting children as their elderly parents begin to contend with serious health (and perhaps economic) issues. On the other hand, some have argued that the parent generation is likely to be healthier than previous generations. Therefore, the sandwich generation is not as pressing a problem as frequently presented in the past because most children will be out of the house and most parents will be much older by the time they require their children's assistance. Realistically, both points of view are likely to be true. Dichotomous demographic trends suggest that one will be true for affluent, well-educated families while the opposite will be true for those less fortunate.

If such scenarios were not bleak enough, several more complications often undermine the amount of support that families provide to elderly parents. The changes in family form, that is, fewer children raised by both their biological parents, heighten the risk of disconnection between the oldest generation and their descendants. Men, in particular, are likely to lose contact with some or all of their offspring through divorce or separation. A growing body of evidence reveals that fathers who experience marital breakup or who never marry, are unlikely to receive much support from their children later in life, in large part because they provided little support to their biological offspring as they grew up. In addition, divorced men often remarry, creating another potential source of support, but also conflict. As [Sherman et al. \(2013\)](#) have shown, remarriage is often complicated by the ambivalent feelings and uneven mix of support from children and step-children. At the same time, older never-married or formerly married older people are creating new independent support relationships, such as couples "living apart together," i.e., in separate households but committed relationships ([de Jong Gierveld, 2004](#)). These couples report valuing their partnerships as well as their independence.

As childlessness rises, elderly parents without children will be looking beyond the confines of the nuclear family for assistance. Here the literature is more encouraging: it suggests that elderly individuals who do not have children can frequently garner support from extended kin and younger friends ([Kohli & Albertini, 2009](#)). Early literature on childlessness indicates that people create synthetic families, even when younger. They become the fictive kin of people or families to whom they feel and remain close throughout their lifetime. This creates patterns of exchanges that are likely to extend into old age ([Dykstra & Hagestad, 2007](#); [Rowland, 2007](#)). Another increasingly common, some would say new, family form for older people, is group co-housing. In these contexts people share common space, resources, chores, and some caregiving but also maintain private space ([Glass, 2009](#); [Glass & Vander Platts, 2013](#)). It is yet to be seen, however, how strong these forms of support will be when faced with prolonged and substantial caregiving demands.

Another worrisome trend that will interact with greater variability in family forms is the growing level of inequality that has been rising for the past several decades. Both a cause and a consequence of the de-institutionalization of marriage, higher levels of inequality are creating a two-tier family system. The top-tier, roughly corresponding to college-educated families, is in a stronger position to weather the challenges of aging. They are somewhat more likely to have stable unions and children with whom they have strong interdependent relations. Second-tier families who lack the advantages of being college graduates have become less stable and more complex. Although life expectancy is lower for this group, as parents in these families reach old age, they are likely to experience relatively more stress resulting from their union instability, economic pressures, and a greater likelihood of health disabilities. In other words, the correlation between

socio-economic status and social support in old age is likely to become much stronger in the middle of this century than it was in the middle of the past century. Although older people in these second-tier families tend to have more children and live in closer geographic proximity to them, due to the intergenerational transmission of accumulating life stressors such as marital instability, poorer health and occupational histories, as well as fewer economic resources, the bottom two-thirds of the population in the United States, will probably experience a severe gap between their need for assistance and the supply provided by family members.

Policies and Practices

Policies and practices concerning health, education, work and retirement, of course, fundamentally affect the family. Yet rapid changes in family structures are directly fraying the family safety net that normatively provides for young and needy family members (Cherlin & Seltzer, 2014). To the extent that families remain the primary sources of informal support, in the absence of effective policies, caregiving demands on families may escalate to untenable levels and leave many elderly people without the support that they need. These dramatic changes call for policy innovations adapted to current family structures.

Both traditional and non-traditional families will need support. Policies for children, such as Head Start, offer examples of important societal actions that improved child and family welfare. Rather than being strengthened, they are consistently underfunded and typically under political attack. Whereas many other developed nations have policies which provide such care universally, the United States has expected parents to absorb most of the cost, even in cases where costs are adjusted on sliding scales with priority given to those with more children and less income.

If we are behind in policy and practices related to children, one could argue that this is even more true of policies related to other family members. To the extent that policies help to strengthen bonds across generations, considerable benefits could accrue from their implementation. Grandparents and great-grandparents have enormous potential to, and often do, serve as sources of financial, physical and emotional support. Although most discussions about family old-age policies address the needs of older people, improved health at advanced ages means that grandparent generations can be effectively involved in their grandchildren's (and sometimes great-grandchildren's) lives well into adulthood. Making use of the additional layer of family support can be extremely valuable to children, especially in single-parent, divorced and step-family households. With high rates of divorce and remarriage, grandparents can offer essential stability to children. Policies that encourage grandparent involvement in extended families, ranging from child-care credits that later assist with home care costs, flexible savings and education accounts, to shared housing policies could strengthen emotional bonds among family members while offsetting strains across generations.

Policies that support non-biological families are also essential in societies where 20% of women do not bear children and longer lives mean that increasingly more older people will outlive their children. As noted above, all sorts of non-traditional families exist and provide strong emotional support. Too often, however, these families are not served in the same ways as traditional families by state and federal policies.

When illness occurs, as it inevitably does, the burden falls predominantly on women, especially poor women. Short-term, acute health events are usually handled best by family members whose familiarity with frail relatives makes them uniquely suited to clearly assess and present options, help with decisions,

and advocate for their relatives' needs while providing emotional and tangible support. In these cases, paid family leave, which protects wage-earners while they take time off to care for their family member would be most helpful. Long-term care presents a different set of challenges. Evidence indicates that long-term adult care can be expensive both in terms of human and economic costs. There are currently few publicly available programs to assist. As a consequence, care tends to be individual and expensive. More affluent families can, although often with difficulty, afford this personal one-on-one care, but less affluent families often must call on one family member, usually a woman, to quit her job to attend to the needs of their family member. The family then has even less discretionary funds; the caregiver becomes isolated and unavailable to other family members, as does the care recipient. One might argue that the problem is not that families do not want to provide care, but that the burden they take on to provide that care is daunting.

Constant caregiving, e.g., for a family member with Alzheimer's disease, can be draining and depressing, even for the willing caregiver. It is not likely, despite the family member's most noble intentions, that she will be able to provide the best care. Care may become custodial and perfunctory without the guidance of professionals on how best to care for and prevent deterioration of the care recipient. Policies and programs should be created to provide some relief for these caregivers. Group care by professionals or even family members with professional guidance is likely to provide better care for the patient and allow the family member to complement that care while still remaining attached to their other roles and obligations such as parenting and paid employment. Long-term care of any sort is expensive and funding it is a challenge. Probably the greatest policy benefit would be to include long-term care in social insurance, so that the family does not have to impoverish themselves to receive

needed help, thus relieving at least some of the financial burden. In addition to costs of caregiving is the question of where elders should live. We turn to this question briefly, below.

Housing options include aging in place; moving to different private, but perhaps better-designed, housing; subsidized independent living properties; and various forms of institutional care from assisted living to skilled nursing facilities. Housing policies are very important and yet are seriously underdeveloped. In light of the inequalities that represent an underlying theme of this chapter, we focus on community-based, affordable housing. This type of housing for seniors is minimal and decreasing in this country even though affordable housing can create safe, protective, and proactively helpful environments for older people. They have the potential to be cost-effective by providing productive environments that encourage healthy living. Older people who age-in-place, often are faced with home designs that are outdated and zoning ordinances that discriminate against multi-family living arrangements. The single family suburban home, far from centralized services, is not well suited to the needs of single parents or multi-generational households. Community living that engages the individual, younger as well as older people, improves the health and wellbeing of everyone ([Webster, Ajrouch, & Antonucci, 2014](#)). Policies could help older people modify their homes and assist families in creating multi-family dwellings; thus keeping older people engaged with their families and communities. Policies that increased availability of affordable housing, incentivized elder-friendly designs, as well as multi-generational households and communities, would be advantageous for all.

Finally, it is worth noting that current policies and restrictions concerning immigration often result in the separation of families, especially across generations. These separations have negative consequences for the family,

while at the same time severing a major source of elder caregiving, both in the formal and informal sectors. Policies and practices that are supportive, rather than disruptive, of these relationships are likely to yield benefits to individuals and societies.

SUMMARY AND CONCLUSIONS

This chapter focused on four key social institutions that will fundamentally influence individuals' material and psychological success in addressing the challenges we face in light of the demographic revolution of the twenty-first century. People are living significantly longer, marital norms are changing with people marrying later, multiple times or not at all, and having fewer or no children. Normal societal structures concerning care for the elderly are less likely to be available. We highlighted the importance of a lifespan perspective to the four areas: health, education, work and retirement, and family. To successfully address these societal challenges we must enhance health and health care across the lifespan, provide life-long access to education, optimize lifetime experiences of work and retirement for people of all ages, and create innovative approaches to maintain engagement and complement or offset changes in family structure, composition, and norms. We further outlined policies and practices that have or might serve to address these challenges. Thus far, our society has been neither thoughtful nor proactive. Clearly, corrective action is necessary.

Longer life represents a tremendous social and cultural achievement. Yet, this triumph of the modern era requires changes in social norms, institutions, and behavioral practices. All demand policies that support the social fabric that provides for healthy, engaged, satisfying lives. Today, we are advantaged by considerable knowledge about the psychological and behavioral predictors of positive long-term outcomes, as well as risks for disease and disability. Strong

social bonds reduce morbidity and mortality (Antonucci et al., 2011; Carstensen et al., 2011). Physical activity promotes physical and mental health; education predicts cognitive functioning in old age. The growing inequalities do not bode well for the future.

Increasingly studies show that work—whether paid or unpaid—benefits cognitive health in old age. We have amassed sufficient information about Americans 50 years of age and older that predictive modeling, such as the Future Elderly Model, can simulate a range of long-term outcomes with key inputs (Goldman et al., 2005; Zissimopoulos, Blaylock, & Tysinger, 2014), allowing sophisticated projections into the status of future generations of long-lived people. The transformation of the United States from a young into an aging society is a great challenge that also represents scores of opportunities to improve life at all ages. Fortunately, in the past, we have shown ourselves capable of stepping up to, and successfully meeting, the challenges we have faced. We will need to be committed, as a society, to create innovative, bold, and unifying solutions to successfully address the challenges of the future—much as we have in the past.

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