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## **Demographics in World History— Population Explosion and Implosion**

Laina Farhat-Holzman

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### **Overview**

Human populations have burgeoned and crashed from the beginning of what may have been our recognizable ancestors. We have gone from being a very tiny population, survivors of the first crash when human numbers were just a few thousand, to being the dominant species on earth (if we do not count cockroaches and bacteria).

Although there is some contention about this theory, a draconian event, possibly an enormous mega-supervolcanic eruption in Indonesia (Mt. Toba), created a decades-long Ice Age, which reduced our human ancestors to a few thousand individuals. This demographic disaster was called “the bottleneck.” The group that walked out of Africa and their descendants peopled the world. One female among them, whom anthropologists named Eve, produced the marker DNA which all human groups share today. [[http://www.dwightwinenger.net/real\\_eve.htm](http://www.dwightwinenger.net/real_eve.htm)]

### **Agricultural Revolutions**

When our ancestors were wandering hunters and gatherers, their numbers remained small. Such groups cannot sustain many children, nor can migratory mothers handle children spaced less than three years apart. We can see even today that groups that migrate on the fringes of civilization are small and apparently declining.

But something changed as the last ice age retreated and the world warmed up. In the Middle East certain grasses

appear to have mutated so that they had heavy heads of seeds. These were the first grains that human beings found and then began to cultivate to augment and later replace much of the meat from hunting. Simultaneously, hunting groups began domesticating creatures that did well with their care—cattle, sheep, goats, and pigs, from whom they had a reliable supply of meat, milk, hides, and wool. At the same time, gathering of shellfish evolved into going out to sea in boats to fish. All of these products could be stored or traded, which gave rise to specialists who traded, those who protected the wealth (the first armies), and those who went to sea to fish (the first pirates). From herders came the first to tame the horse, which gave them a military advantage against those on foot, and from herded animals came the first diseases that crossed over to human beings. [See William McNeill's *Plagues and Peoples*.]

However, neither warfare nor new contagious diseases made much of a dent in the explosion of human numbers when the food supply was increased by the new food revolutions (agriculture, herding, and fishing). Shortly after this revolution in the Middle East, the "Fertile Crescent," other areas began to transform, too. The Fertile Crescent was joined by the Punjab region of the Indian subcontinent and the Nile River valley. Settled communities increased and became city-states and eventually groups of towns were organized into the first kingdoms. The wealth provided by stored foodstuffs (and soon, metallurgy) gave rise to division of labor and the ability to support much larger populations than could have been possible with hunting/gathering.

North China, apparently independently of the Middle East, also began cultivating grain (millet) and the accumulation of wealth and military prowess enlarged the first settlements

into small kingdoms and eventually larger ones. The Chinese moved south, where the cultivation began of rice, a crop that provided so much wealth that it could support a great Chinese empire, and it conquered or influenced all the other peoples in East Asia.

During that early period, particularly in the Fertile Crescent, Punjab, and Egypt, the combination of population pressures and continued drying after the last Ice Age began to transform the land. Grasslands gave way to savannahs and deserts; forests gave way because of increased use of wood; and irrigation systems began poisoning land with salts. Human beings have never walked lightly on the earth.

### **First Known Population Crash**

Around 1200 BC, a number of flourishing civilizations crashed at once. The most documented was the crash of Crete, victim of a neighboring major volcanic eruption on Santorini Island, in which the volcano and its related earthquakes destroyed not only buildings, but the government's ability to rule as well. Revolts were followed by barbarian invasions not possible before the catastrophe. The same collapse happened in the Punjab and the Fertile Crescent, both perhaps victims of major climate drying. All of these civilizations then underwent what would be called a dark age. It took about 800 years for these societies to recover and for the populations to once more increase.

### **Greece and Rome**

Greek civilization, coming out of the dark ages that followed the region's loss of Cretan civilization, flourished on seagoing trade. Their islands and lands had limited capacity to sustain populations over a modest size; as a consequence, they devised a system of sending their surplus

population off to colonize available lands around the northern Mediterranean. Another group of trading people, the Phoenicians, from the southern Mediterranean, did the same, sometimes in conflict with the Greek settlers. This same solution to overpopulation was independently pursued by the Polynesians, who sent overflow to settle and colonize unoccupied islands further east.

By the time the Romans appeared on the scene, empty lands were not available. They settled their surplus populations as imperial colonists, producing one of the most successful long-term empires in human history. The population explosion that resulted flourished for a long time, but eventually the demands on agricultural lands began to be too much. In addition, for reasons not yet clear, the fertility rate of the Romans themselves crashed—and the empire was laid open to barbarian invasions and collapse. We do know that there was a cycle of failing to drain swamps as population declined, thus increasing malaria and further reducing the population. Some population decline might also be attributed to exhausting the soil in Italy, which contributed to increasing malnutrition.

### **The Event of 527 AD**

In *Catastrophe: An Investigation into the Origins of Modern Civilization*, David Keys (2000) has written a fascinating detective story to trace a history-changing event. In the middle of the sixth century, something happened that was the natural equivalent of what scientists fear would befall the world's climate in the event of nuclear war—the so-called “nuclear winter.”

In that appalling potential future disaster, hydrogen bomb explosions would force vast quantities of pulverized debris,

dust, and temporarily vaporized earth up into the atmosphere. There, this nuclear pollution would form a barrier that would prevent much of the sun's light and heat from reaching the ground. Temperatures would fall, the world's climate system would be thrown into chaos, and famine followed by epidemics would begin to rage.

The mid-6<sup>th</sup>-century climatic catastrophe displayed all the hallmarks of nuclear winter. But obviously there were no H-bombs in the first millennium A.D. So what was the culprit?

Apparently it was Mt. Toba again, which erupted and split Java from Sumatra—with a sound (and effects) that could be heard in China. Southern China had yellow snow fall in August, duly noted in Chinese government archives. But another consequence of this eruption was the final blow to Roman civilization, already depopulating, and its replacement in eastern Europe by Slavs, barbarian tribes being pushed from their own central Asian homeland by the movement of other tribes.

Other places devastated by this event included Yemen, which was until then a very prosperous kingdom. It never recovered from the drought and plague-caused collapse. The same apparently affected Native American civilizations—the Mayans in particular—who faced drought, hunger, and internal strife.

It appeared that all over the world there were serious ramifications, and stable governments fell to barbarian invasions or declining populations.

The Muslim eruption out of Arabia in the 7<sup>th</sup> century owed a good deal of its success to the exhaustion of the former Roman population in the southern Mediterranean and

the strife between Persia and Byzantium, which weakened them both.

### **Middle Ages**

But then by the year 1000, Europe began to recover from their centuries of chaos and darkness and the population started to explode again. The invention of the iron plow enabled them to bring new lands under cultivation (the Mediterranean soils had been exhausted) and there was economic recovery and the creating of cities and cathedral building. Then—the next disaster—again, origin unknown.

In 1300, the climate abruptly cooled and crops started to fail. The population of Europe was on the verge of hunger when the next two disasters struck: the Mongol invasions (devastating to Persia) and what they apparently brought with them: the Black Plague. The definitive books to consult on this are *Plagues and Peoples* by William H. McNeill (1976) and *The Black Death* by Robert S. Gottfried (1983), which is specifically on that plague. The population of Europe (and across Eurasia) precipitously declined, not to recover until about 1850, when the Little Ice Age suddenly ended, and the warming period began that we are experiencing today.

### **The Enormous Global Population Explosions of the 19<sup>TH</sup> and 20<sup>TH</sup> Centuries**

Enormous improvements in safe water, food supply, and modernizing medicine had an effect on population. Colonial powers brought some of their technologies to their colonies and birth rates and survival went up. By the mid-20<sup>th</sup> century, countries such as Japan, Italy, and Germany were looking for more room for their very large populations. World War II was partly fueled by that need.

Decolonization throughout Africa and Asia provided initial hope to those populations who thereupon increased their birthrates and decreased their child mortality rates—temporarily. This proved disastrous because both food supplies and diseases took their toll. There were more people there, but most were living badly and life expectancy was low.

### **Fear of the Population Bomb**

From the 1960s on, the educated elites preached zero population growth and every prediction of disaster was Malthusian. Correctly, they saw ecological devastation from too many people living off delicate ecologies and also saw that too many people in a society not designed for it spurs conflict. (Nobody, however, talked much about the density of Holland, where these predictions did not apply.) [*The Population Bomb*, Paul R. Ehrlich, (1968).]

Simultaneously, various groups objected to the notion of zero population. Third-World leaders and American minorities interpreted this campaign as a genocide directed against them. On religious grounds, the Catholic Church and certain fundamentalist Protestants considered population control an offense against God. The issue still roils in some places. But there were actually some totalitarian leaders who deliberately wanted cannon fodder. The Ayatollah Khomeini forbade contraception. Mao did the same. The consequences were devastating for Iran and China, both of which are dealing with this now.

### **The Beginning of the Population Crash**

To the surprise of demographers, the beginning of the 21<sup>st</sup> century has seen populations decline—some, as in Europe, deliberately; in other places, mysteriously. Scientists

don't know if this is a fertility drop caused by ecological degradation (chemicals, pollution, *etc.*) or the consequence of increased prosperity, which was the reason for this drop in the US and Europe early in the 20<sup>th</sup> century. The combination of increasing prosperity and contraception led to the desire for smaller families. We are seeing that in Asia today as well.

The only places that have not declined or are experiencing a population bubble that exceeds their economic capability are in the Himalayas, Sub-Saharan Africa, the Andes, and one of the worst: Yemen. Malthusian predictions may apply there.

One curious observation: those countries during the 20<sup>th</sup> century that were under totalitarian rule have had the most extreme population decline. Italy, Germany, Spain, Romania, Russia, and Japan, are at the bottom of the list. It appears that not enough women want to conceive in these countries. It seems that people today have children when they have hope for a future.

Ireland, the US, and France are doing best in population replacement. Others are doing badly. The Japanese already know that their population will soon be half of what it was at the onset of World War II. They are already considering what to do about it.

Europe had addressed their population drop by a generous program of immigration—initially by invitation—to such countries as Turkey or Pakistan. For the past decade, however, they have had a flood of both legal and illegal migrants whose own countries cannot sustain them. What was originally conceived as a temporary solution for lower-end labor has had social ramifications not anticipated.

Europe's generous welfare system has been strained to its limits; ghettos of unemployed and often delinquent youth surround Europe's cities and make up more than half of the

prison populations, some of which the police refuse to enter. The first generation of grateful migrant workers has been replaced by second and third generation young people who are being radicalized by some of the most violent Islamist cults.

Europe's educated elites have not been affected as much as the working classes, which see their culture under assault. This issue is being addressed by a range of authors listed in **Recommended Readings** at the end of this paper.

While alarming, there are cooler voices noting that the Muslim birthrate is dropping to European levels and that the forces of modernization and Europeanization are beginning to counteract the violent Islamists. *The Economist* takes this position, as do the essays of Fared Zakaria, a *Newsweek* editor and CNN program host.

European countries that have experienced Islamist attack, such as Denmark, with the violence over the Danish "Mohammed" cartoons and the Netherlands, with the murder of a filmmaker offensive to Islamists, are tightening up their immigration rules and have begun to deport those who are not documented or are criminals. And in some European countries, the general public is showing renewed respect for their traditional cultures and hostility toward aggressive Islamists.

### **Japanese Plans**

The Japanese have a history of long-range planning, such as when they decided to modernize in the late 19<sup>th</sup> century. Their projections seem to me much more thought out than the notorious Marxist five-year plans or the delusional Nazi thousand-year Reich. Their current planning is very interesting.

- They have looked at increasing their population through immigration, and with one exception, have dismissed it. They regard their culture as too special to permit this. The exception is Philippine women invited to marry Japanese farmers, who have not been able to attract or keep Japanese women on the farms.
- What to do about the elderly, who now have no families to take care of them? They do hire temporary workers to provide elder care in senior homes. But they are also looking at robots—which are very attractive to elders. There are robotic pets and they are working on robotic servants.
- Most inventive is consolidating communities that are otherwise spread out and difficult to provide infrastructure. Toshiba has produced a mini-nuclear power plant that can power a city, and this has led to the movement of suburbanites back into the city where amenities can be provided more easily. They are now selling these power plants on the global market. [www.nextenergynews.com/news1/next-energy-news-toshiba-micro-nuclear-12.17b.html - 11k]

### **A Shrinking World—The Great Dilemma**

Modern capitalism has flourished on a model of growth. A shrinking population will offer great challenges to our economy and our social values. We have not even begun to explore what this will mean. I would suggest that this will occupy us in the next half century because this population drop is inevitable.

### **Projections and Objections**

The *Christian Science Monitor* [October 28, 1998] provided the following estimate of population projections from 1998 to 2050. These figures were gleaned from the UN Population Fund. However, there have been many contradictory estimates with which I would more readily

agree—particularly in regard to Pakistan, India, China, and Sub-Saharan Africa. Pandemics, water shortages and famine will have a disastrous effect on these countries, particularly on their poor. Among the top 20 were European countries that by 2050 no longer appear on the list.

### Rankings of nations

1998			2050 (projected)		
Rank	Nation	Millions	Rank	Nation	Millions
1	China	1,256	1	India	1,509
2	India	982	2	China	1,478
3	US	274	3	US	349
4	Indonesia	206	4	Pakistan	346
5	Brazil	166	5	Indonesia	312
6	Pakistan	148	6	Nigeria	244
7	Bangladesh	123	7	Brazil	244
8	Nigeria	147	8	Bangladesh	213
9	Russia	126	9	Ethiopia	206
10	Japan	106	10	Congo	160

### Conclusion

We are entering an era of decline in population. Factors involved include climate change, prosperity which fosters low birthrate, and in the most backward places, probability of conflict and climate change disasters (Bangladesh and Central Africa). There are unknown consequences in the Andes and the Himalayas (not very big populations to begin with, but too large for the bearing capacity of the land.) We can expect a great deal of population movement and in some places replacement. This is a topic that could use more scholarly heads. I will watch for changes in the predictions.

**RECOMMENDED READINGS**

- Bruce Bawer, *While Europe Slept: How Radical Islam Is Destroying the West From Within*. Doubleday, 2006.
- Claire Berlinski, *Menace in Europe: Why the Continent's Crisis is America's, Too*. Three Rivers Press, 2006-7.
- Ian Buruma, *Murder in Amsterdam: The Death of Theo van Gogh and the Limits of Tolerance*. Penguin Press, 2006.
- Paul R. Ehrlich, *The Population Bomb*. 1968.
- Oriana Fallaci, *The Force of Reason*. Rizzoli, 2006.
- David Keys, *Catastrophe: An Investigation into the Origins of Modern Civilization*. Ballantine Books, 2000.
- William W. McNeill, *Plagues and Peoples*. 1976.
- Melanie Philips: *Londonistan*. Encounter Books, 2006.
- Mark Steyn, *America Alone: The End of the World As We Know It*. Regnery Publishing, Inc., 2006.
- Bat Ye'or, *Eurabia: The Euro-Arab Axis*. Fairleigh Dickinson University Press, 2005.