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**China's Empty Cradles:
Demographic Implications for China's 2049 Centenary Initiative**

By:

Brian McCreary

Lieutenant Colonel, United States Air Force

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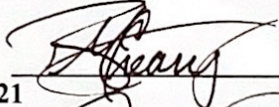
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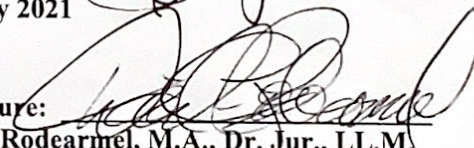
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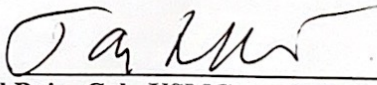
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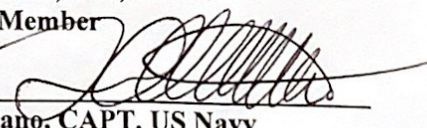
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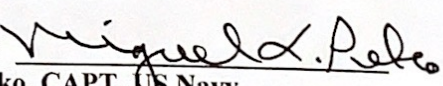
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Abstract

China's rise as a global economic power has the attention of the world and the United States in particular, and as China's power and influence grows, so grows tensions between the United States and China. This has led some to advance the theory that open military conflict between the two superpowers is inevitable. Yet, this is not the case. The source of China's economic growth is its population. Yet China fought for 35 years to stringently restrict its population under the One Child Policy. This research finds that China is thus likely to soon face a rapid demographic decline and likewise will see its economic growth decline too, perhaps well before it ever reaches its stated 2049 goals. Therefore, if cooler heads prevail, the growing tensions between China and the United States may never result in an open war, just like the Cold War never turned hot with the Soviet Union because it too faced insurmountable demographic challenges that devastated its economy.

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Chapter 1: Introduction

The world and the United States have had an eye on China for nearly a century. In the last two decades, the intensity of the world's watchful eye has increased as China went through the process of industrializing and modernizing to become the second-largest economy in the world in terms of Gross Domestic Product (GDP), second only to the United States as of 2019.¹ What was more eye-catching was the rate at which China grew. Over three decades, from 1985 to 2015, China sustained an average annual real GDP growth rate of almost 10 percent.² Although its economic growth rate for the last five years has seemingly slowed to about 6.5 percent, many financial experts have forecasted that China's rise is far from over.³ Economic Nobel laureate Robert Fogel went so far as to say, "by 2040 China not only will have long since surpassed the United States but also its economy will be nearly three times as large and will account for fully 40 percent of total world output."⁴

China's rapid rise as an economic world power has given many in the United States cause for concern. Chairman Mao insisted "political power grows out of the barrel of a gun."⁵ However, instead, it is a nation's economic strength that allows for the financial resources and industrial capacity to produce the weapons and grow a nation's military force, thereby increasing its political power. After the chairman's death, the

¹ "Gross Domestic Product Ranking Table" (The World Bank, July 1, 2020), accessed November 11, 2020, <https://datacatalog.worldbank.org/dataset/gdp-ranking>.

² "International Monetary Fund DataMapper" (IMF, October 2020), accessed November 10, 2020, <https://www.imf.org/en/Countries/CHN#whatsnew>.

³ Ibid.

⁴ Aaron L. Friedberg, *A Contest for Supremacy: China, America, and the Struggle for Mastery of Asia*, (New York: W. W. Norton & Co, 2011), 32–33.

⁵ Mao Tse-tung, "Problems of War and Strategy" (November 1938), in *Selected Military Writings of Mao Tse-tung* (Peking: Foreign Languages Press 1968, 274-75).

Chinese people began to see wealth as “the taproot of all other forms of strength.”⁶ Thus, as China has risen as a world economic power, it has also sought to convert that strength into military strength. In 2017, General Secretary Xi Jinping announced the Chinese Communist Party’s (CCP) goal to transform the People’s Liberation Army (PLA) into a “world-class” military by the end of 2049.⁷ While “world-class” is not explicitly defined, it is not beyond reason that China’s working definition is to surpass the United States in terms of military strength. According to the Department of Defense’s annual report to Congress, China has already pulled ahead of the United States in the areas of shipbuilding, land-based conventional ballistic and cruise missiles, and integrated air defense systems.⁸

Together, China’s ascent to economic world power and its ongoing pursuit to become a military world power have led political scientist Graham Allison, among others, to propose that the United States and China may be destined for war.⁹ Such an assertion stems from the so-called “Thucydides Trap” that portends a status quo nation’s fear of a rising power will ultimately drive the two great powers to fight. In 2012, China announced a centennial goal, to build itself “into a fully developed country that is prosperous, powerful, democratic, culturally advanced, and harmonious by 2049.”¹⁰ The year 2049 is significant for the Chinese government. It will mark the centenary of the

⁶ Ibid., 149.

⁷ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2020*, September 1, 2020, i.

⁸ Ibid., i-ii.

⁹ Graham Allison, “The Thucydides Trap: Are the U.S. and China Headed for War?,” *The Atlantic*, last modified September 24, 2015, accessed October 10, 2020, <https://www.theatlantic.com/international/archive/2015/09/united-states-china-war-thucydides-trap/406756/>.

¹⁰ David Dollar, Yiping Huang, and Yang Yao, eds., *China 2049: Economic Challenges of a Rising Global Power* (Washington, D.C: Brookings Institution Press, 2020), vii.

victory of the CCP over the Guomindang (GMD) nationalists and the formation of the People's Republic of China (PRC). China is the rising power.

As such, under the concept of the Thucydides Trap, the United States may find itself engaged with the People's Republic of China in an intense geopolitical rivalry that will eventually erupt into open conflict and war. Yet that path is not inevitable; few things in life are inevitable. China's forecasted military rise and continued economic ascendancy may not be as determined as simple linear projections predict. Economic growth is dependent on numerous factors, but China's rapid economic rise was, in part, due to its favorable demographics. China has long been a global power in terms of population size. It has had the most people of any nation for centuries. Therefore, in terms of China's ability to mobilize the population to develop its human capital, industrialize and break free of Malthusian restraints, to now also become a global economic power and contend for recognition as a global military power should come as no surprise.¹¹

However, China employed hard demographic engineering methods from 1980 to 2015 to control its population growth. These efforts significantly changed its demographic landscape. Although China may not have stopped the demographic wave from sweeping their nation, the One-Child Policy did reshape and redirect the tide. The policy, though ended, may still have long-lasting effects that run counter to the economic

¹¹ John R Weeks, *Population: An Introduction to Concepts and Issues*, 11th ed. (Belmont, CA: Wadsworth Cengage Learning, 2012), 77. Malthusian restraints were the earth's ability to produce food to sustain its population, and the passion between the sexes which drives the creation of more people. Malthus held that population, when unchecked, increases in a geometrical ratio, whereas subsistence increases only in an arithmetical ratio. Malthus thus concluded that a strong and constant check on population was necessary from the difficulty of subsistence.

and military goals of the CCP.¹² Given that classical economic theory of growth holds that labor capital formation and technological progress are critical drivers for economic growth, the demographic implications from thirty-five years under a one-child policy give reason to question if China will continue its ascendancy and achieve its 2049 goals.¹³

If the rising power of China will wane before 2049 on its own, due in part to its drastic demographic policies, then the United States and the world would be wise to direct their policies and military actions in ways that do not provoke war out of an unfounded fear of China's rise. Sidestep the Thucydides Trap. Despite ongoing concerns about China's aspirations to become a global power by 2049, it now faces potentially insurmountable demographic challenges that may limit and perhaps reverse its trajectory to surpass the United States economically, and as a natural consequence, militarily too.

Methodology

This paper will first document China's population history in terms of its size to demonstrate the negative economic and military implications from China's coming rapid demographic transition and decline. Then it will expound on the actual demographic shifts China has already experienced and their probable underlying causes. The focus will also be placed on the stated and assumed reasons for the CCP's imposition of the One-Child Policy, the methods used to enforce the policy, and the resulting demographic

¹² Paul Morland, *The Human Tide: How Population Shaped the Modern World* (New York: Public Affairs, Hachette Book Group, 2019), 210. Morland asserts throughout his book that the human tide, as he calls it, cannot and has not been tamed by any nation's imposed governmental policies to date. He maintains that the patterns of demographic transition observed since the early nineteenth century will continue unabated, although perhaps either to a greater or lesser degree or more or less rapidly. From Morland's perspective, China's One-Child Policy will cause a demographic decline, but only facilitated a more rapid decline sooner.

¹³ Dollar, Huang, and Yao, *China 2049*, 7.

characteristics of China's population today. From there, three comparative case studies, both historical and contemporary, will examine nations that previously obtained or currently maintain global great power status and also underwent or are undergoing demographic transitions similar to what China is experiencing. Great Britain, the Soviet Union, and the United States are the countries that are or were widely held to be great powers.

A comparative case study will allow for a synthesis of the historical and contemporary patterns between the nations previously referenced and allow for quantitative and qualitative analysis of the demographic similarities and differences to China's current situation and stated aspirations. The raw data to study and assess a population's processes, changes, and implications, will be the number of births, deaths, migrations, and explanatory factors. Additionally, to evaluate a nation's capacity to build, sustain, and modernize a military capacity, its economic well-being is also critical. A variety of economic indicators will be referenced, but GDP will be the principal measure of economic well-being globally and express the relative well-being of people in one country compared to another.

Although demography touches on numerous aspects of a nation's development, health, and future prospects, this paper cannot explore them all in-depth. China's large population, industrialization, and urbanization have enormous implications for global climate change. The types and quantities of pollutants China produces will also have consequences on the long-term prospects of its people's wellness and life expectancy not addressed substantially in this paper. Additionally, although the racial and ethnic aspects of demography will be touched on as they relate to the CCP's stance on both inbound and

outbound migration, China's internal racial and ethnic demographic compositions cannot be thoroughly explored in the space allotted here.

Chapter 2: China's Demographic History

China was perhaps the greatest civilization in the world during the Tang and Song dynasties (AD 666-1266). Before the industrial revolution, it was the most advanced part of the world technologically. It had mastered the arts of irrigation and rice cultivation and maintained a population that its agricultural system could support. Thus, Malthus would have seen China as “the archetype of a society which, lacking constraints, lived at the frontier of the highest population it could support.”¹ During the later Ming and Qing dynasties (AD 1346-1911), the Chinese economy stagnated. Nevertheless, sometime during the mid-seventeenth to mid-nineteenth centuries, China appeared to have further improved its agricultural output through capital investment, further improved irrigation, and greater use of fertilizers. Thus, it supported a more significant population and, after centuries of stagnation, saw a growth rate of more than 1% for two centuries, reaching around 430 million in 1850.²

Before then, both China's population and GDP kept pace with the rest of the world. Afterward, however, the British Empire underwent explosive growth, and China's share of the population began to decline. Its share of GDP declined even faster.³ Without the industrial revolution taking seed and growing in China, its population remained bounded by Malthusian principles, and China paid the price for it. The Chinese-termed “Hundred Years of Humiliation” began shortly after the Opium Wars (1839-1842 and 1856-1860) and continued with the Boxer Rebellion (1899-1900). It was not until China could combine its already sizable population with industrial progress that

¹ Paul Morland, *The Human Tide*, 212.

² *Ibid.*

³ Dollar, Huang, and Yao, *China 2049*, 5.

it again began to reestablish itself as the Middle Kingdom global power that it identified itself as. Thus, for China, 1949 was not only the end of its civil war and the founding of the People's Republic of China (PRC) but the beginning of its first demographic transition.

China Awakens: Initial Rapid Growth

The PRC's leader, Chairman Mao, was a firm adherent to Marxist theory. In step with his Marxist ideology, Mao stated in 1949 that "it was good for China to have a large population, that it could find ways to feed it and that of all the things in the world, people are the most precious."⁴ The Chinese people probably did not need much encouragement from Mao to populate. With years of war finally ending, security and prosperity returned to the countryside, and Chinese families grew correspondingly. In 1950 the population grew by more than three percent, and shortly after that, the results of the 1952 census reported more than 600 million people.⁵ This alarmed some among the Chinese Communist Party (CCP) leadership because China had only counted 470 million people in 1947, so they initiated population control propaganda and legalized abortion in 1957.⁶

Although Mao himself was still very pro-natalist, his actions curbed China's rapid population growth in other ways. Implementing various policies to force rapid modernization in the country, called the Great Leap Forward, caused grain production to drop nearly 30 percent, and famine broke out.⁷ The Great Leap Forward and its associated starvation and death were also underlying causes for China to begin rapidly accelerating towards the second demographic transition only a decade after crossing into

⁴ Paul Morland, *The Human Tide*, 213.

⁵ Ibid.

⁶ Ibid., 214.

⁷ Ibid.

the first. On the surface, China's fertility rates did take a hit from the brutal conditions caused by the Great Leap Forward. Total fertility dropped during that period from over six children per woman to a little over five.⁸ However, fertility rates made a rapid recovery after the mayhem was over, rising to almost 6.5 children per woman in the late 1960s⁹ China's population returned to the growth of nearly 3 percent per annum, and again leadership within the CCP grew worried.¹⁰

Yet, Mao's Great Leap Forward also drove people from the rural countryside, where the famine was felt the worst, towards the urban centers. This produced China's first set of interrelated transitions that make up the second demographic transition, the migration transition.¹¹ The urban demographic transition quickly followed suit where urban fertility rates are lower than rural levels.¹² Accordingly, China's overall fertility rate rapidly dropped from over six children per woman in the 1960s to below three within a decade, even before implementing the One Child Policy.¹³ However, in those urban centers, better health care was available for both the young and old. So, this internal migration helped reduce the overall mortality, extending life expectancy. Thus, despite fertility rapidly falling, China's population continued to grow, likewise the alarm of CCP leadership. Therefore, the stage was set for drastic policy change, at least once the pro-natalist Mao was gone.

⁸ "World Population Prospects - Population Division - United Nations," accessed October 12, 2020, <https://population.un.org/wpp/>.

⁹ Ibid.

¹⁰ Paul Morland, *The Human Tide*, 215.

¹¹ John R Weeks, *Population: An Introduction to Concepts and Issues*, 11th ed. (Belmont, CA: Wadsworth Cengage Learning, 2012), 100.

¹² Ibid., 369.

¹³ "World Population Prospects - Population Division - United Nations."

The One Child Policy

Resulting from the alarm among CCP leadership over population growth, after Chairman Mao's death, China formulated in 1979, codified in 1980, and implemented between 1980 and 1984 aggressive population control measures called the One Child Policy.¹⁴ The political machine of the CCP generated volumes of social propaganda programs to indoctrinate the people to believe that economic prosperity was dependent on each couple having no more than one child.¹⁵ In addition to the propaganda exhortations, monetary inducements, and social pressure, China also used much more draconian methods. The Chinese government would demolish the homes of families who refused sterilization.¹⁶ Village women were frequently forced to have an abortion and then sterilized if found to be pregnant with their second child.¹⁷ One midwife, who retired in 1992, reported that she alone had done “between 50,000 to 60,000 sterilizations and abortions” throughout her career, performing more than 20 sterilizations a day for 20 years.¹⁸

Exceptions were made, supposedly for ethnic minorities in the rural areas. After the first decade of aggressive application of the more horrific measures, China began to relax the One Child Policy. It started an international adoption policy to monetize the One Child Policy, selling “unauthorized” babies rather than aborting them.¹⁹ Government-run orphanages would pay a Chinese couple around \$100 per child that was

¹⁴ Paul Morland, *The Human Tide*, 216.

¹⁵ Nanfu Wang and Jialing Zhang, *One Child Nation*, Prime Video (streaming online video), Documentary (Amazon Studios, 2019), 4:15, <https://www.amazon.com/One-Child-Nation-Nanfu-Wang/dp/B07YM3D3VT>.

¹⁶ *Ibid.*, 8:30.

¹⁷ *Ibid.*, 17:00.

¹⁸ *Ibid.*, 19:47, 20:45.

¹⁹ *Ibid.*, 50:00.

“voluntarily” given up and then charge up to \$25,000 for the adoption.²⁰ Still, even with the international adoption policy, if a birth mother were suspected of trying to hide and keep a child, she would be fined around \$2,000 and then sterilized.²¹ Further relaxations were allowed after the turn of the millennium. For example, if the firstborn was not male, the couple could have a second child, but not a third, even if the second was also female.²² Finally, after 35 years of the One Child Policy, the CCP switched it to the Two Child Policy with the propaganda changing to “One is too few, two is just right; the young will have siblings, the old will be cared for.”²³ Although 2015 marks the official end of the One Child Policy, with the many exceptions allowed for almost 20 years previously under the policy, and with forced abortions and sterilizations still occurring for those who dare violate the new Two Child Policy, the new policy may only be a rebranding of the old.

With transition to the Two Child Policy, China has continued to sell the One Child Policy as a success. Propaganda products advertise that through abortions and sterilizations, China “prevented 338 million births and saved \$130 billion worth of resources,” making the country “more powerful, the people more prosperous, and the world more peaceful.”²⁴ Yet, with the fertility rate dropping as it did in the 1970s and the growth slowing to 1.4 percent per annum (down from 3 percent) before the 1980s, the One Child Policy perhaps should not have all the credit.²⁵ When compared to the trajectories of neighboring Asian nations, there is not much difference in direction.

²⁰ Ibid., 55:17.

²¹ Ibid., 1:06:37.

²² Ibid., 1:20:30.

²³ Ibid., 1:24:44.

²⁴ Ibid., 1:40, 26:30.

²⁵ “World Population Prospects - Population Division - United Nations.”

Taiwan, South Korea, Japan, and several countries in Southeast Asia followed the same demographic path without a One Child Policy. China only achieved a deeper dip in fertility, bottoming out around 2005 at 1.2 children per woman. In contrast, the average for the rest of East and Southeast Asia only dropped to about 1.8 children per woman.²⁶ Because of a culture that favors male progeny to female, China also achieved a sex imbalance of about 120 boys to 100 girls that may have severe implications for China's future population.²⁷

Population Forecasts

Regardless of the cruelties and inconsistencies of the Great Leap Forward and the One Child Policy, China underwent a classic demographic transition of falling mortality, rising population, and then falling fertility. It could be expected that China would then begin to see its population numbers stabilizing. However, China's imposition of the One Child Policy, with forced abortions and sterilizations through that expectation into the realm of improbable. It is still too early to make any definitive forecasts, but there are a few key factors the United States and the world, in general, should bear in mind and observe closely. They are when China reaches its peak population and the aging of the Chinese population and its implications on the Chinese economy.

The sex imbalance creates a marriage problem. Unless China begins importing brides on a massive scale, there will not be enough women to marry every Chinese man who may want to marry. This creates added pressure on the fertility rate. If women are less than half the population, each woman must have a higher average number of children to achieve replacement level. In a typical society, the replacement fertility level is 2.1

²⁶ Ibid.

²⁷ Paul Morland, *The Human Tide*, 220.

children per woman, and China has been well below that for over two decades. The change to a Two Child Policy has had little impact on birth rates. As things stand at the end of 2020, the United Nations expects China’s population will peak in 2030 and fall short of the 1.5 billion mark (Figure 1).²⁸

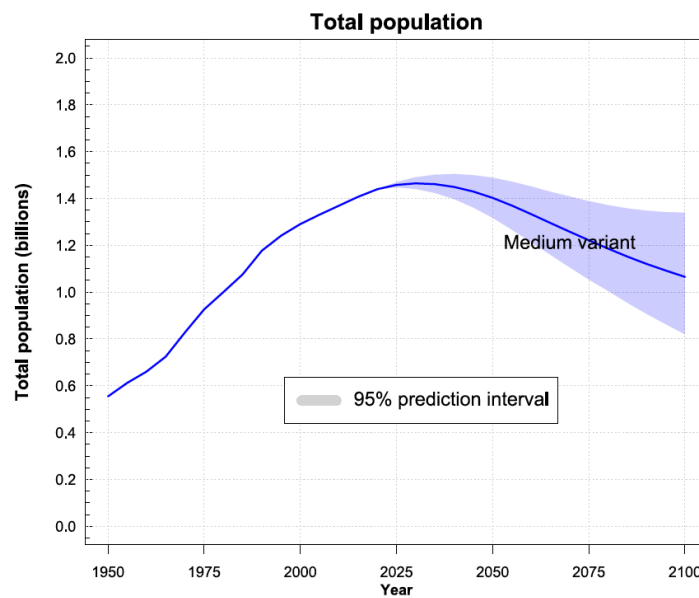


Figure 1: China's Total Population Forecast. Source: Source: “World Population Prospects - Population Division - United Nations,” accessed October 12, 2020, <https://population.un.org/wpp>

China is also aging quickly. So far in the twenty-first century, the median age has risen by seven years, three times the United States’ speed.²⁹ The implication is that China’s working-age population (ages 25-64) has already started to decline in absolute terms, and the primary driver for Chinese economic growth, that is, new generations of people feeding a growing labor pool, is running out of steam (Figure 2).³⁰ As labor becomes scarcer, wages will rise, and Chinese exports may no longer be competitive. It is unclear how China will deal with pension challenges without state provisions since

²⁸ “World Population Prospects - Population Division - United Nations.”

²⁹ Paul Morland, *The Human Tide*, 219.

³⁰ “World Population Prospects - Population Division - United Nations”; Paul Morland, *The Human Tide*, 220.

there are families without children to provide for their elders, as is the custom in Chinese culture. There often is only a single child to one day care for one set of parents and two sets of grandparents. Someone will have to pay to care for the elderly, which will probably cause an already slowing economy to fall sooner and faster. Demographers are beginning to say China may “get old before it gets rich”, but China may also get old before it ever truly becomes a global power.³¹

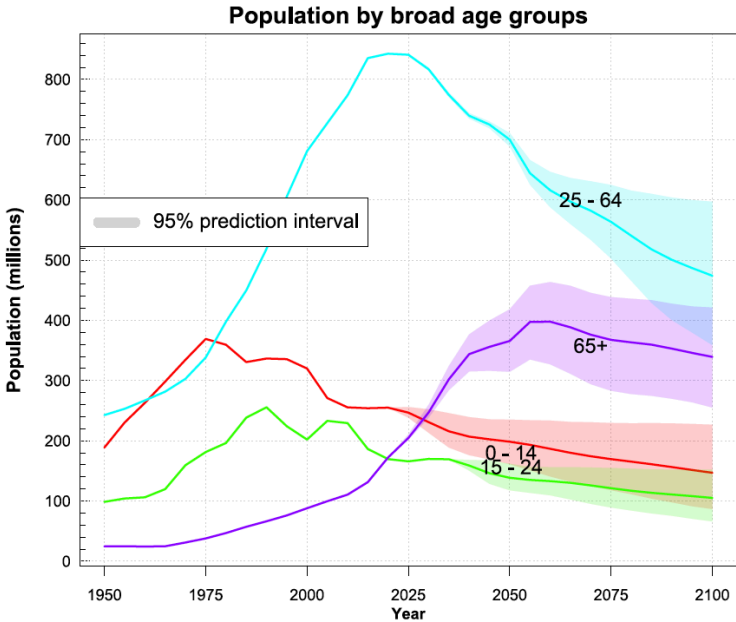


Figure 2: China's Population by Broad Age Groups. Source: "World Population Prospects - Population Division - United Nations," accessed October 12, 2020, <https://population.un.org/wpp>

³¹ Aaron L. Friedberg, *A Contest for Supremacy*, 243–244.

Chapter 3: The British Empire Shapes the World

Experts in various fields debate why England was the first to break free of the “Malthusian Trap”. Historians, economists, social scientists, and demographers will usually align themselves with one of two perspectives. Either the advancement of science and technology enabled the industrial revolution, which in turn allowed the escape from the traditional restraints on population numbers. Or vice versa, science and technology enabled a demographic transition and the resultant population growth, which then fed the industrial revolution. Regardless of which perspective an expert takes, they all agree that England was the first on both accounts, and the two mutually supported each other. Industrialization supported the expanding population and provided the people work while industrial age trade provided them new sources of sustenance. Likewise, the expanding population drove industrialization and provided the people to build and man the transportation infrastructure and work in the factories and shops. These two phenomena are what propelled England towards becoming the British Empire and shaping the world.

Escaping the Malthusian Trap

Initially, England’s exponential population growth was kickstarted by its agricultural revolution. A better understanding of soil nutrients, introduction of crops with higher yields, and crop rotation made existing land used for food production more fertile. However, the industrial revolution’s introduction of faster modes of transportation truly allowed England’s population to grow beyond any previous bounds. People were no longer constrained by what could be produced locally or even the seasonal limitations of more nutrient-rich produce. The techniques introduced by the

agricultural revolution to increase crop yields could be mechanized with the equipment from the industrial revolution, further boosting yields, and then transported and sold globally. As a result, in the early nineteenth century, yields per acre improved more than 50 percent.¹ Additionally, England's food supply was expanded by importation of surplus capacity in the United States, Canada, and Australia, where the farming techniques and machinery developed in England were exported.

The result of the new abundance of food was population growth, but the increase was not linear to the change in food production. The industrial revolution also improved the quality of the food. Refrigeration was introduced, and vitamin-rich fruits and vegetables from warmer equatorial climates became available well into the depths of winter in England. The corollary effect was an improvement of the population's ability to resist disease, better year-round health, a reduction in the mortality rate, and increased life expectancy. This was a classic health and mortality demographic transition that both lengthened people's life span and improved childhood survival through early developmental years.² Thus population growth in England accelerated to 1.33 percent on average despite large-scale emigration and peaked at over 1.7 percent, faster than any other period of population growth in England.³

Expansion to Empire

When a population is growing at the rate England was during the nineteenth century, it doubles in around fifty years and will double again in another fifty. Yet even with the population of England quadrupling in a century, it was also fueling a mass

¹ Paul Morland, *The Human Tide*, 44.

² John R Weeks, *Population*, 101.

³ Paul Morland, *The Human Tide*, 43.

migration out of England. The growth in the number of young people led to an oversupply of youth looking for jobs, encouraged and energetic to go elsewhere in search of economic opportunities in new lands. Emigrants poured out from the British Isles into the United States, Canada, Australia, New Zealand, and more, where there was still “empty” land.⁴ Britain and Ireland exported the vast majority of the people who colonized the vast continents of North America and Australia. In one decade alone during the nineteenth century, existing records estimate over one million people emigrated from England.⁵

In contrast with the Spanish Empire, which conquered most of Central and South America but ultimately had little ability to exert much control over it, the British populated their empire. With overwhelming numbers, they easily wrested their territories away from the original inhabitants. In 1848 there were hardly any Spaniards or Mexicans in the northern half of what was Mexico at the time. Hence, the United States, populated at the time by a continuous influx of immigrants from the British Isles, annexed what became California, Arizona, and New Mexico.⁶ North of the United States, Canada, the world’s second-largest nation by landmass, grew from 2.5 million in the mid-1800s to over 7 million by the early 1900s.⁷ It nearly tripled in spite of the vast majority of the land uninhabitable, much less suitable for agricultural development. In a similar fashion, during the same period, Australia went from fewer than 10,000 to more than 4 million

⁴ John R Weeks, *Population*, 101.

⁵ Paul Morland, *The Human Tide*, 46.

⁶ *Ibid.*, 57.

⁷ *Ibid.*, 60.

people fueled by almost 600,000 English-speaking emigrants that came in the 1880s and 1890s.⁸ New Zealand, too, experience tenfold population growth in less than 50 years.⁹

The British Empire's rise to global power was not just because of its population explosion but because of its exportation of its people who came to dominate vast portions of the globe. With people of the United States, Canada, Australia, and New Zealand having a natural cultural affinity with England, even if not formally part of the British Empire, trade agreements developed that inherently favored the English homeland. Increasing population and new markets contributed to economic growth and further supported a growing population. As wealth accumulated for the British Empire, it became the world's financier.¹⁰ Thus, English became the international language, and the foundation of much of the current global world order is based on what came from the British Empire. The British made the world, and they did it by exporting their people.

England Slows Down

Just as the English led the way for the first demographic transition, so it led the way for the second. As England modernized, people began to live increasingly in cities as part of the urban demographic transition.¹¹ In conformity with the family and household transition, people also started to invest in their children, dedicating finite resources to childhood education and improve their children's advancement in society rather than having more children as either an additional source of labor or an insurance policy in old age.¹²

⁸ Ibid., 61.

⁹ Ibid.

¹⁰ Ibid., 57.

¹¹ John R Weeks, *Population*, 103–104.

¹² Ibid., 104.

Both of these transitions eventually contributed to a decline in fertility. The pattern of life shifted from one primarily centered on an expectation to grow up, marry, and have children to one with a general postponement of marriage, if not a rise in single living or cohabitation, and prolonged residence in the parental household. English women in the 1860s had more than six births each, while those who married in the 1910s had less than two and a half.¹³ The net impact was that while England's population continued to grow, its rate of growth dropped from 1.35 percent at the beginning of the twentieth century to only one percent mid-1900s.¹⁴ England was first out of the gate for a demographic transition that would continue to affect the world after two hundred years. As a result, it became a global superpower as the British Empire. But just as it led the way in the first demographic transition, it also was first to experience the second demographic transition, and as its population waned, so did its power, allowing room for others to fill the void.

British Empire: Comparison and Analysis with China

The principal difference between the historical example of England's population boom that allowed it to become a global power and China's population boom that may never bear the same fruit and enable China to become the world power it desires to be. That difference is that the British Empire exported its people. This not only expanded available resources to the British Empire it also relieved demographic pressure in the British Isles to urbanize sooner than they did. That delay in urbanizing also delayed the associated fall of fertility rates, a key driver of a second demographic transition.

¹³ Paul Morland, *The Human Tide*, 72.

¹⁴ *Ibid.*, 77.

On the other hand, while China's Great Leap Forward put inadvertent pressure on the population to migrate in the 1960s, China as a communist society was closed. So, the people did not migrate outside of the country's borders, rather only to its urban centers. Also, China's desire to modernize and compete with the West industrially and economically in the late twentieth and early twenty-first century has led them to build up their cities further and attract even more people to already high-density urban areas. Therefore, China has experienced a second demographic transition much sooner and much quicker, with fertility rates dropping five times faster than they did in Great Britain.¹⁵

Other than to its western territories and Tibet, China has only recently started to export its people as part of the Belt and Road Initiative (BRI), but mostly its excess male population. Chinese who previously emigrated usually maintained a high level of Chinese culture in "Chinatowns" by marrying Chinese women who also emigrated. Chinese males migrating to work on BRI projects will have to integrate and marry non-Chinese women, and only time will tell if children from such unions will be raised with the language and culture of their Chinese father's homeland or their mother's. Additionally, many BRI projects are already in densely populated areas where local populations have already gone through their first if not second demographic transition. Even if Chinese men marry with the indigenous people, the number of children produced may be few if any and fall significantly short of what China needs to sustain the economic power necessary to continue its drive towards global power.

¹⁵ Ibid., 215.

Chapter 4: Demographic Factors of the Soviet Union's Demise

In 1989 the Berlin Wall fell. Soon after, in 1991, the Soviet Union collapsed. The prevailing rationale for the demise of the Soviet Union is that the United States outspent the Soviet industrial machine and exposed the inherent weaknesses of a communist economic system. Based on the Chinese government's response to the Soviet Union's downfall, the People's Republic of China agrees with that general assessment. China watched the decline and ultimate collapse of the Soviet Union and determined not to follow in its footsteps. Thus, while the Soviet Union had been a planned society from cradle to grave with virtually no free market or private property, after the fall of the Berlin Wall, China adjusted its course.¹ Yet, many of the problems the Soviet Union faced just before its imminent dissolution had deep roots in the demography of the country. While the Soviet Union may have ran on an inefficient economic system, exceptionally high growth rates in the key input of labor kept the system afloat.² Once demographic growth failed, so did the Soviet Union.

The Demographic Rise of the Soviet Union

Before the rise of the Soviet Union there was the rise of Russia. As Great Britain's hold on the title of global power began to wane, the stage was open for a new nation to rise. As seen with Great Britain, both industrial capacity and population size are required to become a power player on the world state. In 1905 Russia was starting to show a combination of industrial spirit and population growth that would soon make it a contender to be at least the next regional European power if not a global power.

¹ Ibid., 173.

² Ibid., 176–177.

At the beginning the twentieth century, Russia's population was three times that of Great Britain and still growing. In 1917 when the Bolsheviks came to power, Russia was still an overwhelmingly agricultural society with only a few large towns or cities and minimal industry. It also had been fending off German and Austrian military advances for four years externally while civil war loomed internally. Despite the social unrest and wartime loses, Russians continued to have large families, averaging around seven children per woman.³ Simultaneously infant mortality rates were falling fast, and with basic education and health care improvements the population exploded just like Great Britain's a hundred years earlier, albeit because it was happening later, it was happening faster. However, what should have been a powerful demographic momentum was blunted significantly by Lenin, Stalin, and Hitler through two world wars, a civil war, famines and terror between 1917 and 1945.

Transition and Decline

Russia then experienced a classic case of demographic transition, with falling mortality rates followed by decreasing fertility and the gradual slowdown in population growth. With the formation of the Soviet Union the Russian population (as well as those of the other Soviet Republics) began to urbanize and become more literate. These trends alone usually foretell an impending demographic transition, however in the Soviet Union the transition was accentuated by a number of factors. The rapid rise of industry and the need for workers in the factories outpaced the available urban male population. Therefore, as men were consumed by the factories, more women began initially to labor in the agricultural fields to replace the men, but then increasingly worked in the factories

³ Ibid., 85.

themselves. Additionally, the Soviet Union was the first state in the world to legalize abortion, and in some cities the number of abortions surpassed the number of births.⁴ Thus, in a short twenty years, from the mid-1920s to the mid-1940s fertility decreased from seven to three children per woman. It took Great Britain twice as long to experience such a drop in fertility.⁵

In response to the declining fertility Stalin declared in 1935 “man the most precious resource” and again outlawed abortion in all but extreme circumstances.⁶ Notwithstanding the newly minted pro-natalism of its Communist leadership, the Soviet Union’s fertility rates continued to fall. In the face of low fertility, the Soviet Union’s demographic momentum weakened. Eventually, in 1955 abortion was again legalized, and it is estimated that during the 1980s the average Soviet woman was having around six or seven abortions in the course of her life.⁷ Declining growth was now built into the population and would soon affect the economy. Unlike Great Britain and the United States, the Soviet Union population was a closed system with little immigration to supplant the decline in labor force as a result of a reduction in fertility and an aging population. A Central Intelligence Agency (CIA) report in 1977 predicted the fall of the Soviet Union in the coming decade of the 1980s (Figure 3) due to a “future contraction of the labor force” and concluded that “whatever manpower dependent project the Soviet

⁴ Ibid., 123.

⁵ Ibid., 167.

⁶ Ibid., 123.

⁷ Ibid., 168.

intend to undertake will be severely handicapped during the 1980s.”⁸ In hindsight, the CIA analysts got it right.

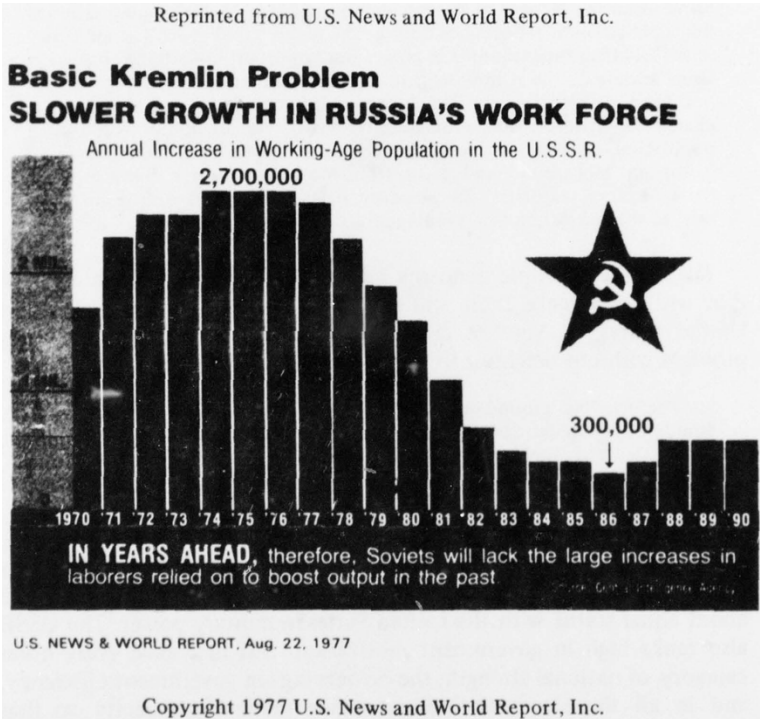


Figure 3: Soviet Union's Demographic and Economic Decline. Source: Dr. Anthony L. Wermuth, "Population, Demography & National Strategy" (Strategic Studies Institute, 1978), 24. The CIA source referenced by Dr. Wermuth is "Soviet Economic Problems and Prospect," Washington DC, July 1977.

Ethnic Factors

While the contraction of the labor force due to falling fertility rates was a large contributor to the Soviet Union's collapse economically, the ethnic demographic and its substantial changes from the reduced fertility rates also played a significant role in the breakup of the Soviet Union. Regardless of the Soviet Union's nomenclature and its protestations of equality for all, it was essentially an extension of the Russian imperial state and favored Russians. For instance, despite the 1970 census recording ethnic

⁸ Dr. Anthony L. Wermuth, "Population, Demography & National Strategy" (Strategic Studies Institute, 1978), 24. The CIA source referenced by Dr. Wermuth is "Soviet Economic Problems and Prospects," Washington DC, July 1977.

Russians to compose only 53 percent of all Soviet Union peoples, all eleven positions on the Secretariat of the Central Committee were occupied by ethnic Russians.⁹ The reported dwindling fertility rate was an average across all Soviet states. However, the decline was not uniform. Russia's cities were the first to urbanize and industrialize precipitating the demographic fertility transition. Other Soviet states underwent these transitions much later. Accordingly, internal to the Soviet Union there was a slowdown in Russian population growth and a rise in the growth among minorities. In the early 1970s the ethnic Russian population outnumbered the Asian minorities by 4 to 1, but by the early 1990s that ratio had fallen rapidly to 2 to 1.¹⁰

As the initial population growth that fueled the expansion of ethnic Russian youth to the outlying areas of the Soviet Union waned, so did the cultural unity of the Soviet states. There was an effective de-Russification among the populations of the central Asian and Caucasian republics and surveys of those populations in the late 1970s demonstrated fewer and fewer were competent in the Russian language.¹¹ For the Soviet Union to hold together it needed the presence of a dominant language and culture. The loss of that cohesive force was first felt in the Soviet military fighting in Afghanistan. Over time the Soviet army could not dependably draw on recruits from its ethnic Russian heartlands. Instead, it relied more and more on the youth from the Caucasus and central Asia.¹² This forced a homogenous society to accept diversity in a culture not accustomed to variety. In Afghanistan, the loyalties of recruits from central Asia were suspect and

⁹ Ibid., 25.

¹⁰ Ibid.

¹¹ Paul Morland, *The Human Tide*, 172.

¹² Ibid., 165.

their lack of fluency in Russian made command and control of the Soviet campaign difficult and exacerbated other problems that had bogged down Soviet troops for years.¹³

The consequences of the changing ethnic demographics, or the de-Russification of the Caucasus, became apparent just three years before the Soviet Union's official end. Clashes between Armenians and Azeris broke out in early 1988 evidencing the inability of the Soviets to maintain control without the cohesion the ethnic Russian culture provided.¹⁴ The inevitable fall of the Soviet Union was then apparent to the world. Though its demise had more than purely demographic causes, the economic and ethnic challenges the Soviet Union ultimately could not surpass had deep roots in demography.

Soviet Union: Comparison and Analysis with China

China watched and studied what happened to the Soviet Union closely. Because of the dissolution of the Soviet Union, China opened its markets and created perhaps the first authoritarian capitalist hybrid market the world has ever seen, an experiment still in progress. However, China seems not to have noticed the underlying demographic roots that helped push the Soviet Union to the edge of and over its economic capability. It should not be a stretch to think there may be a CIA analytical report that is already predicting the economic downturn of China for the same demographic reasons it foresaw the downfall of the Soviet Union over a decade prior.

Both the Soviet Union and China were or are closed societies. The Soviet Union perhaps more because of the nature of its communist government, but China was a closed society even before the Communist Party came to power. However, the Soviet Union was to a high degree built upon the expansion of the ethnic Russian population, making

¹³ Ibid.

¹⁴ Ibid., 177.

its expansion initially more like that of the British Empire than that of China. But Russia did not maintain its high fertility rate as long as the British Empire, and the Soviet Union did not have so-called empty spaces to continue its expansion beyond neighboring states. As the fertility of the ethnic Russia people fell, so did their ability to maintain control over non-ethnic Russian states. Perhaps China has learned from this aspect of the Soviet Union's demise. China has actively worked to either suppress and eradicate non-ethnic Chinese in its western territories or force them to assimilate.

Some have claimed that if the Soviet Union had been as ethnically homogeneous as China, it would not have dissolved.¹⁵ While China may be working to prevent its minorities from experiencing a population boom that could upset the ethnic balance of the country, without additional labor resources, either internally from increase birth rates, or externally from immigration, China's economic future is on a similar path as the Soviet Union, capitalist hybrid system or not.

¹⁵ Ibid., 178.

Chapter 5: The United States

Often described as a melting pot of peoples and cultures from all over the world united under the banner of the United States, at the beginning it was not particularly so. The United States is a daughter of the British Empire and at its foundation the governing elite were substantially English, or at least of British origin. The characteristics of the first demographic transition were naturally transferred to the United States with initially high fertility rates and declining mortality. The people who emigrated from other parts of the world also kept and passed on to their progeny a growth and expansion mentality that powered the frontier push westward and then filled it with emigrants from the east coast. Exponential population growth and industrial capacity catapulted the United States to global power status just as the British Empire waned and the Soviet Union had yet to capitalize on its own population growth through industrialization. Although the United States now faces the second demographic transition, it was postponed with the post-WWII baby boom and continues to evade any population decline from the second transition through a combination of continued immigration and subcultures within that sustain high fertility rates.

Growth and Expansion

Soon after the thirteen colonies severed ties with the British Empire and established the United States, its leaders and people began looking westward to expand. Perhaps influenced by Malthus' work, Thomas Jefferson sought and made the Louisiana Purchase.¹ At the time, in 1804, immigrants from the United States outnumbered people

¹ Ibid., 66. According the Morland, Jefferson was not only aware of Malthus, but commended his work. Faced with a rapidly growing population from both a high fertility rate locally and a growing influx of immigrants from other parts of the European continent, Jefferson likely believed the only solution to the Malthusian trap was continued expansion of territory and resources.

of French origin by more than a hundred times the area purchased.² By 1820 the United States had 10 million people, and with American women averaging seven births per woman, the numbers continued to grow, reaching 23 million in 1850, and then 76 million by 1900.³ With such masses of people, the United States continued to not only acquire more territory by means of the Oregon Treaty with the British and the annexation of northern Mexico, but it quickly swept aside any previous colonists of French or Spanish origin as well as any Native Americans. In 1848, when northern Mexico became part of the United States there were scarcely 100,000 people, indigenous and Spanish/Mexican colonist combined. Within only three years, there was three times that amount consisting of people with British decent alone.⁴

Internal fertility rates alone may have been enough to support the numbers needed to back up the rapid expansion of the United States to the west coast of North America. However, during the same period immigration not only continued but expanded and accelerated up until 1920 when Congress started to pass legislation to control it. Germany contributed 5-6 million immigrants, 4 million from Italy, another 4 million from Austro-Hungary, more than 3 million from Russia, and 2 million from Scandinavia.⁵ Taken all together, the numbers from other European regions were significant, however, they were still out paced by the 8 million immigrants from the British Isles. As a natural consequence, the English language and British culture were predominant.

² Ibid., 65.

³ Ibid., 65–66.

⁴ Ibid., 66.

⁵ Ibid., 67.

Post WWII Baby Boom

With the settlement of the frontier and Congress putting legislative limits on immigration in the 1920s, the United States population growth began to slow down as it entered the Second World War, at least temporarily. After the First World War the average fertility rate had already dropped to just over three children per woman, down from the seven in the mid-1800s.⁶ After Black Friday brought a depression and the Great Dust Bowl, large numbers of people from the rural areas migrated to the cities initiating an urban demographic transition in the United States.⁷ This further drove the fertility rate down to only a little over two births per woman by 1940, and the population growth in the United States was less than one percent per annum during the 1930s.⁸ Prominent demographers of the time began theorizing that the United States had completed its first demographic transition and fertility and mortality would balance and the country's population would stabilize. Yet, the opposite happened. Instead, there was a baby boom.

On a simplistic level, one could speculate that the baby boom was the natural result of wartime soldiers returning home, getting jobs, getting married, buying homes, and having babies. If that were all there was to it though, then the boom would not have lasted more than fifteen year after the war ended. Rather, the trend set by returning soldiers to get married earlier and have larger families became the norm. Cinema and television also presented it as the norm across the nation. Thus, people emulated what they saw, and the pattern became self-sustaining when the majority of a person's family and friends also got married young and had larger families.⁹ Economics also played a

⁶ Ibid., 134.

⁷ Wermuth, "Population, Demography & National Strategy," 103.

⁸ Paul Morland, *The Human Tide*, 134.

⁹ Ibid., 135.

role as population growth and economic boom become self-reinforcing. As the number in families grew, and the number of large families grew, the demand for more homes and associated household goods also grew. As the baby boom in the United States contributed to economic growth, the wealth spread to other parts of the world which in turn then began to experience similar baby booms accordingly.¹⁰ Despite economics driving post-war fertility beyond the initial return of WWII soldiers, the initial momentum of the baby boomers would not carry on beyond their generation. The United States would eventually see a second demographic transition with fertility rates falling below replacement level of two children per woman and the rising possibility of population decline.

Sustainment

Yet the United States has not seen any decrease in population, and now twenty years into the twenty first century still held a sustainable population growth rate at 0.6 percent at the end of 2019.¹¹ Notwithstanding the decline in fertility, the United States is set apart from other nations in the developed world. Fertility rates in the United State fell not much below replacement levels whereas many parts in Europe experienced a much more drastic drop with fertility rates well below two children per woman.¹² The most likely explanation is the persistence of religious belief and practice that still encourages large families. Despite the Catholic Church's official teaching against artificial birth control and abortion, the continued elevated level of fertility in the United States was a Protestant subculture occurrence and not a Catholic one.¹³ Mormons concentrated in the

¹⁰ Ibid., 136–137.

¹¹ “World Population Prospects - Population Division - United Nations.”

¹² Ibid.

¹³ Paul Morland, *The Human Tide*, 143.

western states of Utah, Nevada, Arizona, California, and Idaho, Amish in Pennsylvania and Ohio, and the Quiverfull movement originating in the Bible Belt hold firmly to pro-natalist teaching in biblical texts that urge them to be fruitful and multiply.¹⁴

Another contributing subculture to the United States' sustainment of its population numbers are Latino immigrants. Restrictions on immigration from the 1920s were relaxed in the 1960s, about the same time the general fertility rate in the United States again began to fall. The majority of immigrants came from Latin America where populations had yet to undergo more advanced phases of demographic transition. Although fertility rates of immigrant groups from high to low fertility regions typically fall within a generation or two, the residual effect from immigrants continues to boost the overall fertility of the United States. Precise fertility rates of these American religious and immigrant subcultures are unknown, but the states with the lowest fertility rates are in the north-east, outside the Bible belt and for the most part outside the areas of higher Latino immigration.¹⁵ Other developed nations with low fertility rates also have supplement their populations with immigrants. However, without some other factor (religious subculture or otherwise) helping to keep the fertility rate close to replacement level, immigration alone has not prevented sharp population declines in countries like Spain, Italy, and Greece. The United States is unique in this sense.

The United States: Comparison and Analysis with China

Unlike China, the United States continued the practice it inherited from the British of exporting its people. While the United States did not go beyond the boundaries of the North American east and west coasts, it did fill the empty spaces of its western

¹⁴ Ibid.

¹⁵ Ibid., 144.

frontier. This allowed it to maintain higher fertility rates and avoid the urban demographic transition for more than a century, something China has not done.

Despite temporary restrictions on immigration from the 1920s to the 1960s, the United States has been historically an open society fueled by immigrants. Thus far, immigration has helped sustain its workforce population in spite of declining fertility among long standing inhabitants. However, this does not come without risk. Just as the Soviet Union began to lose control of its associated republics as the unifying culture of ethnic Russians declined, so may the United States risk losing its unity as it continues to rely more and more on immigration to supplement its population without the immigrants wholeheartedly adopting the American culture.

The United States also has been and continues to a great extent to have strong religious subcultures that are missing in China. China not only is officially an atheistic nation under communist party rule, but it generally lacks a religious culture historically. Notwithstanding Confucianism, which does not particularly encourage large families, but rather the maintenance of relationships within families, China does not have subcultures that drive people to act counter to low fertility trends associated with modernization.

While the United States will also face an aging population, it will not be to the same extent as China. Thanks to its unusually high birth rates among the aforementioned subcultures and its traditional openness to immigration, the American workforce will continue to grow, or at least provide balance for the aging population.

Chapter 6: Conclusion and Recommendations

China is on the precipice of a dramatic demographic transition that will ultimately shift the country from one of population growth to population decline. This is a natural transition that has occurred multiple times in recent world history. As infant mortality declines so does fertility. Rural populations migrating to urban areas further compounds the fertility decline. Also, as infant mortality falls, so does overall mortality, which means greater life expectancy for the population. The drivers constitute the first demographic transition and translates into rapid population growth.

However, afterward, there is a second transition. Economic prosperity and opportunity in urban areas drive more migration to city centers. Greater urbanization drives fertility rates below replacement levels, and rural populations imitate the urban socio-economic behaviors producing low fertility levels. Meanwhile, life expectancy (thus far) can only increase by so much. Death still comes to everyone eventually. As life expectancy levels off while fertility continues to drop, population growth also levels off and then begins to decline. The only question is how soon and how fast the decline will come.

As addressed in the comparative case studies and analysis, the only nations which have thus far staved off any significant population decline are those who either have religious populations that encourage fecundity or allow for immigrants to supplement the declining host country's population. The United Kingdom holds its levels with supplemental immigration. The United States has both supplemental immigration and fecund religious groups that help counterbalance the overall trend of declining fertility rates. The Soviet Union and China had neither.

The Soviet Union eventually fell mostly because its system had been supported by exceptionally high population growth rates, with the key input of labor supporting their industrial base. Once the Soviet Union's second population transition was complete and their population began to decline, the Soviet Union did not last much longer as a global power. Russia still struggles today to hold that claim even though it has seen a recent upturn in its fertility numbers. China is likely on the same path as the Soviet Union, although on a different time scale. China started with a larger population, but it also artificially adjusted the human tide of demographic transition. Due to its One-Child policy, even as the policy has been lifted, the Chinese women left behind are frequently infertile due to millions of forced sterilizations or abortions that resulted in sterility. Therefore, China's population decline, when it comes, will come more forcefully, most likely well before 2049. Shortly after the population decline will come economic stagnation, and then degraded military capabilities.

The Thucydides trap alleges that it is fear of a rising power that ultimately drives two great powers to war. However, the Soviet Union and the United States avoided direct open military conflict until the Soviet Union collapsed under economic (both external and internal) and internal ethnic pressures born from underlying demographic causes. The death spiral of rising tensions and mutual mistrust were avoided and the so-called inevitable evaded until the potential threat of Soviet power receded. This too is what the United States should do to in order to outlast again the danger of the new rising power of China.

The CCP's self-imposed and harshly enforced One-Child Policy has possibly done more to prevent China's potential economic and military rise to global power status

than anything the United States could have inflicted externally. As China's rising power will wane on its own, due to these self-inflicted demographic wounds, then the United States and the world need only to sit back and wait and direct their policies and military actions in ways that do not provoke war from unfounded fears of China's rise. Trying to do too much to counteract China's climb to global power status will only feed its insecurity, leading it to lash out, perhaps even provoking an escalating military encounter that results in war both parties wish to avoid.

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Vita

Lt Col McCreary received his commission through ROTC in 2002 after graduating from Trinity University with a Bachelors in Mandarin Chinese, and attended the Intelligence Officers Course at Goodfellow AFB, TX. He was awarded the honor of Distinguished Graduate in March 2003. He has held a variety of assignments in special operations, reconnaissance operations, joint operations planning, and joint collection management. With Lt Col McCreary's completion of the Joint Command and Staff College in Madrid, Spain (ESFAS), he became a certified Foreign Affairs Officer (FAO) for the U.S. European Command region in the Spanish language, and also has his Masters in Strategic Intelligence. His combat deployments and contingency operations include support of Operation IRAQI FREEDOM and Operation TOMODACHI. Prior to attending Joint Advanced Warfighting School, he was deployed as the Joint Director of Intelligence (J2) for Task Force Southeast, responsible for providing situational awareness for U.S. Northern Command's COVID-19 Response operations for Federal Emergency Management Agency (FEMA) Regions III and IV.