How Age Magnifies Experience: Deconstructing Cross-Cultural Differences in Aging

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Sidebar: Culture Shapes How and What We Remember

No matter where you are in the world, it's more likely than not that you live in an aging society. As average life expectancy increases and fertility rates continue to drop, people age 65 and older are representing a larger and larger proportion of the population everywhere from Lebanon to Germany to China.

One of the most drastic of theseshifts is occurring in Japan, a "super-aging" society where, according to theUnited Nations' 2019 World Population Prospects report, 28% of individualscurrently qualify as senior citizens, and one in three are projected to be overage 65 by the year 2030.

In 1987, Hiroko Akiyama, an emeritus professor at the University of Tokyo's Institute of Gerontology, launched the National Survey of the Japanese Elderly—a 30-year longitudinal study of nearly 6,000 Japanese residents over 60—to track changes in the physical and mental health, economic status, and social relationships of this growing population. Since then, she has worked with the city of Kashiwa, Japan to redesign the city to meet the needs of a super-aging society. They developed workplaces for residents' "second life" as senior citizens, community dining services, a civic participation program for frailty prevention, and a home-based health and long-term-care system, which may allow individuals to maintain greater independence and quality of life by "aging in place" in their communities.



Akiyama's research suggests that community programs such as those outlines above couldhelp make Japanese cities more aging friendly. Photo credit: The Toyoshikidai GerontologyResearch Group (May 2018), Kashiwa-Toyoshikidai Projects for Enabling Age-friendlyCommunities:Achievements and Future Challenges."

But while these solutions might be agood fit for Japan, research suggests that the needs of aging societies maydiffer significantly between cultures—at least in part because of differencesin older adults' social relationships and what they expect to get out of them.

Sizing Seniors' Social Networks

In 2017, Akiyama collaborated with Kristine J. Ajrouch, a professor of sociology at Eastern Michigan University; Heather R. Fuller, a professor of human development and family science at North Dakota State University; and APS Fellow Toni C. Antonucci, a professor of psychology at the University of Michigan and recipient of the 2020 APS Mentor Award, to examine these differences in a study of 1,980 adults over 50 in metropolitan areas of Japan, Lebanon, Mexico, and the United States. Each of these countries is undergoing significant generational shifts in fertility, the researchers noted; on the high end, Mexico has dropped from an average of 6.8 children per family in 1960 to 2.2 children in 2014, and, on the low end, Japan has dropped from 2 to 1.4 children in that same time span.

Participants in Ajrouch andcolleagues' study mapped their relationships with up to 20 of the closestpeople in their lives. In line with the *convoymodel of social relationships*, which envisions

individuals as movingthrough life surrounded by supportive others, relationships could fall into oneof three categories on the circular map: the inner circle (people who feel soclose that it is hard to imagine life without them); the middle circle (notquite as close, but still important); and the outer circle (otherwiseimportant, but less close individuals). Participants also provided additionalinformation on the top 10 people in their networks, including demographics,geographic proximity, and how frequently they had contact.

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This data revealed several universal findings, including how children are close and frequent sources of support in old age. In the context of drastically declining fertility, this means it will become increasingly difficult for children to meet the needs of aging parents without outside support such as in-home health aides and long-term care facilities, Ajrouch and colleagues noted.

A number of findings unique to thesecountries were uncovered as well. For example, although Americans reportedhaving the largest social networks, with an average of 11.3 closerelationships, their social networks became smaller and more geographicallydisparate with age. This was not the case for Japanese and Mexicanparticipants, however. Moreover, the social networks of Lebanese participants,who had the smallest, most local social networks (an average 5.8 importantrelationships), expanded with age.

In a related study of 1,331individuals between 70 and 90 years old in France, Germany, Japan, and theUnited States, Antonucci, Akiyama, and APS Fellows Jennifer E. Lansford, aprofessor of public policy at Duke University, and Jacqui Smith, a professor ofpsychology at the University of Michigan, found smaller social networks amongwidowed or ill older adults in Germanyand France than among those in Japan or the United States.

Together, these findings suggest thatnot all social networks shrink inevitably with age as a result of members dyingand not being replaced; in fact, this effect may occur differentially withincultures. These findings may also reflect differences in countries' size andsocioeconomics: Americans, for example, often move across the country forcareer opportunities or retirement, while people in Lebanon are more likely toremain with the same people in one community for their entire lives, thoughyoung adults are leaving the country at a higher rate in pursuit of economicopportunity.

"These findings signify a need forflexibility with respect to how policy is developed and implemented given theunique situational contexts of nations," Ajrouch and colleagues concluded.

Social Expectations Shape Well-being

The effects ofthese various social network structures may vary on the basis of the socialexpectations of cultures as well. In a 2008 study, Katherine L. Fiori, aprofessor of psychology at Adelphi University, along with Antonucci andAkiyama, compared the social network maps and self-reported mental/physicalhealth outcomes of 491 Japanese and 514 American adults over age 60.

This analysis revealed four common network types, which the researchers referred to as *diverse*, *friend-focused*, *family-focused*, and *restricted*. In Japan, the most common network type, reported by 29% of participants, was a family-focused close network in which married and widowed individuals alike reported frequent contact with supportive family members. In the United States, on the other hand, 32% of participants reported living in a diverse, extensive social network, in which primarily married individuals interact with a large number of supportive family members and friends.

There were also several network typesunique to each culture. Some Japanese participants reported a unique marriedand distal, or isolated, network type, with few emotionally or geographicallyclose relationships outside of their marriage. In the United States, theseunique social-network types included unmarried individuals in emotionallysupportive (and unsupportive) friend-focused networks, as well asfamily-focused networks in which interactions were perceived as mostlynegative.

In addition, American participants infamily-focused negative networks, as well as those in functionally restrictednetworks—in which they reported low emotional support and highly negativerelationships—reported significantly higher levels of depressive symptoms andphysical health problems than those in other network types. Even when Japaneseparticipants reported low levels of support, Fiori and colleagues found thatsocial-network type was not associated with their self-reported physical ormental health.

There are a range of potentialexplanations for the differences between US and Japanese participants. It ispossible, the researchers wrote, that Japanese participants were less willingto admit they were unhappy with their social networks. It may also be thatpeople from different cultures assign different meanings to their socialnetworks and therefore respond to the same kinds of social networksdifferently.

“In Western societies, like the US,the key to relational well-being may be the creation of intimate connectionswith large numbers of people as a safeguard against the experience ofloneliness,” Fiori and colleagues proposed. “Because in Japan relationships maybe viewed as predetermined or obligatory, rather than constructed or voluntary,the Japanese may ‘learn’ to be happy with whatever network they have.”

In fact, these differing expectations permeate our social experiences, causing individuals from different cultural backgrounds to respond differently to social support on a physiological level, according to APS William James Fellow Shelley E. Taylor, a professor emeritus of health psychology at the University of California, Los Angeles, and colleagues in Psychological Science.

In a 2007 study of 81 undergraduatestudents, half of whom were Asian or Asian American and half European American,Taylor and colleagues collected a set of three saliva samples from participantsbefore, during, and after they completed a series of challengingmental-arithmetic tasks and presented a short speech to the researcher in theroom with them. Just before giving their speech, however, participants wereassigned one of three writing tasks: an implicit-support task, in which theywrote about a group of people who were important to them; an explicit-supporttask, in which they wrote to a person important to them for advice about thespeech; and a no-support task, in which they wrote about campus landmarks.

After completing these tasks,European-American participants in the explicit-support condition reported

beingless stressed and produced less cortisol (a stress hormone) in their saliva comparedwith the Asian and Asian American participants in the same condition. The Asianparticipants, on the other hand, reported being less stressed and produced lessof the hormone when they reflected on important relationships withoutspecifically referencing their own troubles.

“How people gain the psychologicaland biological benefits of social support in a given cultural context maydepend on the cultural emphasis on relationship goals,” Taylor and colleagueswrote. “Culturally inappropriate forms of social support…may actually haveexacerbated stress.”

In line with this and other research,there is no one-size-fits-all approach to addressing the long-term care needsof older adults, Fiori and colleagues wrote. “Back-to-the-family” policies thattout the benefits of multigenerational households may seem appealing on thesurface, for example, but that doesn’t mean they’re appropriate for allsettings or social-network types.

“Those developing social policy mustbalance an understanding of cultural values with the varying needs of differentgroups of elders,” Fiori and colleagues concluded.

Sowing New Stereotypes

Research by APS Fellow Becca Levy, professor of epidemiology and psychology at the Yale School of Public Health, pioneered the perspective that aging is not just a physiological phenomenon—it’s socially constructed, and internalizing negative beliefs about aging can make the decline associated with age more severe. These stereotypes are built up over the life course, Levy wrote in Current Directions in Psychological Science (2009). Her research group has found that age stereotypes can influence everything from memory to balance and willingness to pursue a healthy lifestyle or follow through on a course of medication.

In one study, Levy and colleaguesfound that individuals with more positive perceptions of aging lived an averageof 7.6 years longer than those who took a negative view, even after adjustingfor baseline differences in health.

“The adverse effects of negative agestereotypes point to the need to develop interventions that will maximize theinfluence of older individuals’ positive age stereotypes in their everydaylife,” Levy wrote.

Fortunately, this does appear to be possible. In a 2014 Psychological Science study of 100 older US adults between 61 and 99 years old, Levy found that 4 weeks of an implicit stereotype intervention significantly improved participants’ self-perceptions—and boosted their physical functioning more than a 6-month exercise intervention.

Participants, who were interviewed intheir homes seven times over 8 weeks, were split into one of four conditions:

- Individualsin the implicit-intervention group, who were tasked with indicating whether aflash appeared above or below a point on screen, were subliminally exposed topositive stereotypes about aging during four sessions. During these sessions,positive age-stereotype words such as ”spry” were flashed on screen at a speedthat allowed them to perceive the words without

becoming consciously aware ofthem. They also wrote a series of unrelated essays. The participants in thisgroup also took part in a neutral-explicit condition.

- Participantsin the explicit-intervention group wrote a series of short essays aboutmentally and physically healthy senior citizens and completed theflash-indication task with neutral implicit stimuli.
- Participantsin the combined implicit and explicit groups completed both tasks aboutpositive age stereotypes. Finally, those in the control group completed bothtasks about unrelated topics, such as clothing.
- Participantsin all groups also completed an "image of aging" scale that asked them to ratehow closely positive terms such as "capable" and negative terms such as"helpless" matched their image of older people in general and of themselves specificallyas older people. Finally, they completed a short test of physical functioningthat measured their ability to rise from a chair, walking speed, and theirability to balance in various positions.

The implicit-stereotype interventionwas found to serve as an "implicit fitness center," Levy and colleagues wrote,reducing participants' negative associations with aging 30% more effectivelythan the explicit intervention, which was in turn found to improve physicalfunctioning.

"The explicit approach may bethwarted by cognitive strategies that preserve existing beliefs," Levy andcolleagues suggested. "The implicit approach may be able to circumvent theinternalized negative age stereotypes that tend to predominate over thepositive ones."

The cultural variability in older adults' health further demonstrates that aging does not have to be accompanied by an inevitable decline in physical and psychological well-being, Levy noted in *Current Direction*s.

The cross-cultural relevance of thesefindings is notable, Levy says. Herfindings on the impact of beliefs about aging on older adults' health have beenreplicated by psychological scientists on five continents and supported by fourmeta-analyses.

Aging societies are already taking onthe challenge of redefining this stage of life. Officials in Japan, forexample, have called for the country to take steps toward becoming an"age-free" society where, instead of being expected to retire at a particularage, people are encouraged to remain active and working for as long as they arewilling and able.

"The remaining challenge is to achieve the activation of positive age stereotypes on a sustained basis," Levy concluded.

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Theinterplay of culture and neurobiology sculpt the brain over the course of alifetime, according to APS Fellows Denise Park, a professor of behavioral andbrain sciences at the University of Texas at Dallas, and Angela Gutchess, aprofessor of neuroscience and psychology at Brandeis University, in *Current Directions in Psychological Science*(2006).

“Cross-cultural investigation ofaging provides a window into the stability of changes with age due toneurobiology, as well as into the flexibility of aging due to life experiencesthat impact cognition,” the researchers explained.

Park’s research suggests that whileage may degrade our “cognitive hardware”—reducing processing speed, as well asworking and long-term memory—it generally leaves our acquired knowledge, thebrain’s “software,” intact. Over time, these experience-based differencescontinue to magnify, wrote Park and Gutchess, contributing to cross-culturaldifferences in the aging process even as our brains undergo similarphysiological changes.

When young Americans and Singaporeanswere examined under fMRI, for example, the researchers found that theyexhibited similar activity in the visual cortex when scanning images forrepeated objects. But while older Singaporeans and Americans demonstrated similaractivity in areas associated with processing images’ background features,elderly Singaporeans had significantly less activity in their object-processingareas.

These findings align with previousresearch suggesting that individuals from more interdependent cultures attendmore to their environment—or, in this case, the background of an image—than dothose from more individualistic societies, who attend more to focal objects.These differences are often more evident in older adults because they've spenta lifetime immersed in a given culture, Park and Gutchess wrote. Whether thesedifferences qualify as a "deficit" is also culturally dependent.

For example, episodic memory forpersonal experiences, or autobiographical memory, supports our sense of self, enablingus to recall specific past experiences that make up our personal history.Research has previously linked moredetailed autobiographical memory with increased creative thinking, more activecoping skills, and greater overall psychological well-being. But while thisappears to be true in Western, educated, industrialized, rich, democratic(WEIRD) cultural contexts that emphasize creating a unique, independentpersonal identity, these benefits may not generalize globally.

In fact, having detailed memories ofone's own experiences may work against the cultural expectation for fittinginto an East-Asian context, reducing well-being. In *Clinical Psychological Science* (2018), APS Fellow Qi Wang, aprofessor of human development at Cornell University, and colleagues reported aset of four studies comparing European-American and Chinese or Chinese-American children and young adults.

In the first of these studies, 99European-American students from Cornell University and 110 Chinese studentsfrom Peking University in China completed a measure of avoidant coping and amemory task that required them to recall three personal events that took placein the last week, the last year, and the past 10 to 15 years. Participants had3 minutes to describe each of the events in writing, providing as much detailas possible in their native languages. The researchers then coded thesedescriptions on the basis of whether each detail was specific to that event(e.g., "I went to the science museum with my family") or general in nature(e.g., "The science museum is very small").

As suggested in previous work,European-American students who recalled more specific details across all threetime periods also reported using fewer avoidant coping mechanisms, such asmaking up excuses to get out of social events, compared with peers with haziermemories. The researchers found no relationship, however, between memoryspecificity and use of avoidant-coping mechanisms among Chinese students.Instead, in subsequent studies, Wang and colleagues found that Chinese-American children with more detailed autobiographical memories reported moresymptoms of depression. In addition, their parents rated them as having feweradaptive skills, such as leadership and active coping.

"Cultural contexts…give rise to thepurpose of remembering and thus shape the way the past is remembered in serviceof the present and the future," Wang and colleagues conclude. "Detailedremembering of one's personal past is not necessarily the norm, nor is italways beneficial for psychological well-being."

Similarly, Park and Gutchess's research suggests that the quality of our memories changes over time both as a function of age—which can contribute to a reduction in source memory, free recall, and other mechanical skills—and of culture—which may help preserve certain types of memory relative to others.

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