

Gray tsunami

Sun City, Arizona, has been a mecca for retirees. But can the model survive as elderly populations explode and retirement becomes a distant dream?

BY JEFF WHEELWRIGHT

On a bright February morning under a blank desert sky, three experts in world population get into a van in Tempe, Arizona, and drive back to the future. From the campus of Arizona State University on the edge of Phoenix, the three head northwest along Grand Avenue, following old U.S. Route 60 out of the city. On either side, what used to be cotton fields and cattle feedlots, and before that catclaw

bushes and cactus scrub, has turned into suburban sprawl. The Phoenix metropolitan area, A.K.A. the Valley of the Sun, has grown more quickly than any other urban area in the United States, following an influx, over the past decade, of Hispanic migrants and white retirees. Due largely to the latter, the Northwest Valley of Phoenix is one of the fastest-aging population centers of the country.





THE DAY STARTS COOL, EVEN COLD. FROST disrupts the tee times on the bright green golf courses dotting the Northwest Valley. Arizona's median age is 34, but at the point where Grand Avenue crosses the dry bed of the New River, palm trees sprout from the sidewalks and the median age jumps to 75. Silver-haired drivers on souped-up golf carts nose into the traffic, one maneuvering fearlessly in front of the university van. Screened by a low white wall, rows of nearly identical single-level houses nestle on tidy, concentric streets. A big hospital overlooks the development like a lifeguard scanning a beach. Welcome to Sun City, Arizona, population 38,000, the once and future retirement mecca, where the whole world seems to be headed.

At Del Webb Boulevard—Del E. Webb was the visionary developer who built Sun City—the van turns and parks in front of the community's historical museum. The three academics get out. They are Michael Birt, 58, a gerontologist and director of the university's Center for Sustainable Health; Jennifer Glick, 42, a sociologist and demographer at the ASU Center for Population Dynamics; and Haruna Fukui, 32, a Japanese graduate student working on her Ph.D. in sociology with Glick as her adviser.

At DISCOVER's invitation, the trio had formed an impromptu panel. They were asked to discuss global population trends, including growth, fertility, and the impacts of immigration. But especially they planned to address the overarching trend of aging, which some researchers are calling "the gray tsunami" because it threatens to inundate the world's health-care systems and sweep away today's social, political, and economic norms. To make the discussion more

pointed, it would take place during a field trip to Sun City, the prototypical American retirement community, now entering old age itself. None of the three has been here before, and they are curious to see it.

Population growth, not aging, has drawn the lion's share of public attention, so the panel speaks to that topic first. There was consternation in the media when the Population Division of the United Nations announced that Earth had gained its 7 billionth person in 2011. By 2050 there could be 3 billion more of us, according to the agency's most pessimistic projection. But Glick, the demographer, says, "Let's not make a big deal about that number. The focus should be on the rate of growth and on the eventual turnaround." Although billions of people are still in the pipeline, global population growth is slowing so rapidly that a decline in the rate later this century seems unavoidable.

Demographers habitually take the long view, because subtle changes in population trends may take 50 years or more to register statistically. In 1960, the year Del Webb sold the first homes in Sun City, demographers believed that Earth's population was out of control. "We thought it would explode," Glick says. The sense of gloom was captured in 1968 by Paul Ehrlich's best-selling book, *The Population Bomb*, which predicted widespread famine and mass mortality. Instead, an annual population gain of 2 percent has been cut in half and continues to head down. "That's because fertility has declined, which writers of the time didn't anticipate," Glick adds.

The slowdown in growth has been offset somewhat by rising longevity. "People are living longer, 20 and 30 years longer, across the globe," observes Birt, the gerontologist. Greater longevity causes a society to age unless births surge in compensation. In fact, the U.N. called attention to the aging phenomenon in developed nations as early as 1956.

Del Webb was no demographer, but in the late 1950s he saw an opportunity in America's budding crop of elderly. Promoting the then-novel idea of "active retirement," Webb was a very active 60-year-old himself. Tall and lean, a vigorous golfer and baseball fan, he was a millionaire contractor with a common touch. The people who flocked to see his Sun City demonstration homes—100,000 showed up over New Year's weekend in 1960—had had their fill of hard times. These were people who had lived through an economic depression and a world war. The advertisements for Sun City depicted a golden way of life in a place where they could retire and relax, where they would not be frail or sick.

Some of those ads now hang in the Sun City Historical Museum, which occupies one of the first homes to be built here, next to the first golf course. Two vintage golf carts, labeled Him and Her, stand side by side in the carport. Inside, the modest fixtures and furniture of a typical 1960s retired couple are on display. The original cinderblock structure consisted of five rooms totaling just 858 square feet; an addition was put on the back later. The small eat-in kitchen features a boxy electric range and fridge. The sink in the pink-tiled bathroom is very low and the toilet is minuscule, hardly suitable for today's amplified Americans. The three academics smile as they look into the bathroom. "There are no hand rails, nothing to grab onto," Glick says.

Sun City's radical idea—to restrict home ownership to people 55 and older—effectively excluded families and children from the development. But recently the policy was updated. Now only one owner has to be over 55, this to accommodate residents with younger spouses. Getting back in the van and touring the quiet, curving streets, with their neat plantings and pink-tinted gravel, the ASU group sees no pregnant women or kids, no young people whatsoever. Sun City has a fertility rate of zero.



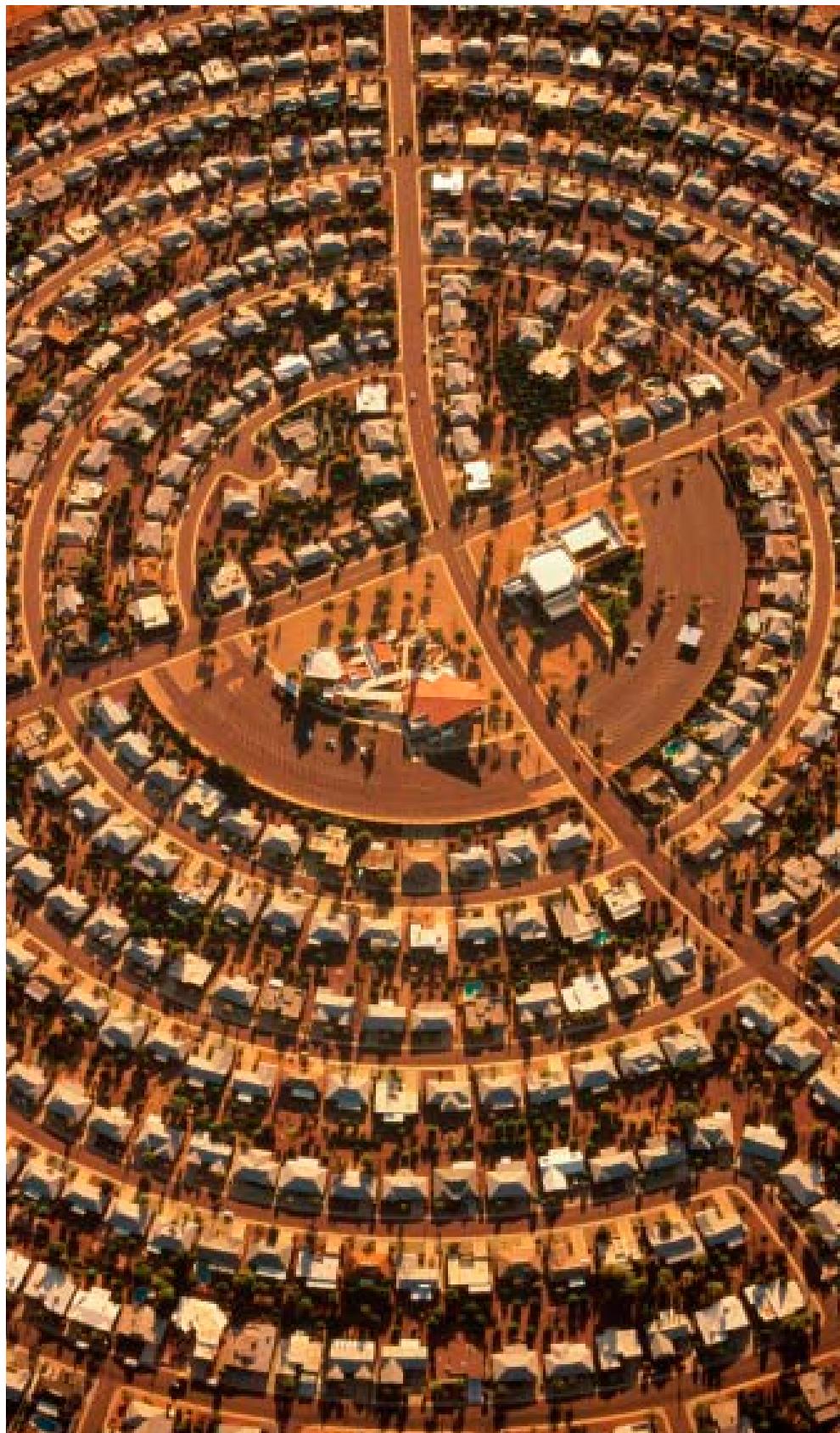
AGING BOOM/ FERTILITY BUST

The fertility rate is the number of children an average female will produce in her lifetime. The panelists note that the rate is currently plunging in almost all countries around the world. True, it has not occurred in sub-Saharan Africa, not yet. But for those who specialize in the long view, fertility collapse and accelerated aging have supplanted overpopulation as the most salient demographic trend.

"Take Taiwan," says Birt. "Its fertility rate has gone from about 7 in 1950 to less than 1 today. This trend applies to any country on the development escalator. It's inevitable." As a country develops, initially its death rate declines because of a rising standard of living and better medical care. Next, almost automatically, fertility goes down. "Japan got on the escalator first, and the emerging countries, like Brazil, will get there," Birt continues. "The religion of the country is irrelevant. It's happening now in Iran. It's happening in Catholic countries that oppose birth control, like Italy and Spain. In Mexico the fertility rate is under 3, approaching replacement level."

The replacement rate is the number of children that the average woman must produce in order to replace herself and her mate. Demographers normally define the replacement rate as at 2.1 children, the 0.1 increment allowing for infant mortality. It is a pivotal number, indicating that a population is stable, not expanding, and very likely to shrink. Among the 222 countries and territories in the world, two-thirds now have fertility rates below 3, while one-third have slipped under 2 and have begun to contract. Japan, the poster child for extreme trends in aging and fertility, is projected to lose a third of its population in the next 50 years. The most populous nation, China, has a fertility rate of 1.5. Though China's strict one-child-per-couple decree obviously has holes, the policy is having the desired result. India, the second most populous nation, has brought down its growth to 2.6 children per woman. The United States stands at the cusp of population decline because American females are having an average of only 2.06 children apiece.

In those figures lies the turnaround in world population that Glick predicts, and also its senescence, because when people are taken off the population escalator—at the front end, by not being born—those already on it



In Sun City, Arizona, houses form concentric circles around NAME/TK hospital. Pages 32-33: Tom and Dawn Bussjaeger from southern California, married for over 50 years.

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The new elementary school was fitted with wheelchair ramps so it could be converted to a senior center when the flow of children dried up.

become more conspicuous as they near the top. There is no stopping the process. “That’s why we say demography is destiny,” Glick remarks. “There’s only one exit: death.”

Birt describes a favorite graphic of his, derived from a 2007 United Nations publication. He calls it “Solving for X” because of the problem it raises for the world’s health-

care systems. Two lines are crossing, the percentage of people over 65 and the percentage under 5. Back in 1950, children predominated in the world; in 2050 the seniors will be on top. “The percent over 65 and under 5 are trading places,” Birt says. “We’re almost at the X spot.” The forecast date for global X to occur is 2017, but each country will arrive at the transition at a different time. “Japan blasted through its intersection years ago,” he notes.

Was there a single factor to account for this world-shaking reversal? “Yes,” Glick says. “You start educating girls.”

Birt agrees. “You start educating women, and they delay marriage and have fewer children,” he says. “It’s all due to not having children in societies that let women loose.” He turns to Fukui, who so far has not spoken. “Fukui-san, you’re 32 and not married. That would be inconceivable in Japan 30 years ago.” Actually, he does not know for sure that Fukui is unmarried, but he does know Japan, having studied and worked

there earlier in his career. With a Ph.D. in Japanese studies, he speaks and reads the language fluently. His calling her “Fukui-san” is akin to saying “Miss Fukui.”

Fukui speaks near-perfect American English, even incorporating a questioning inflection at the end of her sentences. Since becoming a graduate student in Arizona, she goes home to Japan only four weeks a year. She does not object to Birt’s appraisal of her, because it is true. Politely, Fukui turns the conversation to koreika shakai, or “aging society,” a term that has become grimly familiar in her country. Japan has the highest median age in the world, a shade under 45 years, and is in a quiet panic about how to take care of its graying, shrinking population.

For a decade, Fukui recounts, stories have been reported of elderly children tending their frail, sick parents, and lately there are reports of seniors dying alone in Tokyo housing projects, some by their own hand, “without notice, and found days, some-

Robovie-II from Robotics Research Institution may one day aid elderly shoppers in Japan, where

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MICHAEL S. YAMASHITA/CORBIS



times months, later." Although planners saw the gray tsunami coming when it was still far off, they did not do much to prepare for it, she says. She remembers an elementary school that was built in her hometown when she was young. The new school was fitted with wheelchair ramps and movable partitions so it could be converted to a senior center when the flow of children dried up.

In her postgraduate research, Fukui is studying senior citizen facilities in Phoenix. Sun City perplexes her; she calls it "an extreme example of self-separation." In contrast, Japan mingles its youngest and oldest citizens, placing schools next to senior centers, for example. "We respect the elderly," Fukui says. "Having them around during your childhood is an asset. So society tends to promote that."

THE IMMIGRATION ENGINE

If the United States is deficient in Confucian respect for the aged, it has an asset that Japan lacks. Immigration alters a country's population much more rapidly than other factors. Like human hydraulic fluid, immigration pressures the demographic machinery of the world, and the world whines and wheezes in response. Japan's reaction—to restrict foreigners and maintain its ethnic purity—has resulted in a different kind of self-separation. The Japanese are concerned that immigrants will not "fit in," Fukui says. But the needs of its burgeoning elderly have forced the government to relent and let in caregivers from Indonesia and the Philippines.

Over the next 40 years, according to United Nations estimates, the majority of the world's immigrants will head to the United States. "We have higher fertility because we're an immigrant-receiving country," Glick says. Bearing children at higher rates than their hosts and taking lower-paying jobs in hospitals and nursing homes, the new arrivals have the potential to alleviate two problems at once, that of rapid aging and a shortage of caregivers. "In the Anglo world," Glick continues, "the over-65 portion is increasing, but the child population we have is dynamic. So I think there will be enough labor to provide care" for the elderly, she says.

The Phoenix sprawl foreshadows the

"Among Americans over 80—the fastest-growing segment of the U.S. population—half have a neurodegenerative disorder."

fractured demography to come. Although Phoenix and the state at large are 30 percent Hispanic, that proportion drops to 0.9 percent inside the walls of Sun City and other state retirement enclaves—where residents tend to be white, often from the Midwest. Eight of 10 Arizonans who are 65 and older are white, and their numbers are expected to double in 10 years. Meanwhile, 60 percent of the state's Hispanic residents are younger than 24. Already the majority of elementary schoolchildren are Hispanic. By 2030 half the state's residents will be either under the age of 18 or over 65, an unprecedented gulf dividing groups by both age and ethnicity. It would be hard to concoct a better recipe for social heartburn.

In her sociological research Glick has documented the stresses on Hispanic and Asian immigrants in Phoenix, which intensified during the recession of the past four years. "When you have an economic crisis like we've had recently, it's easy to target a powerless group like immigrants," she says. What is happening in Arizona is a microcosm of global strains, as younger, darker countries confront aging, richer ones.

But here it is just another relaxed day on the bowling greens in Sun City. Cars move in a dreamy line along Del Webb Boulevard. The ASU van turns into a shopping plaza and parks in front of Fry's Supermarket. Getting into a space took a bit longer than it might have because the other drivers in the lot are, shall we say, erratic. All the same, nobody honks. Sun City cuts everyone a lot of slack.

A NEW OLD WORLD LOOMS

Sun City is an anachronism, the three researchers agree, and the pool of potential residents is bound to shrink. "It isn't emblematic any more. This is what the baby boomers' parents were retiring to," says Glick.

The boomers who are starting to retire today will live one, two, three decades longer than Del Webb's pioneers. They will definitely need hand rails in their houses, if only because, according to surveys, they will want to stay in their homes as long as possible. "Aging in place" is the new mantra in gerontology, Birt says. The trend has reached Sun City and what is now its third generation of residents. Originally the community was a wintertime escape for aging "snowbirds"; today most residents stay in their houses year-round, braving the summertime heat.

As independent as they may strive to be, the baby boomers will not escape chronic illness and the other ravages of old age. Birt has a version of his Solving for X graphic that shows the disease burden on the graying world population. While infectious diseases and illnesses related to poverty are declining, noncommunicable conditions like cancer, heart disease, diabetes, and Alzheimer's continue to increase. Del Webb's own health history illustrates the change. In his twenties he nearly died of typhoid, a major infectious killer of the early 20th century. Advised by a doctor to move to a warm, dry climate, he chose Phoenix. Webb died when he was 75 of lung cancer, a modern lifestyle disease caused mainly by smoking and largely affecting older people.

Scary statistics about the coming tidal wave of debilitated seniors are almost ridiculously easy to generate. Among Americans over 80—who represent the fastest-growing segment of the U.S. population—half have a neurodegenerative disorder. The 5 million who are currently afflicted by Alzheimer's disease will grow to as many as 16 million by 2030. Again, the Phoenix area will spearhead the trend. Already more nursing homes are located in the Northwest Valley than anywhere else in the country. Behind its palm trees and golf courses, Sun City is destined to become a Potemkin village of invalids unless it opens its doors to a younger and more diverse population.

Part of Birt's job at ASU's Center for Sustainable Health is to brainstorm solutions to the gray tsunami. He puts his faith in technology, envisioning that in lieu of human attendants,



A favorite activity in Sun City is lawn bowling on the green. But the leisure lifestyle might not suit aging boomers, who are more likely to work.

medical devices in highly wired households will keep an eye on seniors, reminding them about their medications and monitoring their vital signs, even as they sleep. "Even weighing someone in a doctor's office takes time," Birt says. "If you had all these measurements coming in—the patients weighed at night, in their beds, and you'd track how well they're sleeping at the same time—their care would be more effective." Not surprisingly, the Japanese lead the world in developing robots and other automated solutions to the caregiving crisis.

The trio is having coffee at a small table in the supermarket. Elderly shoppers glide about with their carts, wheels squeaking on the polished floor. Wi-Fi is available in the store, but judging by one question—"Is that a laptop?" a shopper asks, pointing to a computer on the table—the present generation of retirees may not be ready for digitized medical care.

Sun City has spawned plump successors: Sun City West, Sun City Grand, and Sun City Festival, each development pushing farther

out into the desert and offering greater amenities to a more upscale class of retirees. But many boomers have not saved enough money to retire and will probably have to keep working well past 65; others, tapping on their smartphones beside their swimming pools, may prefer to keep working anyway. "After all," Glick comments, "retirement is a 20th-century phenomenon. Before then, nobody retired. Two hundred years from now they might be asking, 'What? Retired?'"

The shared vision of retiring to white, middle-class Sun City is defunct. Our current Social Security system depends on a steady stream of young, healthy workers to support it. Immigrant workers will need to come in to aid the elderly, and then they will become elderly themselves. Similar trends will play out in other countries, each on its own timescale and in accordance with its

unique culture and circumstance. Culture is flavoring, but still, demography is destiny, as the panelists contend.

If and when a more diverse population moves in to Sun City, something of value will be lost. As Birt suggests, there is a special serenity in a place where no one gets mad at bad driving or confused shopping. The challenge for America as it ages, he says, is for "younger people and older people to be tolerant of the other. Sun City is an environment that is patient with the limitations of elderly adults. I noticed it. I felt it. The U.S. is such an impatient culture...but it is accepting and attractive here. You can see why they stay."

Jeff Wheelwright, a longtime DISCOVER contributor, is author of *The Wandering Gene and the Indian Princess: Race, Religion, and DNA* (W.W. Norton, 2012).