Breaking the Age Code

HOW YOUR BELIEFS ABOUT AGING DETERMINE HOW LONG & WELL YOU LIVE

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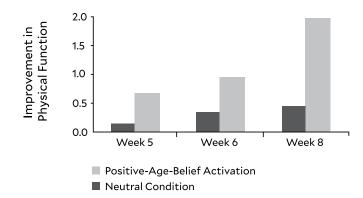


Figure 1: Activating Positive Age Beliefs Improves Older Persons' Physical Function over Time. Those participants exposed to positive age beliefs showed significantly better physical function than those in the neutral group; this beneficial influence of positive age beliefs grew over the two months of the study.

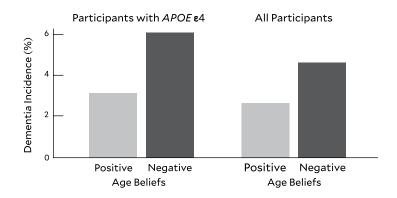


Figure 2: Positive Age Beliefs Reduce Risk of Dementia. These beliefs reduced the risk of dementia for all participants, including those with the risky gene APOE ϵ 4.

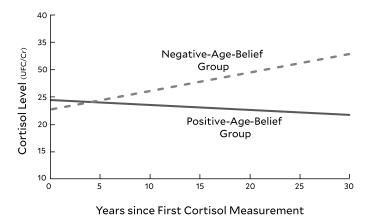


Figure 3: Stress Increases Across 30 Years for Older Participants with Negative Age Stereotypes. Participants holding these stereotypes showed an increase in the stress biomarker cortisol; whereas, those holding positive age stereotypes showed a decline in this stress biomarker.

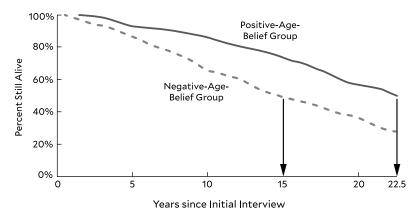
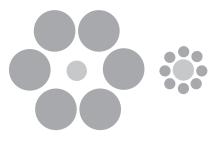


Figure 4: Survival Advantage from Positive Age Beliefs. Participants with positive age beliefs lived an average of 7.5 years longer than those with negative age beliefs. This was calculated by examining the group difference in the time it took for half the people to be still living, as indicated by arrows.

One Size Does Not Fit All

Not long ago, my younger daughter returned home from college for a long weekend, excited to talk to us about her new chosen fields of study. She had decided to major in philosophy and cognitive science and was glowing with the excited fervor of a new convert. To explain how these fields inform our view of the world, at dinner, she grabbed a marker and a napkin and drew two different daisy shapes, one with six large petals and the other with an equal number of smaller petals. "Which of the two central circles is bigger?" she asked.



Without hesitating, I pointed to the drawing on the right, since its central circle looked twice as big as the other one. My daughter smiled as she took a napkin, drew dashes to measure the diameter of the central circles, and then folded the napkin in half so the two sets of dashes were next to each other. The dashes were the same length. In other words, the circles were the exact same size.

Maybe you are familiar with this optical illusion. I wasn't, but I can now be counted in the long line of people who have been tricked by it for over two hundred years, since it was first demonstrated by the German psychologist Hermann Ebbinghaus. It's still used today as a way to illustrate the pitfalls that lie in wait for our brains as we process information about our surroundings.

What I like about this particular illusion is that it demonstrates how our perception is impacted by its context. In this case, the size of the petals influences how we perceive the circle in their center. Another interesting aspect of this illusion is that children tend to be immune to it. In other words, the illusion is a perceptual defect that we pick up as we navigate the world through time, and it's especially strong in those adults who are most sensitive to their context or environment.¹

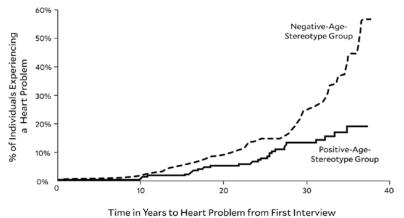


Figure 5: Younger Persons' Negative Age Beliefs Increase Risk of Experiencing a Cardiovascular Event After Age 60.

ABC Method to Bolster Positive Age Beliefs

Exercising Your ABCs: The Health-Promoting Age Belief Tools	
Α	Awareness: Identifying where negative and positive images of aging are found in society
В	Blame: Understanding that health and memory problems can be the result, at least in part, of the negative age beliefs we aquire from society
С	Challenge: Taking action against ageism so that it is no longer harmful

Most of the following exercises can be learned and carried out rapidly. Since age beliefs are multifaceted, operating at both unconscious and conscious levels, it would be helpful to try a combination of these exercises, with at least one from each stage. As discussed in Chapter 9, the three stages consist of: increasing **Awareness**, placing **Blame** where blame is due, and **Challenging** negative age beliefs.

To strengthen these beliefs and to become more comfortable with them, I suggest repeating the exercises you select. What Aristotle discovered twenty-four centuries ago is still true today: "We are what we repeatedly do." Consistently applying these strategies should lead to a compounding of benefits, a snowballing effect in which small changes lead to a cascade of improvements.¹

Here are the ABC exercises for you to try:

Awareness Exercises

Awareness Exercise 1: Five Images of Aging

Jot down the first five words or phrases that come to mind when you think of an older person. Even if you already did this exercise in Chapter 1, try it again to see whether your age beliefs have shifted since you started reading this book. Again, there are no right or wrong answers. How many of your responses are negative and how many positive?

If you find yourself with lots of negatives in the Five Images exercise, that doesn't mean your views are set in stone. Most of us have unconsciously assimilated negative age beliefs from our surroundings, but we can reverse these beliefs. Becoming aware of them is the first step.

Awareness Exercise 2: Portfolio of Positive Role Models

Who are your older role models? List four older people you admire. Pick a couple from your own life and others from the world at large, such as history, books (including this one), TV shows, or current events. In that way, you'll collect a diverse set of role models and associate a range of admirable qualities with aging. For each model, pick one or more qualities you admire and would like to strengthen in yourself as you get older.

Awareness Exercise 3: Noticing Age Beliefs in Media

A good way to make visible the invisible is to record both negative and positive images of aging that you encounter in the course of just one week, using a notebook or your smartphone. When you watch TV or stream shows, take note of whether there are any older characters, what roles they play, and whether these paint aging in a negative or positive light. As you spend time online or read the newspaper, write down how older persons are included and note

when they aren't included. At the end of the week, tally up the number of negative and positive images of aging, as well as the number of omissions. In my studies, I found that this kind of active noticing helps develop a keen awareness of not just blatant ageism, but also the more subtle forms of exclusion and marginalization.²

Awareness Exercise 4: Awareness of Generations

Think about your five closest friends. If you're like me, these five people probably have birthdays within a couple of years of yours. Of course, there's nothing wrong with enjoying the company of your age peers, but the ease with which we keep strictly to ourselves, generationally speaking, is another enabler of negative age beliefs. Think about how to increase your intergenerational contact. Take a look at how many meaningful intergenerational interactions you had in the last week. If you have trouble thinking of many, come up with two activities you could undertake in the next month that involve different generations.

Blame-Shifting Exercises

Blame-Shifting Exercise 1: Find the Real Cause

Monitor yourself for when age stereotypes influence how you think about the cause of unpleasant events or challenges. If you or an older person you know loses keys or forgets a date or name, and you find yourself leaning on the term "senior moment," remember that this is your negative age belief speaking, rather than an objective assessment of the aging process. Is it possible that you or the other person was rushed, stressed, saddened, or distracted by something when the information was being encoded or retrieved? Those emotional states can all heighten temporary forgetfulness. If you blame a sore back or not hearing something on aging, notice the

circumstances: Did you pick up something that was too heavy or is the background noise too loud? Think of two actual or hypothetical mental or physical incidents that happened to you or another older person and was blamed on aging. Then, think of a cause that has nothing to do with aging to explain the incident.

Blame-Shifting Exercise 2: Who Profits?

Write down four negative age stereotypes. Name a company or institution that might benefit or profit from such a stereotype. For example, if you wrote down "memory loss," you might then list Lumosity, a company that sells "brain training games," often by drawing on the anxiety associated with the negative age belief that all memory inevitably declines. The company was sued by the Federal Trade Commission for preying on older consumers' fears with false statements.³

Blame-Shifting Exercise 3: Sexist If It Were About a Woman?

If you aren't sure whether a reference to or action against older people is ageist, try switching it so that the target is another marginalized group, such as women. For example, if an employer states the need to fire older workers, ask yourself how it would sound if the same comment was made about firing women. If it would sound sexist, consider labeling it ageist when older workers are targeted.

Challenge Exercises

Challenge Exercise 1: Dismantling Negative Age Beliefs

You can challenge negative age beliefs by presenting accurate information. This book covers much of the science that disproves common negative age stereotypes. (It is summarized in Appendix 2: Ammunition to Debunk Negative Age Stereotypes.) Write down

three myths about aging. Practice what you might say to someone who thinks they are true. For instance, "The old don't care about the planet." Turns out those over sixty-five recycle more than any other age group (and recycling rates go up as people get older).⁴

If you're like me, you may not always have a zippy one-liner available right when someone says something ageist. So it helps to have a few lines at the ready, or to circle back to make a comment at a later time that challenges an earlier ageist comment or action.

Challenge Exercise 2: Find Ways to Get Involved in Politics

You can run for political office. Alternatively, determine which candidates have advocated for public policies that contribute to the well-being of older constituents and then support their campaigns for office. You could also let your elected representatives know when you agree or disagree with their positions on legislation that is relevant to older constituents.

Challenge Exercise 3: Confront Media Ageism

When you read an article that reflects negative age stereotypes, write to the editor or post about it on social media. One recent example is an ad that E-Trade (the online stock-trading platform) unveiled at the 2018 Super Bowl, the most watched sporting event in the US. The ad ridicules older people for working: we see an older mail carrier dropping a stack of packages; an older fireman being lifted off the ground when he points the hose at the sidewalk instead of at the fire. The elderly dentist and sports ref are no less bumbling and incompetent. Just in case the older age of the workers is not sufficiently emphasized, the words to the song playing in the background are "I'm 85 and I Want to Go Home," sung to the tune of Harry Belafonte's ballad "Day-O."

The advertising agency apparently created the ad to scare younger potential customers into spending for early retirement by

giving commissions to E-Trade for trading stocks.⁵ Even though these negative images helped produce a large profit for E-Trade over the following year,⁶ the ad also generated anger and backlash. And there, by the way, is upstream causality in a nutshell: ageism driven not by facts, but by good old-fashioned hunger for profit.

The first time I heard about this ad was through one of my daughters, who caught wind of it on her Facebook feed and showed me post after post from friends and strangers alike expressing disgust at the way the ad portrayed older people.

Keep your eye out for the next ageist example to appear and find a way to register your concern, by sending a protest message to the company whose product is advertised or by organizing a petition to let the company know that if it continues you and your friends will do business with age-friendlier companies.

Ammunition to Debunk Negative Age Stereotypes

The following presents examples of the false and harmful age stereotypes that are disseminated by a wide range of societal sources. These stereotypes are accompanied by a selection of the considerable evidence that you might find helpful in refuting them (with references in the endnotes).

- FALSE AGE STEREOTYPE: The saying "You can't teach an old dog new tricks" applies to older people's inability to learn.
 FACT: There are many positive cognitive changes in older age and there are many techniques to support lifelong learning. Older persons can benefit from the same memory strategies that young persons use to improve recall. In fact, our brains experience new growth of neurons in response to challenges throughout the life span.^{1.2, 3,4}
- 2. FALSE AGE STEREOTYPE: All older persons experience dementia.

FACT: Dementia is not a normal part of aging. Most older persons do not experience dementia. Only about 3.6 percent of US adults aged sixty-five to seventy-five have dementia. Further, there is evidence that dementia rates have been declining over time.^{5,6,7}

3. FALSE AGE STEREOTYPE: Older persons' health is entirely determined by biology.

FACT: Our team has found that culture, in the form of age beliefs, can have a powerful influence on the health of older persons. For instance, positive age beliefs can benefit their health in multiple ways, such as reducing cardiovascular stress and improving memory. In contrast, negative age beliefs can have a detrimental impact on these aspects of health.^{8,9,10,11} We also found that positive age beliefs amplified the beneficial impact of *APOE* ε 2, a gene that often benefits cognition in later life.¹²

4. FALSE AGE STEREOTYPE: Older persons are fragile, so they should avoid exercise.

FACT: Most older persons can exercise without injury. The World Health Organization recommends that older persons regularly exercise because this can benefit cardiovascular and mental health, as well as lead to stronger bones and muscles.¹³

5. FALSE AGE STEREOTYPE: Most older people suffer from mental illness that can't be treated.

FACT: Most older persons do not suffer from mental illness. Studies show that often happiness increases, whereas depression, anxiety, and substance abuse decline in later life.¹⁴ Further, older persons usually benefit from mental health treatment including psychotherapy.^{15,16}

6. FALSE AGE STEREOTYPE: Older workers aren't effective in the workplace.

FACT: Older workers take fewer days off for sickness, benefit from experience, have strong work ethics, and are often innovative.^{17,18,19} Teams that include older persons have been found to be more effective than teams that do not.²⁰

7. FALSE AGE STEREOTYPE: Older persons are selfish and don't contribute to society.

FACT: Older persons often work or volunteer in positions that allow them to make meaningful contributions to society.

They are the age group that is most likely to recycle and make philanthropic gifts. In older age, altruistic motivations become stronger, while narcissistic values wane in influence. Older persons often engage in legacy thinking, which involves wanting to create a better world for future generations. Also, in most families, there is a downward flow of income with more funds going from older adults to grown children than from grown children to older adults.^{21,22,23,24,25,26}

8. FALSE AGE STEREOTYPE: Cognition inevitably declines in old age.

FACT: A number of types of cognition improve in later life, among them: metacognition or thinking about thinking; taking into account multiple perspectives; solving interpersonal and intergroup conflicts; and semantic memory. Other types of cognition tend to stay the same, such as procedural memory, which includes routine behaviors like riding a bike.^{27,28,29,30} Further, I have found that strengthening positive age beliefs can successfully improve the types of memory that are thought to decline in later life.^{31,32,33,34,35}

- 9. FALSE AGE STEREOTYPE: Older persons are bad drivers. FACT: The absolute number of crashes involving older drivers is low. They are more likely to use seat belts and follow speed limits. Also, they are less likely to drive while texting, while intoxicated, or at night.^{36,37,38}
- 10.FALSE AGE STEREOTYPE: Older persons don't have sex.
 FACT: Most older persons continue to enjoy a physically and emotionally fulfilling sex life. A survey found that 72 percent of older adults have a romantic partner and, of those, most are sexually active.^{39,40}
- FALSE AGE STEREOTYPE: Older persons lack creativity.
 FACT: Creativity often continues and even increases in later life. Numerous artists, including Henri Matisse, are credited

with producing their most innovative works at an older age. Successful start-ups are more likely to be run by entrepreneurs over fifty than under thirty. Older persons are often leaders in innovation and use it to revitalize communities.^{41,42,43,44}

12. FALSE AGE STEREOTYPE: Older persons are technologically challenged.

FACT: Older persons possess the ability to adapt to, learn, and invent new technology. Three-quarters of those fifty and older use social media on a regular basis; 67 percent of those sixty-five and older use the internet and 81 percent aged sixty to sixty-nine use smartphones.^{45,46} Some older persons have led advances in technology, including MIT professor Mildred Dresselhaus, who innovated the field of nanotechnology in her seventies.⁴⁷

13. FALSE AGE STEREOTYPE: Older persons don't benefit from healthy behaviors.

FACT: It is never too late to benefit from healthy behaviors. For example, older persons who quit smoking show improvement to their lung health within a few months.⁴⁸ Similarly, older persons who overcome obesity show improvement to cardiovascular health.⁴⁹

14.FALSE AGE STEREOTYPE: Older persons don't recover from injury.

FACT: Most older people who become injured show recovery, and older persons with positive age beliefs are significantly more likely to fully recover.⁵⁰

A Call to End Structural Ageism

The miracle of longevity provides such incredible opportunity to individuals and the societies in which we live. Yet, today so much of that potential remains unrealized because we haven't adequately addressed these challenges that hinder older populations from living their later lives in meaningful, productive ways. —Paul Irving, Chair, Milken Institute Center for the Future of Aging¹

The best way to eliminate negative age stereotypes is to end structural ageism. Since this ageism is deeply rooted in the power structure of society, to achieve social change requires multifaceted activities from two directions: top-down, which would involve laws and policies; and bottom-up, which would involve an age liberation movement demanding these changes. The following is a partial list of what is needed to achieve age justice. I encourage you to consider whether there is a sector or an item that you could impact.

End Ageism in Medicine

• End age discrimination in providing treatments for a range of illnesses, including cardiovascular disease and cancer. In 85 per-

cent of 149 studies, health-care providers excluded older patients from, or were less likely to offer them, procedures and treatments even when they were equally likely to benefit as younger patients.²

- Increase support of preventive care and rehabilitation services for older persons³ through better health insurance reimbursement.
- Improve how health-care providers communicate with their older patients. This would include avoiding patronizing language and ending the practice of excluding older patients from important health-care decisions. To improve current practice, geriatrician Mary Tinetti developed an effective conversation guide to help health-care providers take into account the priorities of older patients.⁴
- Create geriatric emergency departments at all hospitals. In the US, hospitals often have pediatric emergency departments, but only 2 percent have geriatric emergency departments; these have resulted in improved health care for older persons and reduced costs.⁵
- End the salary and reimbursement disparity among health-care professionals by which those who focus on older persons are paid less than those of other medical specialties.⁶
- Expand the number of departments of geriatrics so that they are included in all medical schools. Of the 145 medical schools in the US, only 5 have departments of geriatrics; there is about one geriatrician for every three thousand older Americans.⁷
- Provide geriatric training for all health-care providers so they are prepared to care for older patients. Training could include diverse older patients with a range of health levels. In the US, while all medical schools require pediatric training, less than 10 percent require geriatric training.⁸ Similarly, less than 1 percent of nurses and less than 2 percent of physical therapists are formally trained to work with older adults.⁹
- · Include antiageism content in the training of health-care profes-

sionals, which could include overcoming the widely held myth that, for instance, hypertension and back pain are inevitable in later life. 10

- Include age-belief screening in primary care visits for all patients and prescribe strategies to challenge negative age beliefs.
- Overcome age discrimination in providing proper screening and referrals for mental health issues, STDs, and elder abuse by putting in place standard protocols for older patients and training for health-care providers to carry out the protocols.¹¹

End Ageism in Mental Health Care

- Reform mental health training so that it adequately includes issues related to older persons, such as findings that depression is not a natural part of aging and that older persons often have skills that allow them to benefit from psychotherapy.
- End the practice by which Medicare reimburses therapists who treat older patients at rates that are substantially lower than the market rates.¹²
- Add information about the mental health of older persons to the *Psychodynamic Diagnostic Manual* and the *Diagnostic and Statistical Manual of Mental Disorders*, which are used as guides by mental health professionals.
- Establish intergenerational psychotherapy groups so people of different ages can learn from one another.
- Reduce the gap between mental health need and care that increases with older age in many countries. This can be done by increasing treatment options by, for example, expanding the Friendship Bench model of older persons administering lay mental health care beyond the countries where it currently operates.¹³

End Ageism in the Governmental System

- Establish and enforce legislation that provides older persons with economic and food security. In the US, 9 percent of older persons live in poverty, 16 percent of older persons do not have adequate food, and 306,000 are homeless.¹⁴
- Create an antiageism tsar and an antiageism agency on the federal level to initiate and coordinate antiageism policies across all government departments.
- Encourage older persons to run for political office at all levels in order to advocate for age-friendly policies, and to become involved in political campaigns of those who support their interests.
- Include the protection of older persons' rights in all laws relating to civil rights. Many such laws, including the US Civil Rights Act, do not include age.¹⁵
- Improve conditions in nursing home and long-term-care facilities through laws that require adequate staffing levels, training, and compensation.
- Prohibit nursing homes and long-term care facilities from inappropriately using medications to sedate older residents. According to several recent reports, a number of American nursing homes use sedating medications to manage dementia symptoms, even though the Food and Drug Administration never approved many of them for this use, and they can cause fatigue, falls, and cognitive impairment.¹⁶
- Provide funding for law enforcement and programs designed to prevent and stop elder abuse, which social epidemiologist E-Shien Chang found is determined by modifiable factors.^{17,18}
- Make voting easily accessible to all older people, by such means as providing transportation to polling stations and by making absentee ballots readily accessible.
- · Demand that all countries ratify the UN Convention to

Strengthen the Human Rights of Older Persons. Multiple countries, including the US, have failed to do so.¹⁹

• Ensure that older persons are adequately included in juries and on judicial benches. A lack of inclusion of older persons in these roles has become a growing problem.²⁰

End Ageism in Education

- Advocate that school boards develop goals for preschool to grade twelve curricula that include positive depictions of older people in courses, such as history and social studies. Many curricula now include other diversity goals, but do not include diversity by age as an aim.
- Encourage teachers to include positive portrayals of older persons through films, songs, events, and books in their classes. For example, see the relevant list of children's literature developed by education activist Sandra McGuire.²¹
- Expand college and graduate school courses in developmental psychology, most of which do not go beyond young adulthood, to include aging topics.
- Include ageism awareness in teacher training, which would show how ageist messages are transmitted in schools and how they can be countered.
- Support programs that bring older persons from the community into schools to talk about what they have accomplished and to engage in mentorship opportunities. The latter was initiated by Columbia School of Public Health dean Linda Fried's Experience Corps; it should be expanded to all schools.²²
- Set up "Grandparents Day" during which students celebrate older relatives or older people from the community.
- · Enhance educational opportunities for older persons, ranging

from literacy programs for those who did not have educational opportunities early in life to making courses available in universities and colleges. The Age Friendly University initiative, which promotes intergenerational learning, could be expanded to the 98 percent of universities in the world that have not adopted its age-inclusive principles.²³

End Ageism in the Workplace

- End ageism in hiring older workers by adequately enforcing antiage-discrimination laws.
- End the firing of workers based on age, including forced retirement. For example, United Nations employees, including those that focus on issues of aging, are forced to retire by the age of sixty-five.²⁴
- Incorporate older age in diversity, equity, and inclusion training programs and policies. This could raise awareness about the age discrimination that is currently reported by 60 percent of workers, dispel myths about older workers, and highlight the contributions of older workers. A survey of employers in seventy-seven countries found that only 8 percent include age in diversity, equity, and inclusion policies.²⁵
- Set up whistleblowing programs in which older workers who leave jobs or retire could share with the public any experiences of ageism, without risk of punishment by employers.
- Implement intergenerational work teams when possible. These teams have been found to shatter age stereotypes and increase productivity.²⁶
- Establish a system that rates companies on how age positive they are and award certificates to those that are the most age friendly.

End Ageism in the Antiaging and Advertisement Industries

- Monitor the negative age stereotypes that companies present in advertisements; this could include using an online clearinghouse to which individuals would provide examples of ageist ads.
- Organize a boycott of companies that demean older persons in their advertisements, including the many created by the antiaging industry, until they agree to end the offensive messages.
- Increase the inclusion and diversity of older persons in advertisements and present them in roles that reflect vitality. To challenge the negative and stereotypical presentation of older persons, the Centre for Ageing Better in the UK recently launched the first online archive of positive and realistic images of older people that are freely available.²⁷
- Give older people a seat at the table as creative directors at advertising agencies. The average age of advertising agency employees is thirty-eight, even though most consumers are over the age of fifty.²⁸
- Establish awards for ads that empower older persons.

End Ageism in Popular Culture

- Expand the meaning of "diversity" in films to include older actors, writers, and directors. The Academy of Motion Picture Arts and Sciences, which presents the Academy Awards, excludes older persons in its new diversity inclusion rules.²⁹
- Monitor and publicize the rampant ageism in movies and television, which includes both ageist language and activities, as well as the absence of nuanced older characters.³⁰ Let producers and fellow viewers know that this is not acceptable.

- Recruit and support celebrities to speak out against ageism in Hollywood and in the larger culture. A number of celebrities such as Amy Schumer, Madonna, and Robert De Niro have spoken out.³¹ More voices are needed.
- Create a national holiday celebrating older persons with local events. Japan has a national holiday of older persons that can serve as a model.
- Organize some of the billions of gamers to boycott current video games that include ageist content,³² and encourage the video-game industry to produce games with positive portrayals of aging.
- Foster the creation and sale of age-positive birthday cards. These could replace the ubiquitous ones that denigrate aging. Efforts of local artists and activists to take on these commercial markers of aging have begun in Colorado and the UK.³³
- Create 50 Over 50 campaigns. This could be modeled after the 30 Under 30 age-based lists that are publicized by various industries to recognize leaders in their fields.

End Ageism in Media

- Pressure the government to prohibit digital age discrimination that excludes older persons from housing and job listings. Under the current system, social media companies are supposed to self-police, but this has not been successful.³⁴
- Demand that social media companies ban the ageism it disseminates. Facebook's community standards should prohibit ageism in the same way it bans hate speech directed at other groups, and Twitter should enforce its community standards that prohibit ageism.^{35,36} Evidence that it is not yet being enforced comes from a Twitter analysis that found 15 percent of the tweets under the #BoomerRemover hashtag were characterized by overt de-

rogatory statements that included wishing death upon the older generation.³⁷

- Encourage journalism schools to stress the importance of reporting about structural ageism as well as writing news stories that empower older persons.³⁸ A model that can be used for this is the Age Boom Academy run by Columbia School of Journalism and the Robert N. Butler Columbia Aging Center of the Columbia School of Public Health.
- Replace the use of ageist language and concepts in news stories, such as the use of the term "silver tsunami" to describe the aging of the Baby Boomer generation, with alternatives, such as "silver reservoir," which reflects the idea that this generation can be a "potential resource for good in our society rather than an impending danger that threatens to wipe everyone out."³⁹
- Ask media outlets to provide time and space on TV and radio and in newspapers for interests of their older viewers and readers. *The New York Times* reporter Paula Span's column "The New Old Age" is a model for this.
- Create journalism prizes for outstanding antiageism and proaging reporting.

End Spatial Ageism

 Eliminate the age-based digital divide by which older persons are significantly less likely to have access to the internet at home than younger persons. This lack of internet access, which now impacts 42 percent of Americans who are sixty-five or older, is particularly severe for older persons who are low income, female, living alone, immigrants, disabled, and members of ethnic minority groups.⁴⁰ As connecting online can facilitate health care, work opportunities, and community involvement, it is imperative that

governments provide affordable connectivity with adequate technical support for all older persons.

- End zoning regulations and regional planning that segregates and isolates housing for older persons.
- Reduce the social isolation of older persons by insisting that the government provide adequate age-inclusive and accessible public transportation in both urban and rural areas.⁴¹
- Require that housing complexes built with federal funding include older persons in numbers that are at least as high as their proportion of the general population.
- Facilitate in-person intergenerational contact through such means as designing age-inclusive public and private spaces including libraries, museums, and multiuse parks.
- End the neglect of older people during natural disasters that can leave them trapped in dangerous places⁴² by including them on an equitable basis in natural disaster emergency-relief plans.

End Ageism in Science

- End the practice of excluding older persons from clinical trials, which even happens when they are particularly likely to have the targeted illnesses, such as Parkinson's disease.⁴³ Their inclusion should be required at a rate that is at least proportionate to the total population, to ensure medications and treatments are safe and efficacious for older individuals.
- Create surveys that include older participants and that report whether and, if so, how older persons are resilient and how they experience illness, treatments, and recovery differently than other age groups. Most surveys do not collect data for those over age sixty-five;⁴⁴ exceptions are the Health and Retirement Study and

its sister studies, the Baltimore Longitudinal Study of Aging and the UK Biobank.

- End the use of the term "dependency ratio" that is frequently used in science and policy reports; it characterizes everyone in a population who is sixty-five or older as being dependent on younger adults and not productive members of society.
- Increase funding for aging research that includes the biological, psychological, and societal determinants of aging health, as well as studies of the best policies and programs to take advantage of increased longevity. Less than 0.01 percent of the US federal budget is devoted to aging research, and less than 1 percent of US foundation funding is devoted to it.⁴⁵
- Change the common definition of aging as "senescence," a process of progressive decay, to a more multidisciplinary and positive definition, such as a later-life developmental stage that can include psychological, biological, and social growth based on decades of accumulated experience.

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Chapter 3: Old and Fast

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Chapter 10: Societal Age Liberation: A New Social Movement

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Afterword: A Town Free of Ageism

- The description of Greensboro is based on individual interviews I conducted with its residents. In order to convey a sense of the interconnectedness that is a prominent and admirable feature of the town, I have merged these interviews and provided them with a Greensboro context.
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Appendix 1: ABC Method to Bolster Positive Age Beliefs

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