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Global Aging: Emerging Challenges

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Global Aging: Emerging Challenges

Alexandra Crampton

Abstract

Aging policy frameworks were devised during a demographic and economic context in which population aging seemed confined to wealthy nations. These countries could afford retirement policies that supported older workers, decreased unemployment among younger workers, and decreased family pressure to provide old age care. This calculation was based in part on failure to anticipate three demographic trends: continual decline in fertility below replacement rate, continual gains in longevity, and the rise of population aging in poor and "underdeveloped" countries. These three trends now fuel a sense of crisis. In the global North, there is fear that increasing numbers of older adults will deplete state pension and health care systems. In the global South, the fear is that population aging coupled with family "breakdown" requires such state intervention. Natural disaster metaphors, such as "agequake" and "age-tsunami," illustrate fears of a "graying globe" in which population aging implies population decay and economic destruction. Yet, global aging trends develop over decades and are not easily reversed. Longer-range trends can be addressed through revising policy frameworks to incorporate how growing old is moving from global exception to expectation.

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I. INTRODUCTION

For most of human history, reaching old age was an exception. Scholars estimate that global life expectancy up until the mid-18th century was only 25 years (Vallin 2002). Reaching old age was cause for celebration. For example, the British crown began a practice in the early 20th century of sending special birthday congratulations to subjects on their 100th birthday. In 1917, seven men and 17 women received this greeting. Over the next few generations, the Queen became quite busy as old age in Western Europe moved from exception to expectation. By 1952, the average number of birthday telegrams was 200. In 2007, the number was 8,439 (The Royal Household 2008/9).

Today, demographers note that population aging is a trend spreading across the world. Global life expectancy reached about 47 years by 1950, has reached age 67 today, and is projected to rise to 75 by 2050 (AARP 2007; United Nations 2009).¹ Due to declining fertility, the proportion of older adults in the global population is also increasing. The global population of people 60-plus is expected to rise from 10.8 percent in 2009 to almost 22 percent by 2050 (United Nations 2009). Women are making even greater gains than men. For example, female life expectancy continues to surpass that of men by a range of three to seven additional years worldwide (United Nations 2009).² In 2005, older women (60-plus) outnumbered older men by 67 million (United Nations 2005). Policy makers describe these trends as a "graying globe;" a more accurate image may be "the grannying of the globe."

Analysts describe this trend as part of a "longevity revolution" in which more people are reaching "old-old" age of 80-plus.³ This age group is the fastest growing segment of older adults worldwide (United Nations 2005). Those nations offering special birthday greetings will become busier by 2050, when a projected 2.3 million people will become centenarians (Kalache et al. 2002).

^{1.} Long-range demographic statistics often include a lower, medium, and higher range of projected change. The statistics used to describe population aging trends and to create population pyramids use a medium-range projection.

^{2.} Gender differences are more pronounced in later ages.

^{3.} As described by Kinsella and Phillips, "Almost one-half of people born today can expect to reach age 80" (Kinsella and Phillips 2005).

In the past, population aging was thought to be the result of successful development. Aging policy, then, was confined to countries defined as either developed or well on their way. Some argued that there was "no aging" in poorer nations of the global South where older adults were protected by cultural norms and the state could rely on family to care for relatively few aging relatives (Cohen 1998).⁴ Today, older adults may seem to have a greater presence in wealthy nations of the global North because the proportions of people 60 and 80-plus are higher (Tirrito 2003).⁵ However, most people aged 60-plus and about half of those aged 80-plus live in the global South. By 2050, 69 percent of the oldest old will be living in that region (United Nations, 2009). This is in part due to the

While the population of people 60plus will increase from 231 million to 395 million between 2000 and 2050 in the global North, for example, the older population in the global South will increase from 374 million to 1.6 billion during the same period. greater overall population numbers in the global South, and also due to faster rates of increase among older populations in these regions (United Nations 2009; Demeny and McNicoll 2006). While the population of people 60-plus will increase from 231 million to 395 million between 2000 and 2050 in the global North, for example,

the older population in the global South will increase from 374 million to 1.6 billion during the same period (United Nations 2002).

Population Aging: Development Success Story or Modern Policy Crisis?

Demographers describe population aging as a modernization success story. This is because the key drivers of population aging are decreasing mortality and fertility, which have been important goals in development policy and planning for the past two generations. Yet, the discussion of old age in policy discourse has been much more pessimistic. A negative relationship is posited between aging and development, in which the role and social status of older adults declines as countries modernize and develop. State intervention becomes necessary to provide jobs for younger workers and to support retirees. Old age then emerges in policy as a life stage characterized as unproductive and dependent. Aging policy focuses on the problems of pensions and elder care. The chief measure for policy planning is dependency ratios, which calculate the boundary between productive citizens relative to the dependent. This boundary is set by the chronological age designated as old. Demographically younger nations tend to choose age 50 as the boundary while aging nations use 60 or 65. Aging policy thus uses birthdays to divide populations between those who give and those who take from the formal economy and social welfare system.

Given the characterization of aging as loss, policy analysts understandably view global aging trends with alarm. At an extreme, metaphors of natural disaster are used to warn of an impending "gray dawn" that threatens to "bankrupt" state welfare systems (Peterson 1999). Meanwhile, elder advocates sound a different alarm in developing countries. They argue that countries are becoming "old before they are rich." The informal policy of relying upon families for elder care is therefore unsustainable. Rather than a burden to the state, older adults are at risk of burdening families.

Steps toward Long-Range Aging Policy

In taking a longer-range view, it is important to remember a previous population crisis. Fear of "population explosion" began in the 1950s (Demeny and McNicoll 2006). The concern was that gains in mortality made possible through successful public health and medical interventions would result in exponential population growth unless checked by fertility decline. Policy interventions focused on decreasing birth rates through population and family planning. What was unknown in 1969, when the UN Population Fund (UNFPA) was created, was that global birth rates were peaking between 1965–1970 (Sadik 2002). Concerted policy efforts were therefore implemented just as trends began to change. Successful intervention through policy then helped accelerate fertility decline (Caldwell 2002). Today, some countries are facing a new fear of birth dearth as fertility rates fall past the desired rates. For example, fear of population implosion helps drive pro-

^{4.} In this paper, the terms "global North and South" refer to regions considered modern and developed (the North) in contrast to those still developing (the South). Despite the problems with this approach, these terms are used given the tendency in aging policy to bifurcate concern between a global North of wealthier, aging populations and a global South of relatively poor and youthful populations.
5. For example, the proportion of older adults in developed regions is projected to increase from one-fifth to one-third of the regional population between 2005 and 2050. During the same period, the proportion of older adults in the global South is projected to increase from 8 percent to one-fifth of the regional population (United Nations 2005).

natalist policies in Western Europe and parts of Asia (Martin 1991; Robertson 2007).

This past crisis was met with a reaction narrowly focused on one policy solution (family planning programs) to reduce birth rates. The current crisis now centers on those who reach an age of dependency at the other end of the lifespan. Given the global economic crisis, it is not surprising that such a population would be examined with alarm. At the same time, demographers

The long-range policy challenge is how economic and human development policy and planning should include aging and the expectation of reaching old age. project that population aging is beginning to slow. The global growth in older adults is currently peaking, and is projected to stabilize by 2025 (AARP 2007). In addition, the rate of population aging is beginning to slow in the "oldest" country pop-

ulations even as that rate is beginning to take off in those countries in which youth currently occupy policy makers' attention.⁶ A significant proportion of older adults in the future will come from these youthful populations. The enduring challenge is not how to simply reduce either the number or dependency of older adults. Nor can countries wait until they are wealthy enough to support national pension and health care programs. The longrange policy challenge is how economic and human development policy and planning should include aging and the expectation of reaching old age.

This paper addresses this challenge through examination of demographic trends, policy discourse, and ethnographic data. The historical experience in Western Europe has provided a classic model for explaining how aging becomes an important demographic and policy issue. In this model, population aging trends emerge slowly through modernization and development. This is accompanied by erosion of elder status. By the time aging becomes a social problem demanding policy attention, the state is prepared to support older adults through pensions and health care. Individual countries can be analyzed as pre-transition, in transition, or post-transition. In looking

toward the longer-range future, however, a singular model becomes increasingly insufficient. Demographic trends are outgrowing the classic model, and new policy challenges have emerged. These challenges are exacerbated by policy in which old age is narrowly defined by chronological age and as dependency and loss. Ethnographic study of older adults provides data for expanding policy frameworks. The data in this paper demonstrate how people become old (unrelated to birthdays) and how they rely on family and informal networks for care. Old age care is thus not only a problem for the state but part of a social contract between the state and the family in providing care and workforce productivity. Given demographic trends, this paper concludes with recommendations for re-conceptualizing aging and the problems of old age in policy and planning.

II. POPULATION AGING BY NUMBERS: DEMOGRAPHIC TRENDS

How do populations age? Demographers use several measures to define population aging, including absolute numbers, rates of increase, and proportion in relation to younger cohorts. The most common measures are average life expectancy at birth, and the proportion and rate of increase in older populations relative to younger cohorts (for example, see United Nations 2009). Young populations are those in which more than 30 percent of the population is under 15 and less than 6 percent of the population is old (defined as 60- or 65-plus). Old populations are the reverse, and are particularly noted when the rate of increase is greatest among older cohorts (Cowgill 1974). Another measure is the median age of a population. This is the age dividing the population in half. For example, the median age in China is projected to increase from 41 to 55 by 2050 (United Nations 2009). This means that half of the population will be over 55 and half will be under 55. By contrast, the median age for Niger as the world's youngest population is 15 today and projected to be age 20 by the year 2050 (United Nations 2009). Demographic trends are measured and projected through historical and current averages in fertility, mortality, and morbidity rates. (Morbidity refers to cause of death.) Current global aging trends are primarily driven by fertility decline, followed by mortality decline. National aging trends are also affected to varying extents by migration.

^{6.} For example, while the average age of the U.S. population is projected to increase by about three years over the next 20 years, the average age in Mexico is projected to increase by 20 years (Hewitt 2004).

When demographers write of population aging as an indication of development success, they are referring to fertility, mortality, and morbidity trends. These are captured through a tale of transitions in which developed countries have successfully reduced fertility and mortality rates. Morbidity trends show improved survival rates from acute infection and many illnesses (Demeny and McNicoll 2006; Omran 1971; Sadik 2002). Development drives the demographic and epidemiologic change from "traditional societies" of no aging to "modern societies" with population aging. Policy analysts then examine how far individual countries have moved from traditional to modern development contexts. While this process unfolded slowly in Europe over centuries, demographic changes associated with development are now happening within decades. In fact, current and longer-range demographic patterns suggest that these models are increasingly outdated both in Europe (which is now in "post-transition") and many other parts of the world. In particular, development has proven to be a highly variable and complex process of social and economic change. Variables linking development and demographics ought to be disentangled from the historical European example used to create the classic models. Nevertheless, this section begins with the dominant theoretical tools currently used by policy makers within this linear, progressive model, and then discusses trends that fall outside this model using country-specific examples.

Demographic Transition Theory

The demographic transition consists of four stages. The first stage is marked by high fertility and mortality.⁷ In the second stage, infant and child mortality decrease, and fertility rates then slowly decrease to replacement level. Replacement level is the number of births per woman that would keep population levels stable, and is estimated as 2.1 children per woman. In the third stage, infant and child mortality rates stabilize at a very low number. This causes population growth. As fertility rates fall, and as adult mortality rates also begin to fall, populations begin to "age." In this fourth stage, when fertility and mortality rates are low, the demographic transition is complete. Population equilibrium theory suggests that population growth declines and that populations eventually stabilize (Vallin 2002).⁸ Analyzing the how and why of population transition ties aging to development. The main drivers are theorized not to be the arrival of industrialization as much as accompanying socioeconomic changes. The main factors are public health and education (Cowgill 1974). Again, the key transitions are changing fertility and mortality rates. In the first phase of transition, decreasing infant and child mortality rates lead to decreasing numbers of births. Public health is a factor as improved sanitation and health interventions improve not only infant and child health but also maternal health outcomes. Assuming rational calculation based on an ideal family size, women choose to reduce the number of pregnancies (Jones et al. 1997). As countries develop, families also choose to have fewer children as the "cost" per child in education and other preparation for later economic roles increases. Examination of fertility transition also shows a correlation between declining fertility and the rise of women's education, delayed marriage, and age of first birth. Changes in choices and behaviors are thought to happen as a consequence of policy. For example, aging policies are partly intended to reduce fertility and ideal family size because parents no longer need to have children as an informal social insurance policy.

Epidemiologic Transition Theory

Abdel R. Omran first posited epidemiologic theory as a way to explain the correlation between mortality patterns, morbidity patterns, and demographic transition (Omran 1971). This theory suggests that demographic transitions are accompanied by an epidemiologic transition in which trends in cause of death shift from acute and infectious diseases to chronic and degenerative conditions. These are divided into three stages: The Age of Pestilence and Famine, The Age of Receding Pandemics, and The Age of Degenerative and Manmade Diseases (Omran 1971). While the first is most often used to describe "premodern" times, the second and third are used to describe the more recent past and current trends. Development brings improved living conditions, public health measures, and basic medical interventions. These changes enable more infants and children to survive

^{7.} For a review of the history and debate around demographic transition theory, see Kirk 1996.

^{8.} Scholars debate whether and when populations stabilize. Long-range projections of world population

aging tend to use population stabilization theory, and to project that population growth will continue to decline and eventually stabilize at about 9 or 10 billion people. This stabilization will begin around 2050 (Vallin 2002).

into adulthood. Morbidity trends eventually reflect the health problems more typical of later life, such as diabetes, obesity, and heart disease. These diseases are the so-called "diseases of civilization" (Barrett et al. 1998). In Europe and North America, these trends are often analyzed as consequences of development more broadly—such as changes in sanitation and hygiene that happened over time. In developing countries, these trends are also attributed to concerted campaigns and interventions in the immediate post-World War II period, most of which have declined since 1960 (Sadik 2002).⁹ As this general trend is noted in different world regions, the term "health transition" is used to write optimistically of generally improved health and longevity as a longer-range trend (Kinsella and Phillips 2005).

Population Pyramids as Demographic Age Gauge

Since the 1950s, when many current population planning and research programs first started, population demographics have been expressed in graphs called population pyramids. The left side of the graph depicted the numbers of males in each age cohort, from 0–5 at the bottom to 60-plus at the top. The right side of the graph depicted the numbers of females

Over the past few generations, however, population pyramids for many countries have changed shape. These pyramid permutations can be categorized into younger and older populations as aging trends emerge. in each cohort. At that time, the typical graph and the one assumed to be the premodern or pre-industrial norm for populations created a pyramid shape. These "youthful" populations are characterized by high fertility and mortality rates. As a result, the base of the pyramid is always

much wider than the top. These are populations in which reaching old age is exceptional and average life expectancy might range from 40 to 60. Over the past few generations, however, population pyramids for many countries have changed shape. These pyramid permutations can be categorized into younger and older populations as aging trends emerge. For example, Pakistan has a youthful population. The population pyramid takes a classic shape in which high fertility rates mean that the largest cohorts also are the youngest. Moving up the pyramid, each cohort tapers to a smaller size. A steeper shape indicates high mortality rates as fewer people survive into the next age range. Italy, by contrast, has an aging population. Very low birthrates mean much smaller young cohorts. High life expectancy coupled with longevity trends keep each cohort from shrinking quickly as cohorts age up the pyramid. These shape differences can be compared in Figure 1.

Figure 1: Population Pyramids for Pakistan and Italy



In describing how populations age, demographers distinguish between aging "from below" and aging "from above" as seen in population pyramids. The main factor driving up life expectancy over the past two generations has been declining (and very low) infant and child mortality. This is in part because most people who survive into mature adulthood will survive into old age. Growing old thus depends very much on what happens as population cohorts grow up. Demographers refer to population aging trends caused by decreasing fertility and infant mortality as "aging from below," as larger young cohorts survive childhood and age up the population pyramid.

Brazil provides an example of aging from below. As can be seen in comparisons of population pyramids from 2000 and 2050 in Figure 2, larger cohorts move from those at the lower (younger) tiers of the pyramid up into adulthood through middle to old age over time.

^{9.} If the decline is significant, then it may suggest that population aging trends seen today could be less impressive in the longer-range future. That is, the infants and children who benefited from interventions of the 1950s are the current cohort of older adults in the global South.

Figure 2: Population Pyramids for Brazil, 2000 and 2050

Data Source: U.S. Census Bureau, International Database



In addition to aging from below, populations can also age "from above" through declining mortality rates and overall growth rates in adult cohorts. Italy is one example, as can be seen from the shape of its population pyramid in Figure 1. Global variation in adult mortality is not as great as in adult life expectancy at birth. For example, life expectancy at birth ranges from 55 in the global South to 77 in the global North (United Nations 2009). This reflects an overall range in life expectancy at birth from age 33 in Swaziland to age 82 in Japan and Hong Kong (United Nations 2009). The gap in life expectancy for older adults, however, is much smaller. Added years once an individual reaches age 60 range from an additional 15 years for African men to an additional 25 years for North American women (Aboderin 2007). The phenomenon of aging from above helps explain population growth in countries with birth rates at or below replacement level. For example, the birth rate in China is below replacement level, and population growth has slowed but not yet stabilized (Jianmin 2007). Aging from above has also required demographers to add tiers to the tops of population pyramids.

Of course, the most immediate way in which population aging trends can change is through immigration. Although immigration does not typically affect demographic trends as much as fertility and mortality rates, this obviously depends upon immigration policy and migration flows. In particular, the United States is one of the younger populations in the global North largely due to immigration. The current global migration rate is about two million people each year (United Nations 2009). Over the next 50 years, the United States is projected to continue receiving about 1.1 million people each year (United Nations 2009). Although population aging pressures spark immigration debate in Europe and Japan, policies remain comparatively restrictive.

Population pyramids from Germany and the U.S. can be used to compare the impact of population aging from above with the added influence in the U.S. of immigration (Figure 3). While longevity trends are reflected in the cohort size of older generations for both countries, U.S. immigration adds more people to younger cohorts. The U.S. also has a higher fertility rate, which is partly due to a relatively youthful immigrant population. The U.S. pyramid thus takes a more dome-like shape in contrast to the more inverted German pyramid.

Figure 3: Population Pyramids for Germany and the United States Data Source: U.S. Census Bureau, International Database



From Population Pyramids to Population Permutations: Outgrowing Transition Theories

Policy makers examine population pyramids to map each country onto the stage of demographic transition. Over time, the pyramid shape is expected to become more uniform. Analysts use the changing shapes of population pyramids to determine how far a country has progressed and what may be needed to complete transition. However, there are three major trends that suggest new (or at least more complex) models are needed. The first is rapid fertility decline that continues beyond replacement level rather than stabilizing at or near it. The second is a longevity trend in which life expectancy of adults continues to rise. This means that increasing numbers of adults will reach old and old-old ages. In some countries, this trend has also been coupled with "morbidity compression" in which more people live healthier adult years before they become very sick at the end of their lifespan (Fries 1989, Kalache et al. 2002). The third trend is how much more rapidly demographic transitions are happening in the global South in comparison with Western Europe's slow trajectory. This means that countries are "getting old before rich" as population aging outpaces economic development. In addition, the classic model suggests progressive change from high fertility and mortality to low fertility and mortality. Yet, fertility and/or mortality trends have also reversed in some countries.

In addition to the elusiveness of a universal theoretical framework to explain demographic transition, morbidity trends in some countries challenge the utility of epidemiologic transition theory. The health transition of epidemiologic theory was first devised in the 1970s, when there was high optimism that medical technology would eventually cure most health problems. (Barrett et al. 1998) Discoveries of antibiotics and vaccinations led to confidence that diseases could be eradicated. Since then, there have been many examples of how widespread use of these drugs leads to a more resistant and sometimes more virulent strain. One such example is the use of chloroquine, which has led to chloroquineresistant malaria (Barrett et al. 1998). In addition, diseases can seem to be on the wane only to return at a later time, such as tuberculosis. This disease is associated with poor living conditions. The persistence of poverty worldwide is therefore considered a major factor in disease resurgence (Barrett et al. 1998). In addition, new diseases can emerge through development beyond the "diseases of civilization." For example, large commercial farms easily spread viruses, which are then transported through distribution of products and travel by consumers. Rather than a transition from acute and infectious to chronic and degenerative illness as the major cause of death, countries such as Mexico include both as leading causes of death (Barrett et al. 1998). Mortality and morbidity trends are thus proving more complex than was anticipated more than 30 years ago.

One way to examine the complex interplay of variables shaping population aging trends is by comparing national populations. Variations in shape can be partially explained by post-demographic trends, speed of transition, the impact of policy, the reversal of trends, and the impact of pandemics. In the next section, Japan provides an example of a post-transition country, Mexico as a developing country in rapid transition, China as a country in which policy has dramatically impacted demography, Russia as a country with trend reversals, and South Africa as a country radically impacted by HIV/ AIDS. Each trend presents challenges in developing long-term aging policy.

Post-Demographic Transition: Vertical Expansion and Shrinking Bases. In posttransition countries, fertility and mortality rates continue to decline past previous model predictions. Populations may shrink as fertility rates plunge below replacement level, while mortality decline brings greater lifespan in each generation. Today, there is speculation about what the absolute ceiling on longevity might be. One provocative question is whether life expectancy could rise to the level of maximum life expectancy, which some estimate as

120 years. Another important trend is in changing family composition (Bengtson 2001; Tirrito 2003). This has emerged as more women have fewer than two children and more people live into old-old age. Family trees with many branches begin to resemble family "beanpoles" (Bengtson 2001). In beanpole families, there are no (or few) siblings,

Today, there is speculation about what the absolute ceiling on longevity might be. One provocative question is whether life expectancy could rise to the level of maximum life expectancy, which some estimate as 120 years.

cousins, aunts, and uncles. At the same time, each generation can live long enough to see the birth of great-grandchildren. The result can be four-

generation households in which parents and grandchildren support greatgrandparents and a great-grandchild.

Japan provides an example of a post-transition country of high life expectancy, low fertility, and great longevity. In 1950, it was one of the "youngest" countries in the world, with a median age of 22; now, the median age is 41. By 2025, median age will approach 50 (Hewitt 2004). The birth rate is more than one-third below replacement level. Japan's projected population pyramid dramatically reverses the pyramid shape (Figures 4 and 5). This means fewer children in young cohorts and a greater bulge as comparatively large cohorts age past adulthood into old (and old-old) age.







Data Source: U.S. Census Bureau, International Database



Demographic Transition at High Speed: Getting Old before Getting Rich. As previously discussed, demographers have tracked the "fertility transition" in which birth rates fall to replacement level. In the classic demographic transition model based on European history, this process took many generations. Since the 1950s, however, fertility transition in some parts of the world has required decades rather than generations. For example, the fertility transition in France, in which birth rates fell from six children per woman to 2.1 children, required 115 years (Kinsella and Phillips 2005). The same transition in Mexico, however, took 30 years (Pujol 1992). Meanwhile, mortality rates have also dropped more quickly in parts of the global South than projections based on European experience. For example, Mexico's fertility transition was preceded (between 1950–1975) by a nearly 50 percent drop in death rate (Pujol 1992). In many countries, dramatic demographic trends

are quickly outpacing economic growth. This challenges the classic model in which population growth and later stabilization seem to accompany higher standards of living and social welfare expansion. Instead, countries can "get old before they get rich." This raises questions of who will care for those older adults as they become more frail and

In many countries, dramatic demographic trends are quickly outpacing economic growth. This challenges the classic model in which population growth and later stabilization seem to accompany higher standards of living and social welfare expansion.

dependent in countries where relatively few are covered through private or state social welfare policies.

Acceleration of Demographic Transition through Policy. China provides another example of a country in which population aging seems to outpace economic growth. China has a projected population pyramid of rapid population aging. This is caused in part by the family planning policy often known as the "one child policy." This effort to lower fertility rates by restricting most couples to one child per family is estimated to have "averted over 300 million births" (Greenhalgh 2003). The longer-range challenge is a "4-2-1" problem, in which one adult child will need to care for two aging parents and four aging grandparents. This problem is exacerbated by the government's reduction of social welfare support dating back to the 1980s (Jianmin 2007). Social security is not widely available, and currently supports only 26 percent of the older population (Jianmin 2007). To compare how much China has changed since the one child policy and how much more the population will change, see Figure 6.



Figure 6: Population Pyramids for China Data Source: United Nations World Population Prospects: 2008 Revision

Transition Reversals and Deviations. While demographic transition has accelerated in countries like China, this transition has reversed in many parts of Eastern Europe (for example, see Coleman 2006). Life expectancy has been decreasing in Eastern Europe since the 1980s (United Nations 2009). The Russian Federation has one of the lowest life expectancies in the global North (United Nations 2009). Since the 1990s, male mortality has increased, particularly in cohorts who should be in their productive years. At the same time, female infertility rates have increased. Population projections for Russia are a longer-range trend of population decline (Coleman 2006).

These shifts can be seen in comparing population pyramids from 2009 and 2050 (Figure 7).





Pandemics. Scholars have argued that pandemics cannot be eradicated but are instead periodic and inevitable. The most dramatic example currently has been HIV/AIDS in Sub-Saharan Africa. In Southern Africa, the hardest hit region, population growth has slowed to 0.6 percent and continues to decline (United Nations 2009). Life expectancy has fallen to 52 from the average of 61 years just 10 to 15 years ago (United Nations 2009). Although average life expectancy at birth has fallen dramatically, the disease has primarily robbed populations of the middle generation, leaving older adults to care for their sick and dying children as well as their grandchildren. There are currently 24.7 million adults and children who are HIV positive. As many as 12.2 million children have lost one or more parent to AIDS (Aboderin 2007). At the same time, there have been fewer adults having children who survive childhood, particularly when the child is also infected. This results in future trends of smaller cohorts at every age, even as the number of people 60 and over will continue to be significant. In South Africa, for example, overall the population growth rate is in decline (U.S. Census Bureau International Database 2009). However, the proportion of people 60-plus is expected to more than double from 7 to 14 percent of the population (United Nations 2009). The proportion of people 80-plus is expected to rise from 0.6 percent to more than 2 percent of the total population (United Nations 2009). Population pyramids from 2000, 2025, and 2050 (Figure 8) help illustrate how population aging continues in the face of a pandemic as found in South Africa.¹⁰



Figure 8: Population Pyramids for South Africa Data Source: United Nations World Population Prospects: 2008 Revision

To summarize, both the demographic and epidemiologic theories underlie classic models by which demographic trends have been measured and monitored. The classic models have been useful for explaining population aging from the historical perspective of how these trends first emerged in Europe. They also help explain how population aging trends are leading to global trends in which old age should be an expectation. However, development is not a uniform process that changes populations from a pyramid to a more uniform shape. While variables associated with development—such as formal education, delay of marriage, and reduced family size—remain important for understanding demographic change, the interplay of these variables is forming trends insufficiently captured by classic models. In some wealthy nations, continual investment in the health and welfare of populations through adulthood helps create "morbidity compression" as people live longer and healthier lives. Survival curves better resemble survival rectangles (Kinsella and Phillips 2005). At the same time, epidemiologic transition is not inevitable or necessarily enduring. As the variable impact of HIV/AIDS demonstrates, how many people get sick and how sick they get depends in part on policy and resources. The hardest hit areas of this global pandemic are also in the poorest regions of the world.

Overall, demographic trends demonstrate how population aging has become a part of development rather than apart from it as an outcome or result. As one ages, the environment, health, and lifestyle choices made over the years impact health and everyday functioning into old age. Going forward, policy makers need to tease apart the interplay of development and demographic variables within each country context to better understand the interplay of demography, development in the global South, and "post-industrial" development of the global North. The key is not development as a linear process but rather development as a context affecting health and behaviors of age cohorts over time. Yet, aging policy frameworks tend to focus much more narrowly. In aging policy discourse, aging becomes a problem through the process of development. Development acts like a fulcrum that tips old age from a positive to negative social attribute. Attention is limited to older adults as frail, dependent, and vulnerable. The limitations of current aging policy are addressed in the next section.

III. POPULATION AGING AS SOCIAL PROBLEM: POLICY TRENDS

As mentioned previously, global discussion of aging policy centers on pensions and elder care. These kinds of policies were first created as part of state welfare systems in Western Europe. The earliest was in Germany, where social insurance for those 65-plus was started in 1889. Similar policies were developed in the Americas and in India in the 1920s and 1930s. Aging policy began spreading around the world in 1950 through a conference on

^{10.} Long-range population projections are typically based on current assumptions that the impact of HIV/AIDS is declining, and that the long-term impact will attenuate by 2050.

the global use of aging policy. Today, pension policies are found in most countries but coverage is often limited to particular groups, such as civil servants, the military, and workers in the formal sector. Only 30 percent of people 60-plus are covered through pension policies worldwide (Vincent 2003).

The historical, economic, and demographic context of half a century ago determined the way in which aging has been defined as a policy problem. This, in turn, has shaped subsequent policy solutions. Thus, while the current policy crisis has been identified through demographic statistics, longerterm solutions may lie in reforming the meaning of aging in economic and social policy. This section begins with popular discussion of aging as a "Florida problem" normally confined to wealthy nations. Academic theory linking aging with development is next explored before moving to current policy trends for addressing population aging. Suggestions for new policy directions are made using ethnographic research on how older adults address the challenges of old age.

Population Aging as a Florida Problem

Consider the following quote from a journalist:

Want to see what the future has in store for Canada? Forget about crystal balls, soothsayers and opining pundits. The future of the country is unfolding in real time in our favorite winter getaway destination, the state of Florida (Griffiths 2007).

Despite the interdependence of factors underlying population aging and development trends, the above quotation captures much of the policy discussion on population aging. The image of Florida illustrates the dominant associations with aging found in policy and popular perception: Old age means retirement; means growing into a more frail and dependent physical and cognitive state; means pressure on health and other care systems to accommodate the demand; means assisted living communities. In short, Florida brings up two of the main issues that dominate policy discussions on aging, particularly in the global North: retirement and long-term dependency. Countries' individual demographic trends can be examined to determine when they will reach the Florida stage. The assumption is that policy will have to be developed globally as demographic change brings regions within the Florida range. The dominant theoretical framework underlying aging policy (as found in Europe, the U.S., and elsewhere) comes from another classic model of transitions. As discussed next, development is again the driver of change in this model. The result, however, is negative.

Modernization (Industrialization) Theory as a Theory of Aging and Development.

In the early 1970s, Cowgill and Holmes demonstrated through comparative national research that the "status" of older adults generally decreases as countries develop and industrialize (Cohen 1998; Cowgill and Holmes 1972). Since then, additional scholars have critiqued, modified, and added to discussion of how and why this happens. As in demographic transition theory, the key factors are not found in the changing mode of production per se as much as in social structural changes that accompany a shift from economies based on agriculture to those of an industrialized wage economy. These factors include education, migration, and secularization. That is, in "traditional" or "premodern" societies, older adults command respect through control of resources, knowledge, and ascriptive roles. They own the land, which is the source of wealth, and they are most closely associated with powerful ancestors. Younger generations turn to them for advice as they grow into responsible members of the group. At the same time, older generations can rely on children and grandchildren to help them with everyday tasks, particularly if their physical or cognitive functioning declines. As described by Nana Apt:

Traditionally, the "family" especially was the greatest force that gave security to its poor, its children, and its older members. Older persons formed an integral part of the civil society fabric and played an important role in harmonizing relations made tense through poverty, war, and conflict. The most striking feature of traditional care systems in Asia, Latin America, and Africa is that they are rooted in complex family systems that include reciprocal care and assistance among generations, with older people not only on the receiving end but also fulfilling an active, giving one (Apt 2002). Development, however, brings in complicating factors. The first is the pressure of population growth, which helps push younger generations out of rural areas in search of better opportunities. Moving to cities and other countries, they turn to formal education for training and entry into the wage economy. Through separation from family and elders back home, their kinship ties loosen and they are exposed to both secular lifestyles and other religions (such as Christianity). This creates a generation gap in which the younger generations eventually surpass their parents in material and social success. These differences are greater in the first generation of development, and then diminish as the younger generation becomes the older cohort. Over time, continued population growth into the wage labor economy creates competition that is partially resolved through retirement policies. At this point, older adults find themselves devalued as they leave the roles considered productive and important in modern economies. In addition, they can no longer rely on younger generations to provide care because of geographical separation and a new emphasis on nuclear rather than extended family systems. The overall result is an inversion of socioeconomic status from old to young, as values and resources shift to younger generations.

In application of modernization theory to current development contexts, some scholars emphasize subjective change (Aboderin 2004b). They link aging and development as a shift in cultural values and social norms. Others, however, argue that elder respect persists but the problem lies in the unequal benefits of development as a global process (Aboderin 2004b). The stress of development breaks family solidarity and makes it difficult for families to care for older members. While culture persists, the objective means of expressing cultural ideals is eroding.

Either approach supports a bifurcated theory of aging in society: successful social, economic, and political change paradoxically ruins the social structure and social ties on which aging adults rely for what gerontologists call "successful aging." Old age has become a casualty of development. This argument helps naturalize calls for state support and formal intervention. Thus, aging policy becomes self-perpetuating: first helping to produce problems of retirement, dependence, and exclusion, and then offering policy solutions to enable old people to be secure, independent, and integrated within society. This process fuels a continual need for support as more people reach the age defined and addressed in policy as frail, dependent, and vulnerable.

Population Aging as Longer-Range Policy Challenge

Given that old age is essentially defined in aging policy as an antithesis to development (i.e., as unproductive and dependent), it is not surprising when policy makers regard longer-range demographic trends with alarm. This is often expressed through dependency ratios, in which current and future dependency of older adults on the working population is calculated as the number of people 15–64 relative to those 65-plus.¹¹ These ratios are a proxy for measuring the number of people paying into contributory pension programs relative to pensioners. The cause of crisis is partially found in previous underestimations of current population aging trends. For example, the United States' Social Security program began in 1935. Beneficiaries had to be at least 65 and the program covered only a small percentage of

that group. Social Security was expanded to cover older adults by the early 1970s (Hudson 2009). At that time, there were about 16 people 65-plus per 100 working people aged 15–64 (United Nations 2009). As baby boomers reached peak working ages, the assumption was that dependency

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ratios would change but remain sustainable (Manton 1991). However, this was based on the assumption that life expectancy would remain close to 65 rather than rise to 78 and without knowing how much fertility rates might decline (Manton 1991). Today, the dependency ratio is 19 (people 65-plus per 100 people ages 15–64) and projected to increase to 35 as baby boom-

^{11.} Dependency ratios can be calculated as elder care ratios, as expressed above or as the dependency of older adults and children relative to working adults; thus, the numbers of people over 65 and under 15 relative to those 15–64. Another statistic is a "parent support ratio" of people 85-plus relative to those in the younger generation that are likely to be the caregivers (age 50–64). According to a 2002 report from the Madrid conference on aging, "globally, there were fewer than 2 'oldest-old'" people for every 100 people aged 50–64 in 1950. By 2000, this ratio was 4 to 1. By 2050, it is projected to increase to 11 people 85-plus per 100 people 50–64 (United Nations 2002).

ers retire (United Nations 2009). This projection problem is not limited to Europe, North America, and Japan. In Latin America, most pension programs began in the 1920s and 1930s, when life expectancy was about 35 (Segura-Ubiergo 2007). Retirement ages were set at 45 or 50. Over time, those pension programs expanded coverage and life expectancy also increased. Today, life expectancy has risen by decades. For example, life expectancy is 72 in Nicaragua and 78 in Costa Rica (United Nations 2009). On a global scale, dependency ratios are rising. The global dependency ratio rose from 8 to 11 (people 65-plus per 100 working-age people 15–64) between 1950 and 2005 (United Nations 2009). By 2050, this ratio will further rise to 25 (United Nations 2007).

Dangerous Dependency Ratios or a Problem of Defining Old Age? Looking at current numbers, some argue that population aging constitutes a natural disaster for otherwise prosperous nations (Peterson 1999). This alarm is likely to spike in the current economic recession. Many suggestions for how to avert this crisis can be interpreted as an effort to recalibrate dependency ratios. One approach is to change population demographics. For example, Western European countries and Japan are reconsidering and revising immigration policy. Japan has been accused of trying to "export" older adults by encouraging long-term care in Europe and other parts of Asia (Martin 1991). A longer-term strategy is found in the pro-natalist policies of some Asian and Western European countries, so that an initial increase in overall dependency ratios will eventually pay off in a "demographic dividend" of workers (Robertson 2007). Singapore, for example, offers state-sponsored dating services as well as child support (Martin 1991). Another approach is to redefine the boundary between old and young in aging policy. Given health gains that often accompany longevity gains, the most logical approach is to increase the number that defines who is old (Hudson 2009). Seventy years of age thus becomes the new 60. In the U.S., for example, the age for Social Security eligibility is rising. Another policy adaptation is to modify the definition of old as retired and unproductive by supporting older workers through retraining, enabling environments, or part-time work. For example, Japan is developing technology, such as robots, that can enable older workers to be productive (Tirrito 2003).¹²

On the other hand, why is chronological age the best proxy for old age? In policy, common definitions of old age are 50, 60, and 65. While analysts often add in the caveat that age is not just a number and that chronological

age is merely a convenient proxy for aging and old age, reliance on these numbers persists. One way to explore additional ways to define aging is through ethnographic research. As seen in the discussion about aging in the global South, there may be variations in social norms and cultural values that have been underuti-

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lized by policy makers. In addition, scholars can now study the longer-term impact that aging policy has had in shaping the social structure and cultural meanings of old age.

Lessons from Ethnographic Research: "Old age is just a number and mine is unlisted"

Ethnographic study of aging reveals that there is a common idea of old age. Across most cultures, there is a term for when someone becomes so frail and debilitated through aging that they become totally dependent upon others.¹³ The empirical question is not whether but when, how, and why this happens. Often, people delay getting old and prepare for old age through reciprocal exchange and the "social capital" of informal networks. In more youth-oriented societies, not only is old age avoided but also the entire aging process. "Anti-aging" efforts to improve health, productivity, and well-being then help realize an increasingly popular effort to enjoy

^{12.} Japan has also developed robots to replace workers and to provide elder care (Robertson 2007; Songmin, Hada, and Takase 2004). In a sense, dependency ratios could then be recalibrated as robots are used to replace a projected 3.5 million workers by 2025 (Noor 2008).

^{13.} For example, Kertzer and Keith write that most cultures include a term for "decrepit" older adults (Kertzer and Keith 1984).

the lifestyle of younger cohorts. In more "gerontocratic" (or what some call traditional) societies, growing older is first associated with becoming a mature adult (Kertzer and Keith 1984). Aging, then, is a positive process only achieved through such lifecycle milestones as getting married, having children, heading households, officiating important life ceremonies, and mourning the death of one's parents (for discussion in Sub-Saharan Africa, see Oppong 2004). Thus, youth societies may be led by people in their 40s, and younger generations turn to elders for advice. In one's career, evidence of lifelong maturity is a frequent criterion for choosing leaders. Later in life, those who do become old and frail can then turn to those they previously helped. As explained in an African proverb, "Just as elders help children cut their first teeth, so should adult children help elders who lose theirs."

Despite variations in how people grow old across cultures, reliance on family and informal networks for old age care is nearly universal.¹⁴ In other words, the cultural ideal in which family should provide care for old age endures as an international social norm. In many countries, wives and daughters assume most responsibility for aging relatives. Institutionalization is avoided as unacceptable or a last resort. Only in the very late stages of life might people in wealthier nations enter a nursing home or hospital. The average nursing home stay in the United States, for example, is less than three years (CDC 2009).

How can policy definitions of aging and old age better reflect social experience? Ethnographic research provides data on how everyday realities may contradict policy-based assumptions. These data can also provide ideas for how to reform policy to better reflect current and future social and economic trends affected by population aging. The following discussion is based on field research and interviews conducted in the U.S. and Ghana (Crampton 2007). This work provides insight into who is old in one wealthy, aging nation and one developing and poor nation.

No Aging in the USA? One of the challenges in conducting research on old age in the U.S. is a disconnect between the construction of old age in policy,

professional, and advocacy work on the one hand and everyday social meanings and practices on the other. This disconnect is seen, for example, when an adult signs up for Social Security and then delivers meals on wheels to seniors out of sympathy for the elderly, or when a 70-year-old professional delivers a speech on the needs of older persons as the apex of a distinguished career rather than a spokesperson for this frail, vulnerable, and dependent population.

The question "Who is old?" can be thus both easy and provocative to answer. Although sometimes taken aback, Americans often start with the easy answer of a bureaucratic choice. One option is the age of 60 used in the Older Americans Act. Another is the age of 65 historically used for Social Security. When resisting an easy answer, however, chronological age is often eschewed in favor of changes in identity and/or functioning. For example, a 70-plus person said:

My mother is 90 and I did not think of her as old until she had a stroke and changed quite a bit. She had been the kind of person who is careful to put on makeup and select what she wore before going out and she was no longer interested in that. Then, my sister and I noticed she had become forgetful (Crampton 2007).

Another person added that people can become old in their 40s while there are others she does not consider old who are in their 90s. The difference is one of attitude and activity. Thus, "old" was defined by loss of traits identified with mature adults and as a bodily and social experience that is actively avoided. This places policy makers and professionals in the awkward position of serving involuntary clients—that is, people who would rather not identify as "an official geezer." One clinical social worker explained that the hardest part of her job was convincing an older adult to accept being a client. At a senior center, staff often seek older volunteers in the hope they will be more willing to later use the services themselves.

Of course, old age cannot always be avoided. In this research and other studies, however, most old people still eschew old age services. Instead, they turn to informal services and networks. For example, one woman in her 90s relied upon neighbors, church members, and her therapist. She was afraid to

^{14.} For example, Tirrito writes that family support is a common tradition (Tirrito 2003). Aboderin writes both of traditional norms and enduring reliance on family support in developing and developed regions (Aboderin 2006).

live alone and yet even more afraid that social services professionals would move her to a nursing home. So, she cheerfully refused agency help as she became increasingly frail and housebound. Her preference was to place

Of course, old age cannot always be avoided. In this research and other studies, however, most old people still eschew old age services. Instead, they turn to informal services and networks. newspaper ads for people to stay with her as needed. Her informal network helped monitor the situation, and she eventually found someone who would also provide basic nursing care. Eventually, she did need formal intervention and moved to a nursing home.

However, she was able to avoid this move for several years in comparison to if she had tried to live entirely independently.¹⁵ In her new environment, she continues to both give and receive care. Although bedridden, she calls out greetings to caregivers and reads to her roommates. She is not simply alone.

The Importance of Social Ties and Reciprocity in Ghana. As in much of the global South (and perhaps the global North), old age in Ghana is based on whether one can work and support himself or herself (see also Apt 1996). In a labor-intensive economy, this often means being physically fit enough to work. The onset of old age comes when one is no longer able to contribute to one's own care or that of others. For many Ghanaians, this becomes more likely as people reach age 80 and over. Until then, many develop strategies to earn income and contribute despite aging bodies.

Although this may seem to contradict the idea that families offer an informal social safety net, it raises an important issue. The African proverb described earlier about elders helping children cut their teeth is a social contract. That is, one does not care for elders solely as tradition; one cares for elders because of what they have done for you (see also Aboderin 2004a). Those who do not or cannot provide for their children as they grow may find that there is not as much care as they grow older. This is not to say that there is a calculated exchange but rather that respect and love as an elder has to be deserved on some level. Many in the research study also complained that this love was more abundant in times when resources were also more abundant (Crampton 2007). In villages, children used to be routinely sent to share food with elders during harvests. This practice is less likely as resources deplete. A related comment was that old age seems to come earlier to people today because of stressful life circumstances. At the same time, people noted that social norms have changed: older adults cannot expect children to offer help as readily nor for younger people to seek their advice.

Overall, old age is not a particular age or even state of being as much as it is a status negotiated within interdependent relationships. People who have "done well" and shared generously with others are more likely to enjoy their later years as ones of rest and a sense of achievement. One example is an older woman who has become the head of her extended family. This means her opinion is consulted for important matters, her presence is especially

requested for special events, and her advice is sought in counseling. She has earned her elder status not only within her family but also in the village through the care she has given to others and for organizing and leading various associations. For example, she has created a "practical approach" to the problem of old age in

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her village. She began offering help to old people after a trip to Zimbabwe taught her that Africans might otherwise turn to creating nursing homes.¹⁶ That is, she visits old people at home, tries to reduce family conflict that compromises elder care, lectures on reciprocity and care, and offers health promotion presentations. In doing this work, she has modeled the care she may need if she becomes old.

^{15.} Most older adults live at home and receive care from family, but most people at the end of life receive paid care in nursing homes, hospitals, or hospices.

^{16.} As she explained, when the government made white farmers leave, many of the new owners were not interested in running the farms. The able bodied staff left, leaving older people behind. The new owners then formed support through what are effectively nursing homes. A recent study noted that there are 13 nursing homes in Zimbabwe.

Policy Implications from Ethnographic Research

Global trends project that most people alive today will live into the chronological ages defined as old. The longer-range future will also bring an increasing number of old people who are dependent on the love and kindness of others for care. When formal intervention is available, it can provide help that is much needed. However, focusing on aging as a problem of old age is like writing the end of the story without first examining the plot progressions. As seen in both country examples, how people age and how (and if) they grow old depends on choices, behaviors, and opportunities for health, productivity, and support across their lifespan. In both more traditional and modern societies, older adults resist meeting the underlying definition of old in social policy. In the U.S., this is partly due to avoiding the stigma of old age. In Ghana, this is part of a more general life strategy and striving for social success and eventual elder status. These strategies can be generalized into examination of how people actively negotiate autonomy across the lifecourse and cultural contexts. The timing and implications of old age are then embedded within a larger question of political, economic, and social relations.

Despite the importance of family and social contexts, current aging policy tends to narrowly focus on state obligations to aging individuals. Through social and health insurance, the state rescues old people from poverty and poor health. One way out of the policy crisis of aging may be to re-conceptualize aging in social and economic policy. If this definition were based more on ethnographic realities rather than statistical calculations, then aging would become part of human development. That is, aging policy would consist first of understanding how people can "successfully" grow from child to older adult. Those adults who receive opportunities to do well as they grow up need less formal support to replace independent resources, family ties, and informal networks. Once care is needed, the issue is not only a social contract between the state and individuals but also between the state and families. Family planning would thus require more than plans for reducing fertility. Supportive family policy would focus on developing and sustaining a healthy, productive workforce. This might require labor policy that requires the state or employers to subsidize the care that family and informal caregivers provide through direct funds such as paid leave. At the same

time, aging policy would define old age as a composite variable rather than chronological age. For example, old age might be defined as a number in combination with capacity to fulfill what gerontologists call the "activities of daily living." These are the activities required to look after oneself and to live productively. A more complex variable might reduce the numbers of active adults who are defined by policy as old and increase attention to those who do become frail, vulnerable, and dependent.

CONCLUSION: GETTING READY FOR GRANNY

In looking beyond a current sense of crisis to the longer-range implications of global aging, there are three main points to review. The first is that demographic trends are outpacing current theoretical frameworks. These frameworks include demographic, epidemiologic, and modernization theory, which best describe the historic rise of population aging and policy trends in Western Europe. As population aging occurs around the world, however, new trends seem to outpace or outgrow this classic model. Most of the global North, in fact, is in a post-transition phase. This includes population shrinkage as fertility rates fall below replacement level. This also includes a longevity trend in which living well beyond 60 or 65 is increasingly common. Meanwhile, the demographic transition that first took three to five generations in Western Europe is now taking place in one or even less. In most of the global South, population aging trends are driven by a combination of falling birth rates and increasing survival rates of the young. Thus, part of the long-term future of aging is found in the "youth bulge" in parts of Africa, Asia, and Latin America. While policy makers may be focused on Florida today, future cohorts of older adults will increasingly come from countries like Brazil, Nigeria, and even Bangladesh.

The main limitation of current theoretical frameworks in policy making is that they replace changes over time with stagnant, linear stages. This allows the odd heuristic of analyzing countries at one point in time as being early, on time, or late. If countries were analyzed based on changes over time rather than changes in relation to a universal standard, then the complex interplay of development and demographic factors might be easier to discern. This might help explain, for example, how a country can get old before it gets rich. At the same time, we know how trends can change through war, pandemics, and the failure to provide support for human development. We also know from the dramatic example of China how policy can impact long-range demographic trends. Country-based studies can be a start for rethinking how to define who is old and the role of aging in labor, health, and care policies within these complex contexts.¹⁷

The second point is the narrow concept of aging found in current policy. Aging policy tends to place older adults outside of economic and human development. These policies were first created in countries when it seemed that expanding economies and welfare systems could keep pace with life expectancy and dependency ratio trends. The aging question in policy then focused on how to manage and care for old people who are unproductive and dependent. As fear of population explosion gives way to fear of population aging, one solution is to reduce the calculated numbers of older adults by increasing the chronological marker of old age in policy. However, another (or additional) may be to expand the policy lens on aging. This would first involve recognition that aging is part of the entire lifespan and not simply a loss suffered around age 60. Public health, family planning, child welfare, and health care are implicitly part of aging policy because they all impact how people age and when they become old.

Not only should aging policy expand ideas about who is old but also about who cares about the process of aging. This raises the third point, that aging policy should include family and informal networks. While aging policy has focused on the responsibility of the state to aging individuals, the reality is that the state often relies upon families and informal networks for most of old age care. Long-range aging policy, then, requires consideration of the social contract between the state and family. Current examples are found in pro-natalist policies. Labor laws and social welfare are used to support families to both care for children and provide productive labor in the formal economy. Aging policy might further intertwine labor and social welfare with retirement and social security. Pension reform then becomes just one element within the question of old age care. This approach will be increas-

ingly important as families try to care for aging relatives and children while both women and men work outside the home. As family composition changes in many parts of the world, policy makers will increasingly need to consider the "beanpole" of multiple generations rather than the extended branches of family

While aging policy has focused on the responsibility of the state to aging individuals, the reality is that the state often relies upon families and informal networks for most of old age care. Long-range aging policy, then, requires consideration of the social contract between the state and family.

trees. As aging policy spans the globe, cultural variations in defining family will also require consideration.

In conclusion, there is no reason to fear "the coming age of grannies" if revised policy frameworks are applied to a lifespan approach to global aging. Policy makers should recognize how emphasis in the developing world on mothers and children has helped lay the foundation for today and tomorrow's aging policy concerns. As these children grow into older adults, crosscultural research demonstrates a common concept of old age as decline and loss. However, how people become old and even whether they become old is not a question of chronological age as much as a one of social relations and context. In particular, older adults avoid and prepare for getting old through interdependent relationships with family and informal networks. This happens in both countries like the U.S., in which the state provides old age support, and countries like Ghana that lack national aging policy. Efforts by the state to define who is old and then replace informal and familial support may be unsustainable. In using a lifespan approach, however, aging policy would be part of human development. Aging policy frameworks could be revised so that the state supports individual effort to delay old age as well as family- or community-based care for dependent relatives. The longerrange challenge is less about a rising tide of older adults than about how social policy can positively influence human and social development across a lengthening lifecycle.

^{17.} Of course, there are limitations to using countries as the unit of analysis—globalization requires recognition of interdependent trends among nations. For example, many family members (including older adults) rely on remittances from overseas relatives. This support is probably not calculated in most dependency ratios. Similarly, the productivity of working adults varies with the value of their labor within an increasingly international economy. On the other hand, most aging and social welfare policies are implemented on the national rather than international level.

BIBLIOGRAPHY

- AARP International. (2007). *Major developments and trends in global aging*. United Nations Headquarters, February 7–9, 2007: Weinberg.
- Aboderin, I. (2004a). Decline in Material Family Support for Older People in Urban Ghana, Africa: Understanding Processes and Causes of Change. *Journals of Gerontology Series B: Psychological Sciences & Social Sciences*, 59B(3), S128–S137.
- Aboderin, I. (2004b). Modernisation and ageing theory revisited: Current explanations of recent developing world and historical western shifts in material family support for older people. *Aging & Society*, Vol. 24, 29–50.
- Aboderin, I. (2006). *Intergenerational Support and Old Age in Africa*. New Brunswick: Transaction Publishers.
- Aboderin, I. (2007). *Ageing in Sub-Saharan Africa: Challenges and Opportunities.* Powerpoint presentation for the Gerontological Society of America, San Francisco.
- Apt, N. A. (1996). Coping with old age in a changing Africa: Social change and the elderly Ghanaian. Brookfield, Vermont: Avebury.
- Apt, N. (2002). Ageing and the changing role of the family and community: An African perspective. *International Social Security Review*, Vol. 55(1), 39–47.
- Barrett, R., Kuzawa, C. W., McDade, T., and Armelagos, G. J. (1998). Emerging and re-emerging infectious diseases: The third epidemiologic transition. *Annual Review of Anthropology*, Vol. 27, 247–271.
- Bengtson, V. L. (2001). The Burgess Award lecture: Beyond the nuclear family: The increasing importance of multigenerational bonds. *Journal of Marriage and the Family*, Vol. 63(1), 1–16.
- Caldwell, J. (2002). Thirty years of global population change. In N. Sadik (Ed.), *An agenda for people: The UNFPA through three decades* (pp. 2–23). New York and London: New York University Press.
- Centers for Disease Control and Prevention, U.S. (CDC). (2009). FastStats: Nursing home care. Retrieved June 14, 2009, from www.cdc.gov/nchs/fastats/ nursingh.htm.
- Cohen, L. (1998). No aging in India: Alzheimer's, the bad family, and other modern things. Berkeley: University of California Press.
- Coleman, D. (2006). Europe's demographic future: Determinants, dimensions, and challenges. *Population and Development Review*, Vol. 32, 52–95.
- Cowgill, D., and Holmes, L. (1972). *Aging and modernization*. New York: Appleton-Century-Crofts, Educational Division, Meredith Corporation.
- Cowgill, D. O. (1974). The aging of populations and societies. *Annals of the Ameri*can Academy of Political and Social Science, Vol. 415, 1–18.
- Crampton, A. (2007). Negotiating old age, mediation, and elder advocacy in the social life of helping: NGO pilot projects in Ghana, the United States, and the

politics of global intervention work (Doctoral dissertation, University of Michigan, 2008). *Dissertation Abstracts International*, 68/10, 4358.

- Demeny, P., and McNicoll, G. (2006). The political demography of the world system, 2000–2050. *Population and Development Review*, Vol. 32 (Special supplement), 254–287.
- Fries, J. F. (1989). The compression of morbidity: Near or far? *The Milbank Quarterly*, Vol. 67(2), 208–232.
- Greenhalgh, S. (2003). Science, modernity, and the making of China's one-child policy. *Population and Development Review*, Vol. 29(2), 163–196.
- Griffiths, R. (2007). *Look at Florida to see what the future holds for us*. Toronto Star, May 6.
- Hewitt, P. (April 2004). *World in the balance: Voices of concern*. NOVA Science Programming on Air and Online. Retrieved from: www.pbs.org/wgbh/nova/ worldbalance /voic-hewi.html.
- Hudson, R. (2009). From industrialism to institutionalism: Theoretical accounts of aging policy development in the United States. In V. Bengtson (Ed.), *Handbook of theories of aging* (539–554). New York: Springer.
- Jianmin, L. (2007). China's lopsided pyramid. China Security, Vol. 3(2), 54-65.
- Jones, G., Douglas, R., Caldwell, J., and D'Souza, R. (1997). *The continuing demographic transition*. Oxford: Clarendon Press.
- Kalache, A., Aboderin, I., Hoskins, I., and Fries, J. F. (2002). Compression of morbidity and active ageing: Key priorities for public health policy in the 21st century. *Bulletin of the World Health Organization*, Vol. 80(3), 243.
- Kertzer, D. I., and Keith, J. (1984). *Age and anthropological theory*. Ithaca, N.Y.: Cornell University Press.
- Kinsella, K., and Phillips, D. (March 2005). Global aging: The challenge of success. *Population Bulletin*, Vol. 60(1), 1–42.
- Kirk, D. (1996). Demographic transition theory. *Population Studies*, Vol. 50, 361–387.
- Manton, K. (1991). The dynamics of population aging: Demography and policy analysis. *The Milbank Quarterly*, Vol. 69(2), 309–338.
- Martin, L. (1991). Population aging policies in East Asia and the United States. *Science, New Series*, Vol. 251(4993), 527–531.
- Noor, A. K. (2008). Moving on their own. *Mechanical Engineering*, Vol. 130(11), 26–31.
- Omran, A. R. (1971). The epidemiologic transition: A theory of the epidemiology of population change. *The Milbank Memorial Fund Quarterly*, Vol. 49(4, Part 1), 509–538.
- Oppong, C. (2004). Gendered family strategies and responsibilities of grandparents in sub-Saharan Africa. *University of Ghana Institute for African Studies Occasional Research Paper Series 2004*, No. 6, 1–51.

Peterson, P. (1999). *Gray dawn: How the coming age wave will transform Americaand the world.* New York: Times Books.

Pujol, J. M. (1992). The population of Mexico from 1950 to 2025: Demographic indicators for 75 years. *DEMOS*, 4–5.

Quadagno, J., and Street, D. (2006). Recent trends in U.S. social welfare policy: Minor retrenchment or major transformation? *Research on Aging*, Vol. 28(3), 303–316.

Robertson, J. (2007). Robo sapiens Japanicus: Humanoid robots and the posthuman family. *Critical Asian Studies*, Vol. 39(3), 369–398.

Sadik, N. (Ed.) (2002). *An agenda for people: The UNFPA through three decades*. New York and London: New York University Press.

Segura-Ubiergo, A. (2007). *The political economy of the welfare state in Latin America: Globalization, democracy, and development*. Cambridge; New York: Cambridge University Press.

Songmin, J., Hada, Y., and Takase, K. (2004). Human-assistance robotic system based on distributed computing technology. *Advanced Robotics*, 18(5), 515–532.

Thane, P. (2003). Social histories of old age and aging. *Journal of Social History*, 37(1, Special Issue), 93–111.

The Royal Household. (2008/9). The official website of the British monarchy: Queen and anniversary messages, facts and figures. Retrieved May 5, 2009, from www.royal.gov.uk/HMTheQueenandanniversarymessages/Factsandfigures.aspx.

Tirrito, T. (2003). *Aging in the new millennium: A global view*. Columbia, S.C.: University of South Carolina Press.

United Nations, Department of Economic and Social Affairs, Population Division. (2002). World population ageing: 1950–2050. New York: United Nations. Retrieved June 15, 2007, from: http://www.un.org/esa/population/publications/ worldageing19502050/.

United Nations, Department of Economic and Social Affairs, Population Division. (2005). *Population challenges and development goals*. New York: United Nations. Retrieved August 5, 2008, from: www.un.org/esa/population/publications/pop_ challenges/Population_Challenges.pdf.

United Nations, Department of Economic and Social Affairs, Population Division. (2007). *World population ageing 2007*. New York: United Nations. Retrieved from: www.un.org/esa/population/publications/WPA2007/wpp2007.htm.

United Nations, Department of Economic and Social Affairs, Population Division. (2009). *World population prospects: The 2008 revision highlights*. New York: United Nations. Retrieved from: www.un.org/esa/population/publications/ wpp2008/wpp2008_highlights.pdf. Related databases last updated March 9, 2009, retrieved May 15, 2009, from: http://esa.un.org/unpp.

U.S. Census Bureau, Population Division. (2009). International database: Country summaries. Retrieved June 10, 2009, from: www.census.gov/ipc/www.idb/summaries.html.

Vallin, J. (2002). The end of the demographic transition: Relief or concern? *Population and Development Review*, Vol. 28(1), 105–120.
Vincent, J. (2003). *Old Age*. London: Routledge.

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