**One Child Policy: A brief history, facts, & FAQ**

**STATION 2: China’s One Child Policy (pgs 1-10)**

April 2011

The Chinese government says that the One Child Policy has restrained China’s mushrooming population (claiming that it has prevented an estimated 400 million births since its inception in 1980). But critics say that the law is a violation of basic human rights enforced by heartless bureaucrats.

Here’s the straight dope.  (Or “Everything you wanted to know about the One Child Policy but were afraid to ask”).
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**A BRIEF HISTORY**

**1949: The Commies take control**
When Mao Zedong’s Communist Party took control of China in 1949, it inherited the most populous country on earth—over a half a billion Chinese people. This was more than triple the population of the U.S., which at the time stood at 150 million (US population in 2010 = 310 million).

**More is better?**
After a century of wars, unrest, and epidemics,China saw a population boom (helped by improved medical care and sanitation). This growth was initially greeted by leaders as an economic advantage. Reflecting the prevailing attitude of the leadership, Hu Yaobang, secretary of the Communist Youth League reasoned that, “*A larger population means greater manpower…the force of 600 million liberated people is tens of thousands of times stronger than a nuclear explosion*.”

The CCP condemned birth control as well as banned the import of contraceptives (doh!).

**Can China feed itself?**
On August 1949, U.S. Secretary of State Dean Acheson authored the China White Paper, in which he expressed his doubts about China’s ability to feed itself. He wrote: “*The first problem which every Chinese government has had to face is that of feeding its population. So far, none have succeeded.”*

In direct response to this, a defiant Mao retorted: “*Even if China’s population multiplies many times, she is fully capable of finding a solution; the solution is production*.” He also famously stated that a large population is “*a very good thing … Of all things in the world, people are the most preciou*s.”

**1950-1960’s**

"...and I'm pretty sure smoking is good for you too!"

It wasn’t long before Mao was proved wrong (one of many, many things he got wrong). In a few short years, China’s population growth started taking a toll on the nation’s food supply. By the mid-1950’s, the government started to change their tune—providing contraceptives, developing voluntary birth control programs, and supporting abortion.

Meanwhile, Mao seemed to cling to the idea that a bigger population was advantageous.  According to a 1965 Life Magazine article on China’s growing nuclear power: “*Mao told a visiting Yugoslav in 1957, ‘We aren’t afraid of atomic bombs. What if they killed even 300 million [Chinese]? We would still have plenty more–China would be the last country to die*‘.”

**1958:** [**The Great Leap Forward**](http://www.china-mike.com/chinese-history-timeline/part-14-mao-zedong/) — Mao’s disastrous attempt to rapidly convert China into a modern industrialized state—took things from bad to worse. Botched state planning (such as shifting too many workers away from farming to steel production)—in addition to a series of ill-timed floods and droughts—resulted in nationwide food shortages. From 1958 to 1961, an estimated 20-30 million Chinese people starved to death. In short, a Massive Leap Backwards.

In the aftermath of the colossal catastrophe, officials turned up the heat on a propaganda campaign to put the brakes on population growth (which was briefly interrupted by the turmoil of the Cultural Revolution in 1966 before resuming again in 1969).

According to Wang Feng, a demographer at the University of California, Irvine, China’s leadership used the population boom as a convenient scapegoat. “*It was mostly a problem of the economic system…not really a population issue*,” he argued. “*But the growing population actually made those problems more apparent. I think that drove the leadership to have a more forceful birth control program*.”

**1970’s: The population still mushrooms…**

Things get better.  Although the people weren’t starving, there were still widespread shortages of every conceivable consumer goods. Everything from soap and cloth to eggs and sugar was rationed.

But the population continued to swell. By the early 1970’s, China’s population passed the 800 million mark.

**“Late, Long, and Few”**
The CCP launched a soft-sell approach to curbing population growth. Under the slogan “Late, Long, and Few,” the voluntary family planning campaign advocated delaying marriage, having fewer children and increasing the number of years between children.

It works. From 1970 to 1976, the country’s **fertility rate plunges** by more than half—dropping from about six births per woman to less than three. But they weren’t out of the woods yet—the rate leveled off and the voluntary program was about to go mandatory.

**1976: Mao croaks. Enter Deng.**
Mao dies and the baton is passed to [Deng Xiaoping](http://www.china-mike.com/chinese-history-timeline/part-15-deng-xiaoping/), who inherits a China in the poorhouse. With the political legitimacy of the post-Mao leadership on the line, Deng sets his sights on achieving what Mao’s planned economy was never able to deliver: a richer China.

The people were hungry—desperate—for a better life. Looking at their Asian neighbors—Japan, Taiwan, South Korea, and Singapore— Chinese leaders (and the people) knew how far back they were in terms of standard of living. And how is that measured? On a per capita basis. And of course, one way to boost that number is to reduce the denominator: the aggregate population.

**1980: The gloves come off**
The One Child Policy officially goes mandatory.

Under the original One Child Policy, couples needed to first obtain permission from local officials to have a baby (in 2002, they revised the law so that prior permission for the first child is no longer required).

Although the policy was meant to be an emergency policy (the original document anticipated that it would be phased out in 20-30 years), the CCP has continued the policy despite significant changes in China’s economy and demography.

**China’s One Child Policy: FAQ**

**Are there any exceptions to the law? Loopholes?**
Yes, there are numerous exceptions to the policy. Contrary to popular myth, the policy isn’t a uniform, nationwide prohibition on multiple children. In fact, today the policy doesn’t even apply to the majority of Chinese citizens. In 2007, the National Population and Family Planning Commission estimated that the policy applies to only about 36% of China’s population.

The exact rules and enforcement vary by province and local area, however, the main exceptions include:

**Ethnic minorities**. The policy doesn’t apply to China’s 55 or so ethnic minorities (such as Uighurs, Tibetans, and Kazakhs) who make up about 8% of China’s total population.

**Rural residents**. Local officials in rural areas will typically permit a second child, especially if the first one is female (this revision came after massive protests in the early years by farmers who rely on children to help work the land).

**When both parents are only children** (neither has any siblings), an allowance is typically made to have two children.

A notable exception was made after the devastating 8.0 magnitude earthquake in Sichuan province in May 2008. Of the nearly 70,000 people killed, an estimated 10,000 were children. Parents who lost their only child were legally allowed to have another child (similar exceptions are made in the case of deceased or seriously disabled children).

Though not technically “exceptions,” there are other ways of circumventing the policy. For instance, wealthy parents can simply pay a hefty fine to legally register and raise their second or third child. Many other parents simply lie—secretly giving birth multiple children secretly and then sending them to live with relatives in the country or passing them off as nieces and nephews.

**How do they enforce it?**
Enforcement of the one-child policy relies on combination of carrots and sticks.

First, the **Incentives**: Those who follow policy are awarded a “Certificate of Honor for Single-Child Parents” and given rewards in the form of longer maternity leave, interest-free loans, and other forms of social assistance and government subsidies such as better health care, state housing, and school enrollment. Government employees can receive an extra month salary each year until their child turns 14. Couples who delay marriage and having their first child are also eligible for similar benefits.

To boost compliance, the National Population and Family Planning Commission of China (NPFPC) offers free, universally accessible contraceptive. The New England Journal of Medicine estimated that more than 87% of China’s married women use contraception (compared to about one third in other developing countries).

**Penalties** (and enforcement) can vary depending on specific situation as well as by province and local municipality. Similarly, the law and penalties have continued to evolve (in general, becoming less draconian over the years).

However, for the vast majority of people caught breaking the law, the penalties are **financial**—large fines imposed (which vary by region but are typically several times the average annual income). For those unable or unwilling to pay the fine, more heavy-handed tactics can be applied, such as seizing property and houses, being dismissed from jobs, or having their kids pulled out of school. The system also makes it difficult to hide unregistered children (for example, the inability to apply for schooling, etc).

Although widely publicized in the media, the really draconian measures—such as forced sterilization or abortion—are relatively rare these days, the exception and not the rule. However, during the early days, these tactics were widespread, despite widespread resistance in the countryside (more on draconian tactics below).

**What does the average Chinese person think?**
A surprising (to me anyway) number of Chinese people today actually support the one-child policy. Hard numbers are difficult to come by, but I think it’s safe to say that it was not well received in the beginning (in accordance to the Chinese tradition of having large families).

But according to a 2008 Pew Research poll (Global Attitudes Survey in China), today about three-in-four (76%) approve of the policy. China’s increasing wealth and urbanization has contributed greatly to the “natural” societal tendency towards smaller families. The poll support this, showing that approval of the policy is highest among those with higher incomes (85%) and those living in cities (84%).

Today, China’s current fertility rate (1.54 in 2010) is not far off compared to [Hong Kong](http://www.china-mike.com/china-tourist-attractions/hong-kong/) (1.04) and its wealthier Asian neighbors: Japan (1.20), South Korea (1.22), Taiwan (1.15), Singapore (1.10) [Source: CIA 2010 World Factbook].

**Has the policy been effective?**
The policy has undoubtedly slowed down the fertility rate. The Chinese government claims that the law has prevented an estimated 400 million births (about the combined population of the US and Canada).

As mentioned above, China’s fertility rate would have most likely dropped on its own, without the law, however, any accurate estimates are hard to come by.

**So why is China still so populous?**
In 1950, China had about 550 million people. In 1980, when the policy was first enacted, the population stood at around 980 million.

Today, China’s total population is about 1.33 billion (to be more precise, 1,330,141,295 in 2010, according to CIA World Factbook). That means that the country has added an average of 12 million people every year since the law went into effect (or the equivalent of the total population of Greece).

And according to projections from the United Nations’ Population Division, their population will peak in 2030 at about 1.46 billion.



So what’s the deal? After three decades of the policy (and lower fertility rates), why aren’t there fewer Chinese people?

There are a few reasons to explain this seeming disparity. The bottom line is that the policy has significantly slowed China’s population growth—without it, their population today would be far greater.

One factor in the China’s population boom has been a drastic **improvement in standards of living**. Naturally, this translates to longer life expectancy. Between the early 1950s and early 1970s, Chinese **life expectancy increased** by an average of 1.5 years EVERY YEAR. Taken together, that means a leap in life expectancy from below 40 years old to almost 70 years old. Similarly, better health care has resulted in a sharp **decline in mortality** (particularly infant mortality), resulting in a population explosion starting in the mid-20th century.

Another factor is the so-called **“population momentum” effect**. The architects behind the law never expected to slash the population at once. Instead, they understood that eventually, the millions of children that were already born before the policy would grow up and hit their reproductive years. With or without the policy, that generation would eventually start having kids faster than the smaller elderly population would die off.

Add in the various exceptions and loopholes (and non-compliance), and the net effect is a still-growing population.

Some good news though: The U.N. Population Division also projects that China’s population will be down to about 1.40 billion by 2050, and will then will start to lose about 20 million people every five years or so.

**CONTROVERSIES & CRITICISMS**
Needless to say, the One Child Policy hasn’t been without its critics. To most Westerners, it’s incomprehensible that a government could legislate how many children a family can have—something most consider a fundamental human right. Over the decades, the Chinese government has come under fire from both outside and inside their borders—accused of everything from reproductive and human rights issues to female infanticide.

These are the most frequent controversies and criticisms, of both the tactics employed as well as of the unintended negative social consequences:

**Draconian human rights violations**

The most serious and widely reported criticisms involve allegations of forced late-term abortions, forced sterilization, official harassment, beatings, and even forced eviction. Generally speaking, these abuses—while they do still occur—have grown less common throughout the years. These days, the draconian measures aren’t conducted on a national, systemic basis. Instead, they typically occur at the local level by local officials who want to “make their numbers” by any means necessary (unlike Americans who, in general, trust their local & state politicians more than “the Feds,” in China it’s just the opposite since the unelected local politicians are most likely to be corrupt and abusive).

In the face of growing resistance to the law, some local officials have turned to harsh enforcement tactics. For instance, there were reports in 2007 of government officials who took sledgehammers to some towns and threatened to whack holes in the homes of people who had failed to pay fines for having too many children. Around the same time, other officials reportedly forced pregnant women without birthing permits to have abortions.

These heavy-handed measures resulted in riots. Some 3,000 in Guangxi province took to the streets in 2007, burning government buildings and overturning cars. There were reports that many civilians and officials were killed (as usual, reliable statistics in China are hard to come by).

The most famous outspoken Chinese critic of policy is the so-called “blind lawyer”. A persistent thorn in the side of Chinese family planning officials, he drew international attention to the abuses, such as forced abortions and sterilizations. After being arrested, he made Time Magazine’s 2006 list of *100 People Shaping Our World*. He spent over four years in prison and was released in September 2010 (but still remains under government surveillance).

**Female infanticide and gender imbalance**

Another widely publicized negative effect of the One Child law is the practice of **female infanticide**, the act of intentionally aborting female fetuses (and even infants). Even before the policy, the practice in China was not unheard of (although the practice was largely dropped by the 1950s). After the law went into effect, the practice became widespread.

Chinese culture has long had a strong cultural preference for boys to carry on the family name.   According to long-standing tradition, once a daughter was married off, she would move in with her husband’s family and became responsible for taking care of her new family (unlike males who remain permanent family assets who can add a daughter-in-law, as well as grandchildren).  Most of China’s rural residents have limited savings or pensions so need to rely on their children (traditionally many) to take care of them in old age.

Since the policy went into effect, China has had a significant **gender imbalance**, an abnormal sex ratio. The imbalance steadily grew worse since ultrasound became widely available in the mid-1980s. Today, the ratio hovers around 120 boys to 100 girls (compared to a “natural” ration of about 105 boys to 100 girls around the world). Although the practice is now illegal—China banned prenatal sex screening in 1994—the problem continues (it’s still fairly easy to pay a doctor to give more subtle “coded” message regarding a fetus’ gender—a slight shake of the head, for instance).

In rural areas, it’s not as common for parents to abort female fetuses if it’s their first time around since they’re allowed a second shot at a boy. But among second-born children in the countryside, there are approximately 160 boys born for every 100 girls.

Minister of the National Population and Family Planning Commission, Zhang Weiqing, said the government is committed to solving gender imbalance problem through with educational campaigns, increased punishments for sex-selective abortions as well as rewards (such as retirement pensions) for parents who have girls.

“*This problem is a reality of country life in China*,” said Zhang. “*We have a 2,000-year feudal history that considered men superior to women, that gave boys the right to carry on the family name and allowed men to be emperors while women could not*.”

"**Girl power!"**

Some good news: there’s increasing evidence that the pendulum is starting to swing the other way, in favor of girls, particularly among urban residents. According to a 2009 survey of 3,500 prospective parents in [Shanghai](http://www.china-mike.com/china-tourist-attractions/shanghai/), 12% said that they wanted a baby boy while 15% wanted a baby daughter (the rest stated no preference).

The reason for these changing attitudes? Economics and the law of supply and demand. For one, educational and career opportunities have greatly expanded for Chinese women in recent years, especially in the cities where the gap is rapidly closing (females are also capable of inheriting and running a family’s business). In short, urban daughters are now just as capable of taking care of parents (many parents also reason that a daughter would play the caretaker role better).

Also, the gender imbalance has made it much more difficult for Chinese men to get married. With such a vast supply of willing suitors, Chinese women have grown increasingly picky (I’ve personally heard many say that they won’t date any men who don’t own their own car and house…not a low hurdle in China). To marry off their sons, parents feel added pressure to buy them an apartment or a house (add rising real estate prices to the list). Unlike in the U.S., Chinese tradition also dictates that the son’s parents foot the bill for the wedding.  All these factors add up to make the economics of having a boy less and less attractive.

**Rapidly aging population & workforce challenges**

Many have blamed the One Child Policy for China’s demographic problems. China’s **rapidly aging population**—combined with lower fertility rates—is expected to present significant social and economic challenges.

Demographers warn that the days of abundant, cheap Chinese labor is coming to an end. China is already seeing declining numbers of elementary school students and college entrance exam takers. According to one estimate, between 2010 and 2020, the total size of the China’s labor force aged 20-24 will be cut by 50 percent. In recent years, factories have already reported **shortages of young workers**—a problem bound to get worse before it gets better.

China’s average age will continue to grow dramatically. China’s median age was 32 in 2005. By 2050, that figure will leap to around 45, with a quarter of the population over 65. As a result, China will see a drastic change in their labor force: In 2007, China had six adults of working age for every retiree, but by 2040 that ratio is expected to drop to 2 to 1.

Again, traditionally, Chinese parents have relied on their children to take care of them in their older years. That looks unlikely to change much since the government’s pension system is almost nonexistent and social welfare systems are woefully inadequate.

In short, one unintended but significant result of the One Child Policy is that it has eliminated the traditional support system of the extended family. Instead, the heavy burden will fall on the shoulder of only-children, who in many cases, will need to care for his/her parents in addition to four grandparents. The Chinese refer to this reverse-pyramid social phenomenon as the “four-two-one” problem.

**WILL THE GOVERNMENT EVER LOOSEN THE LAW?**
As mentioned above, the original policy was intended to last for only a generation; however, the CCP has not shown much indication in reversing the decision, despite persistent rumors to the contrary.

Just as the original policy resulted in unintended negative consequences, the government has been reluctant to change the course for fear of making things worse.

In a 2008 interview with state newspaper China Daily, Zhang Weiqing, minister of the State Population and Family Planning Commission, suggested that relaxing the policy could unleash a new baby boom. “*Given such a large population base, there would be major fluctuations in population growth if we abandoned the one-child rule now,” he warned. “It would cause serious problems and add extra pressure on social and economic development*.”

In September 2010, the government announced that the policy would remain unchanged. The China Daily newspaper on Monday quoted Li Bin, head of the National Population and Family Planning Commission, as saying: “*We will continue the one-child policy until at least 2015*.”

**DID YOU KNOW? (OTHER INTERESTING FACTS)**

**Chinese adoption:**

The United States is the No. 1 destination for Chinese children adopted abroad (about 80% are female; 25% are under the age of one). In 2007, China imposed new restrictions on foreign adoptions, barring applicants who are unmarried, over 50, obese, or who take certain medications.

**The origins of the One Child Policy:**

Song Jian, a missile scientist (not an economist or a demographer) was an unlikely key player in the decision to implement the policy. As a member of the strategic defense establishment, Song held the trust of top leaders. In her book, “Just One Child: Science and Policy in Deng’s China,” University of California, Irvine anthropologist Susan Greenhalgh writes how Song “wowed” the audience with high-tech computer projections—applying rocket-science formulas to population projections in advocating for strict birth controls. She noted that his rocket-science approach ignored real-life human consequences.

**Secret two-child experiment:**

In the mid-1980’s demographer Liang Zhongtang – a longtime critic of the one-child policy – convinced China’s leaders to run a “two-child policy” experiment in Yicheng, a country in northern China about 550 miles southwest of [Beijing](http://www.china-mike.com/china-tourist-attractions/beijing/). The results?

In 2010, the Southern Weekend newspaper in Guangzhou revealed the details of the experiment for the first time: For the past 25 years, the experimental county’s population grew more slowly than the whole of China (about 20%, nearly 5 percentage points lower than the national average). Also promising: Yicheng’s gender ratio was in line with the natural norm at 106 males to every 100 females. In an interview, Liang was quoted as saying: “*It shows the government could have had a looser child policy. Lower birth rates and slower population growth are inevitable results of economic development*.”

**MORE FACTS ABOUT CHINA’S ONE-CHILD POLICY:**
**As recently as 1965, Chinese women were bearing an average of six children.** Today, that figure is down to 1.5 because of China’s One-Child Policy.
[ National Geographic cover “Population 7 billion” Jan. 2011 ]

**The One-Child Policy only applies to about 45% of China’s population.** Exceptions are made to have more than one child in the countryside, where 55% of China’s population lives.
[The Economist “The worldwide war on baby girls” March 4, 2010; CASS ]

**There are numerous exceptions and variants on the One-Child Policy.** In the coastal provinces, about 40% of rural couples are allowed to have a second if their first is a girl. In central and southern provinces, all couples are permitted a second child either if the first is a girl or if the parents suffer “hardship”. Ethnic minorities—such as those in Inner Mongolia and the far west—are exempted from the policy and can have multiple children.
[The Economist “The worldwide war on baby girls” March 4, 2010; CASS ]

**Up to 3 million babies are hidden from the government every year** because of the One-Child Policy, according to research by Liang Zhongtang, a demographer and former member of the expert committee of China’s National Population and Family Planning Commission.
[ The Telegraph UK “Chinese hiding three million babies a year” May 30, 2010 ]

**China has a “wildly skewed sex ratio” with too few females,** because of the One-Child Policy. China’s sex ratio for the generation born between 1985 and 1989 was 108 (already just outside the natural range of 103-106). Today, the ratio is over 120, which is “biologically impossible without human intervention”.
[ The Economist “The worldwide war on baby girls” March 4, 2010 ]

**By 2020, China will have 30-40 million more young men (under 19 years old) than young women**, according to the Chinese Academy of Social Sciences (CASS). By 2020, “China faces the prospect of having the equivalent of the whole young male population of America, or almost twice that of Europe’s three largest countries, with little prospect of marriage, untethered to a home of their own and without the stake in society that marriage and children provide.”
[The Economist “The worldwide war on baby girls” March 4, 2010; CASS ]
**By 2020, one in five young men in China will be brideless due to the “chronic shortage of potential spouses”**, according to CASS. In the 20-39 age group, there will be 22 million more men than women….which is the equivalent of 10 cities the size of Houston populated exclusively by young males.
[Newsweek “Men Without Women” March 6, 2011 ]

# Seven big problems for 7 billion peopleExperts weigh in on predicaments caused by a burgeoning world population

 **STATION 1: Seven Problems for Seven Billion (pgs 11-18)**

Reuters

By James Eng

msnbc.com

**World population by the billions**

1 billion - 1804
2 billion - 1927
3 billion - 1959
4 billion – 1974
5 billion - 1987
6 billion - 1999\*
7 billion – 2011

\*Year when the milestone was observed by the United Nations.

Source: United Nations Population Fund

Sometime on Monday, Oct. 31, 2011 the world's population is projected to hit 7 billion. Is that numerical milestone a cause for celebration or concern?

A little bit of both, according to the [United Nations Population Fund](http://www.unfpa.org/public/). The organization, an international development agency that promotes the right of every person to enjoy a life of health and equal opportunity, on Wednesday released a report detailing the achievements and setbacks faced by an ever-crowded world.

How we respond now will determine whether we have a healthy, sustainable and prosperous future or one that is marked by inequalities, environmental decline and economic setbacks, according to "[The State of World Population 2011](http://foweb.unfpa.org/SWP2011/reports/EN-SWOP2011-FINAL.pdf)" report.

The report notes that the record population can be viewed as a success because it means people are living longer — average life expectancy has increased from about 48 years in the early 1950s to about 68 in the first decade of the 21st century — and more children are surviving worldwide. But not everyone has benefited from a higher quality of life.

In some of the poorest countries women are having more babies, stymieing development and perpetuating poverty; in some of the wealthier countries low fertility rates and a shortage of workers are raising concerns about the sustainability of economic growth and social programs.

"This report makes the case that with planning and the right investments in people now — to empower them to make choices that are not only good for themselves but for our global commons — our world of 7 billion can have thriving, sustainable cities, productive labor forces that can fuel economic growth, youth populations that contribute to the well-being of economies and societies, and a generation of older people who are healthy and actively engaged in the social and economic affairs of their communities," writes Babatunde Osotimehin, executive director of the UNFPA.

The 7 billion milestone “is a challenge, an opportunity and a call to action,” Osotimehin said.

In response to the report, msnbc.com asked seven notable figures to identify some major problems — and potential remedies — confronting a world with 7 billion inhabitants. Here's what they had to say:

**Paul R. Ehrlich
American biologist, Bing professor of population studies and professor of biological sciences at Stanford University and author of the 1968 best-seller, "The Population Bomb"**

**Problem: Food shortage, damage to environment**Seven billion is already facing us with horrendous problems, including almost 1 billion people hungry and contributing greatly to the chances of catastrophic climate disruption.  But the next 2 billion people the demographers expect by 2050 will cause much more environmental damage than did the last 2 billion added to our population — a classic nonlinearity.  That is because human beings are smart, and picked the low-hanging fruit first. Thus each added individual, on average, must now be fed from more marginal land, supplied with water from more distant or more polluted sources, obtain the metals required to make the products he or she consumes from poorer ores, etc.

Many past human societies have collapsed, with overpopulation playing a significant role.  But today, for the first time, a global civilization is in peril, and nothing significant is being done about it in societies insane enough to believe that growth can be perpetual.

**Solution:**Women in every country should be given equal rights and opportunities with men, and every sexually active human being should be given access to excellent birth control methods, and, in case they fail, backup abortion. Governments should all adopt the slogan "patriotic citizens stop at two children" and adjust tax and other policies to discourage over-reproducers and those unethical elements in society that are pronatalist.

The current redistribution of wealth from poor to rich must be halted, and overconsumption by the rich must be controlled with programs such as those that transformed consumption patterns in the United States when it entered World War II.  A rapid transition away from the use of fossil fuels should be started immediately, as should rebuilding of human water-handling infrastructure with much more attention to resilience.  Leaders should be taught enough arithmetic to allow them to grasp the consequences of the growth rates recommended by economists — 3.5 percent per year.

**Alfred Spector
Vice president of research and special initiatives at Google**

**Problem: Access to information technology, education**In the developed world technology has transformed our lives, allowing us to access information at any time from an ever growing number of devices. Tasks once performed by many have been reduced to a single click or tap. However, as the world population exceeds 7 billion people, we must ensure that all are armed with the skills to leverage the vast powers of information technology to improve their lives. Furthermore, we must increase the level of education for all residents of our planet for the mutual benefit of our global society. According to the [United Nations Development Programme](http://www.beta.undp.org/undp/en/home.html) over 70 million children receive no education and most of them are girls.

**Solution:**The good news is that information technology itself is a major part of the solution. With the decreasing costs of smartphones and tablets in the developing world we are seeing a whole new population accessing the Internet. Today, a teacher in India can purchase a $38 Android tablet and bring unprecedented amounts of information into the classroom. Whether through more prevalent network connections like the fiber-optic links connecting Africa, ever more creative software connecting people online, or the vast amounts of Web-based content now accessible to millions, technology is getting into a position to help educate the world.

And learning is increasingly possible online: there are vast amounts of free information on the Web, from Wikipedia to millions of books accessible to all. Or middle- and high school-level YouTube classes like those from the [Kahn Academy](http://www.khanacademy.org/). And the interest is there. At Stanford’s recent online course about artificial intelligence taught by Googlers Peter Norvig and Sebastian Thrun nearly 50,000 people turned in the first assignment.

So in ways that were inconceivable only a few years ago, useful educational materials are spreading across the planet — and the cost of access is declining markedly. However, there is still much work ahead of us and great opportunities to accelerate this access to information.

[**Alexandra Paul**](http://www.alexandrapaul.com/) **Actress (best known for her role as Lt. Stephanie Holden in TV series "Baywatch") and environmental and political activist**

**Problem: Women's rights and gender inequality**I believe we must work to lower the world population to 2 billion people, which was the human population of this planet only 80 years ago.

When the planet is overpopulated, the weakest in society are hurt the most because strained resources go to those with more power.  In many countries, women have very low social status and few rights, but ironically, one of the most efficient ways to stabilize and lower population is to empower women. Today, the biggest barrier to lowering birth rates is gender inequality.  Where girls and women are second-class citizens, where they are taken out of school early, where violence against females is accepted and where women have no say in family planning, birth rates are highest.  When women have no place in society other than to have children and take care of the home, they begin having children at young ages and have larger families.

For every year a girl stays in school she’ll increase her income by at least 10 percent. She’ll get married later. She is more likely to use birth control and will have fewer children, who in turn will be more likely to attend school.

**Solution:**A woman’s status in a society is deeply embedded in its culture; therefore, it is vital that we support programs that influence attitudes toward women.  It is important not to force change, which doesn’t stick in the long run, but to instead transform ingrained belief systems.  The best way to do that is through entertainment — specifically, the soap opera. [Population Media Center](http://www.populationmedia.org/) uses serialized dramas on radio and television to [encourage positive behavior change](http://www.populationmedia.org/what/effectiveness/).

These [shows](http://www.populationmedia.org/what/), which often run weekly for several years, allow time for the audience to form bonds with the characters, who are evolving in their thinking and behavior at a gradual, believable pace.  Each program is first and foremost riveting drama, often taking 60 episodes before messaging storyline is subtly introduced.  For example, Radio Tanzania broadcast a serial drama that attracted 58 percent of the 15- to 45-year-olds in the region. Because of the birth control issues the characters in the program tackled during the course of the show, there was a marked increase in the percentage of Tanzanians in the region who discussed family planning with their spouses and who began to use birth control themselves.  Not because they were forced to, but because they wanted to.

As an actress, I appreciate the power of the media.  But I especially love that soap operas are proving to be one of the most effective tools in lowering birth rates around the world, as Americans have long snickered over this form of entertainment.  Now, however, the lowly telenovela is gaining respect.  "All My Children" may have been canceled, but there's worthy work for Susan Lucci over in Bangladesh.

**John Carr
Executive director of justice, peace and human development of the U.S. Conference of Catholic Bishops**

**Problem: Climate change**Global climate change offers a cruel paradox: The poorest people on earth contribute least to climate change but are likely to suffer its worst consequences since they have the fewest resources to adapt and respond. Climate change with increasing water scarcity, food insecurity, frequency and intensity of natural disasters, migration and conflict over declining resources will exacerbate the challenges felt by people in poverty and a growing world population.

**Solution:**A central moral measure of our response to climate change is how it touches poor and vulnerable people at home and abroad. The U.S. Catholic Bishops encourage Catholics to care for creation and the poor by reducing their carbon footprint, taking the [St. Francis Pledge](http://www.usccb.org/issues-and-action/human-life-and-dignity/environment/), and advocating for climate policies that bring together care for creation and for “the least of these.”

**Robert Engelman
President of the** [**Worldwatch Institute**](http://www.worldwatch.org/) **and the author of the 2008 book "**[**More: Population, Nature, and What Women Want**](http://islandpress.org/bookstore/detailse0a2.html?prod_id=1659)**"**

**Problem: Aging**With 7 billion people of all ages in the world this month and a median age of about 30 we're likely to have several billion people older than 65 late in the century. We have no experience with a vast population of older people like this one will be, and by that time climate change will have advanced significantly — and possibly catastrophically — and fossil fuels are likely to be far more expensive than they are today. The challenge of keeping these people alive and healthy will be vast.

**Solution:**What we should NOT do is try vainly to keep the ratio of young to old constant by attempting to convince women to have more children [than] they want to have. That will just postpone the day of reckoning and make the problem worse by continually enlarging the population of all ages. Better to prepare for this likely future with a focus on preventive health, finding better ways to take advantage of the productive and other assets of older populations, and moving toward simpler and less energy- and resource-intensive lifestyles than today's**.**

**Patrick Tucker
Deputy editor of** [**The Futurist**](http://wfs.org/futurist)**, a magazine about social and technological trends, and director of communications for the** [**World Future Society**](http://www.wfs.org/)

**Problem: Energy**Experts predict that energy demand will double by 2050 and that's a very conservative estimate. As we've reported in THE FUTURIST, petroleum alternatives now comprise less than 20 percent of global energy use and are growing at just 30 percent per year.  By 2020, only 30 percent of global energy is likely to come from alternative energy sources.

**Solution:**As a replacement for oil, halophyte or salt-water alga is abundant, cheap, and has the potential to reduce global carbon-dioxide levels tremendously. Halophyte algae do not compete with food stocks for freshwater (unlike corn). At present, algae need too much nitrogen to be practical as a replacement for oil, but a genetically engineered species of salt-water algae, capable of surviving and growing on less nitrogen than conventional algae, could provide both abundant energy and food.

As covered previously in THE FUTURIST magazine, when the cost of pumping ocean water into so-called "wasteland" regions such as the Sahara is factored in, the cost of halophytic algae biofuel is less than the cost of petroleum trading at $70 per barrel or higher. Desert areas receive a lot of sunlight. That means that halophyte algae farmers could use solar-powered pumps to move water up from sea level. Many of today's water-stressed regions in Libya, Chad, Sudan, western Australia, the Middle East, eastern Africa, the American southwest, and west Texas can become productive real estate.

NASA scientist Dennis Bushnell, (also writing for THE FUTURIST magazine) has pointed out that genetically-engineered halophytic algae could lessen the world's food and water shortages as well. Some 68 percent of the freshwater that is now tied up in agriculture could instead go to growing populations. Even better, algae require only a fraction of the land area of many other crops and can provide an excellent source of protein.


**Aklog Birara
Former World Bank economist and author of "Ethiopia: The Great Land Giveaway"**

**Problem: Water**I believe that rapid population growth in many poorer countries in South Asia, almost all of Africa and Central America is a time bomb. Just take Ethiopia, one of the most emergency food aid countries in the world. Its population today is 90 million and is projected to grow to 278 million by 2050. One least-understood problem about such insane growth is the potential for regional wars to control water resources, for example, war between Egypt and Ethiopia. This will lead to intracountry and regional instability that will in turn reinforce extremist forces and perpetuate poverty and lack of security. Poor and repressive governance in the region and in others aggravates both insecurity and poverty.

**Solution**The most important solution that will avert a disaster is for the world community [to] channel most of its aid and intellectual resources in support of smallholder farming revolutions. Poor people will be owners of their own destiny; they will reduce the propensity to have more children as security and will reduce size. Rural girls and women will be more empowered and will choose their family size.

I also like to suggest that the world can no longer afford to follow the same economic and social model of insatiable demand and consumption and concentration of consumption and wealth in a few hands — a phenomenon that is now spreading in developing countries. I cannot imagine that the rest of the world would tolerate continuation of 20 percent of humanity consuming 80 percent of the world's goods and services, while one-fifth of the poorest consume only 1.3 percent. Is this not what triggered the Arab Spring and is likely to trigger Springs in the rest of, at least the poorer and most repressed countries?

**Vijay Mahajan
Indian social entrepreneur, former dean of the Indian School of Business in Hyderabad, professor at McCombs School of Business at the University of Texas at Austin, and author of "The 86% Solution"**

**Problem: Consumer innovation**My perspective has not changed much since the publication of my last two books ("[The 86% Solution](http://www.amazon.com/86-Percent-Solution-Succeed-Opportunity/dp/0131489070)" and "[Africa Rising](http://www.amazon.com/Africa-Rising-Million-African-Consumers/dp/0132339420)" and the new one that I will finish in the next two weeks, "The Arab World Unbound"). I continue to believe that consumers are going to be in the 86% of the world — where the GDP per capita is less than $10,000. Since 1948, other than Japan, very few countries have managed to be a part of the 14% World (GDP per capita more than $10,000). Some examples include Gulf Cooperation Council countries, Singapore, Taiwan, Israel, South Korea, Slovenia and other Eastern European countries. Brazil and Russia just hit that mark but there are no guarantees that they will continue to be part of the 14%. In fact, since 1948, other than Japan, less than 200-300 million people have managed to be part of 14% World. I do not think this situation is going to change in my lifetime including for China and India — though certain parts may look like 14% there).

**Solution**Rather than looking at the 86% World as Charity (like Africa with more than 1 billion consumers), entrepreneurs and companies need to focus on 86% solutions — be that toilets, housing, diseases, education, women hygiene products, transportation, energy, infrastructure, banking, media, etc. I wish, like COMDEX, where high-tech industry used to showcase its state-of-art products, there would an annual global exhibition where entrepreneurs and companies  from all over the world (both 14% and 86%) showcase their leapfrog 86% Solutions (such exhibitions can be done in the individual countries also). This will accelerate the diffusion of ideas and may even provide an opportunity to investors to bring to the market products and services to meet the aspirations of 7 billion consumers. I believe that many of the 86% solutions will also be good for the 14% world. This will also help us in the U.S. to move away from what I call the "2,400-square-feet mindset" — the average size of the house in the U.S. is 2,400 square feet so our innovation and marketing processes are focused on [a] 2,400-square-foot house with about 1.8 to two persons, on the average, living  in the houses — throw in some pets like a dog or cat. This can also make U.S. companies more competitive and give access to the 86% markets.

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**Population is Not the Problem: Steve Mosher on Seven Billion Reasons to Celebrate**

By Steven W. Mosher

11/1/2011

**Population Research Institute (**[**www.pop.org**](http://www.pop.org)**)**

FRONT ROYAL, VA. (Population Research Institute) - I understand that not everyone is happy that the planet is now home-for the first time-to seven billion human beings.

But what is there not to celebrate?

By nearly every measure of well-being, from infant mortality and life expectancy to educational level and caloric intake, life on Planet Earth has been getting dramatically better.

Take life spans, for example. In 1800, when there were only 1 billion of us, lifespans hovered around 24 years. By 1927, when the world's population is estimated to have reached 2 billion, a person could expect to live into their forties. Today, as we pass the 7 billion mark, lifespans have reached 69 years and are still climbing. As people live longer, naturally there are more of us around at any given time.

Better health care and nutrition, by driving infant and child mortality rates down to extremely low levels, have played a major role in extending human lives.  As late as the 19th century, four out of every 10 children died before reaching age five. Today under-five mortality is under 6 percent and falling.

Despite our growing numbers, both crop yields per hectare and food consumption per capita continue to increase.  World food and resource production has never been higher. Enough food is produced for every person on earth to consume 3,500 calories daily. There is no need for anyone to starve in the midst of this plenty.

As our numbers have grown, incomes have soared. Population may have increased seven times over the past two centuries, but per capita income has more than kept pace, growing a remarkable ninety times from $100 to $9,000. The human race has never been so well off.

Economies continue to expand, productivity is up, poverty is down, pollution is declining and political freedom is growing. So what is there not to like about this picture of prosperity and progress? The human beings themselves, apparently.

Many of the more extreme environmental groups, such as the Sierra Club, see man and nature locked in a kind of mortal combat in which the birth of a baby means the death of a tree, and vice versa.  And they are, I need not remind you, firmly on the side of the trees.

Or the fish.  Like the fellow from the U.K.'s Optimum Population Trust that I recently debated, who said that if we did not control population growth the oceans would be emptied of fish.

I had heard this fish tale before, of course. It goes like this: We are overfishing the ocean commons. Mass extinctions of commercially valuable fish are just around the corner. We will all starve.

In fact, one of Paul Ehrlich's scariest scenarios, from his 1968 book, The Population Bomb, has a hypothetical Environmental Advisory Board telling the American President in 1979 that "the decline in fisheries in both the Atlantic and Pacific is now irreversible due to pollution and recommend[ing] the immediate compulsory restriction of births to one per couple, and compulsory sterilization of all persons with I.Q. scores under 90."

It is not at all obvious to me what the imposition of a one-child policy in the U.S., combined with the forced sterilization of the "unfit," would do to help restore declining fish stocks or avoid mass famine.

But then I don't share Ehrlich's 'blame humanity first' attitude, which leads him to presuppose that the solution to all problems, environmental or otherwise, lies in reducing human numbers.

Even if the ocean fisheries disappeared entirely, it wouldn't matter much in terms of the world's food supply. While fish is an important source of protein, providing 7 percent of the total, it only accounts for a meager 1 percent of the world's calories.

It is true that yields in many of the world's ocean fisheries are no longer increasing. Three-quarters of the world's fish stocks are now fished at, or beyond, sustainable limits. Of the estimated 100 millions tons of fish a year that the oceans can produce, we are already harvesting roughly 95 percent.

But fish in the wild are not the whole story. To satisfy the increasing demand for seafood, entrepreneurs have turned to aquaculture, producing 45 million tons by 2005. This is why, despite the leveling out of the total marine catch, world fish production continues to climb. More importantly, total fish production has increased so much that fish per capita in the late 2000s set new records.

Certainly the wild fish stocks, which "graze" in the vast commons of the oceans, can be better managed to maximize yield.  Establish some kind of ownership rights over the larger, more mobile, and commercially important species, and enforce existing treaties against overfishing and the taking of juveniles.

To save the whales, for example, you should start by reining in the corrupt Japanese commercial fishing industry.

No one would argue that the best way to save the whale population is by forcing the Japanese birth rate-already below replacement-down to even lower levels, even though the Japanese consume all the whales they kill themselves. How much less sense does it make to carry out population control programs in Africa using the same warped more-babies-equals-fewer-whales logic?

As this example suggests, simply reducing human numbers does little or nothing to directly alleviate environmental problems. Population control is neither an effective nor a humane way to protect the world that we live in.

To paraphrase the Pope, the best way to protect the environment is to recognize that Man is an integral part of nature and protect him.



**STATION 5: Contraceptives (pgs 19-22)**

# The Birth Control Solution

###### By [NICHOLAS D. KRISTOF](http://topics.nytimes.com/top/opinion/editorialsandoped/oped/columnists/nicholasdkristof/index.html?inline=nyt-per)

###### Published: November 2, 2011

What if there were a solution to many of the global problems that confront us, from climate change to poverty to civil wars? There is, but it is starved of resources. It’s called family planning, and it has been a victim of America’s religious wars.

Partly for that reason, [the world’s population just raced past the seven billion mark](http://www.nytimes.com/2011/11/01/world/united-nations-reports-7-billion-humans-but-others-dont-count-on-it.html?scp=6&sq=population&st=cse) this week, at least according to [the fuzzy calculations of United Nations demographers](http://esa.un.org/unpd/wpp/index.htm). It took humans hundreds of thousands of years, until the year 1804, to reach the first billion. It took another 123 years to reach two billion, in 1927. Since then, we’ve been passing these milestones like billboards along a highway. The latest billion took just a dozen years.

In 1999, the United Nations’ best projection was that the world wouldn’t pass seven billion until 2013, but we reached it two years early. Likewise, in 1999, the U.N. estimated that the world population in 2050 would be 8.9 billion, but now it projects 9.3 billion.

What’s the impact of overpopulation? One is that youth bulges in rapidly growing countries like Afghanistan and Yemen makes them more prone to conflict and terrorism. Booming populations also contribute to global poverty and make it impossible to protect virgin forests or fend off climate change. Some studies have suggested that a simple way to reduce carbon emissions in the year 2100 is to curb population growth today.

Moreover, we’ve seen that family planning works. [Women in India average 2.6 children](https://www.cia.gov/library/publications/the-world-factbook/fields/2127.html#in), down from 6 in 1950. As recently as 1965, [Mexican women](http://www.un.org/esa/population/publications/completingfertility/RevisedTUIRAN-PARTIDApaper.PDF) averaged more than seven children, but that has now dropped to 2.2.

But some countries have escaped this demographic revolution. Women in Afghanistan, Chad, Congo, Somalia, East Timor and Uganda all have six or more children each, [the U.N. says](http://esa.un.org/unpd/wpp/Sorting-Tables/tab-sorting_fertility.htm). In rural Africa, I’ve come across women who have never heard of birth control. According to estimates from the Guttmacher Institute, a respected research group, [215 million women want to avoid getting pregnant but have no access to contraception](http://www.guttmacher.org/pubs/AddingItUp2009.pdf).

What’s needed isn’t just birth-control pills or IUDs. It’s also girls’ education and women’s rights — starting with an end to child marriages — for educated women mostly have fewer children.

“In times past, the biggest barrier to reducing birth rates has been a lack of access to contraceptives,” [the Population Institute notes in a new report](http://www.populationinstitute.org/external/files/reports/from-6b-to-7b.pdf). “Today, the biggest barrier is gender inequality.”

The seven billion population milestone is also a reminder that we need more research for better contraceptives. One breakthrough is [an inexpensive vaginal ring](http://www.popcouncil.org/projects/115_OneYearCombVagRing.asp) that releases hormones, lasts a year and should not require a doctor. Developed by the Population Council, it has completed Phase 3 trials and seems highly effective. It could even contain medication to reduce the risk of an infection with the AIDS virus.

Traditionally, support for birth control was bipartisan. The Roman Catholic hierarchy was opposed, but Republican presidents like Richard Nixon and George H.W. Bush provided strong support. Then family planning became tarnished by overzealous and coercive programs in China and India, and contraception became entangled in America’s abortion wars. Many well-meaning religious conservatives turned against it, and funding lagged. The result was, paradoxically, more abortions. When contraception is unavailable, the likely consequence is not less sex, but more pregnancy.

Contraception already prevents 112 million abortions a year, by U.N. estimates. [The United Nations Population Fund](http://www.unfpa.org/public/) is a bête noire for conservatives, but its promotion of contraception means that it may have reduced abortions more than any organization in the world.

Republicans are seeking to cut more money from global family planning — which, in poor countries, would mean more abortions and more women dying in childbirth. Conservatives have also sought to slash [Title X Family Planning](http://www.hhs.gov/opa/title-x-family-planning/) programs within the United States. The Guttmacher Institute estimates that in a year these domestic programs [avert 973,000 unintended pregnancies](http://www.guttmacher.org/media/inthenews/2011/02/16/index.html), of which 406,000 would end in abortions.

Guttmacher calculates that these family-planning centers in the United States actually save taxpayers roughly $3.4 billion annually that would otherwise be spent on pregnancies and babies.

Finally, a ray of hope: A group of evangelical Christians, led by [Richard Cizik](http://newevangelicalpartnership.org/?q=node/6) of The New Evangelical Partnership for the Common Good, is drafting a broad statement of support for family planning. It emphasizes that family planning reduces abortion and lives lost in childbirth.

“Family planning is morally laudable in Christian terms because of its contribution to family well-being, women’s health, and the prevention of abortion,” the draft says.

Amen! Contraceptives no more cause sex than umbrellas cause rain.

So as we greet the seven-billionth human, let’s try to delay the arrival of the eight billionth. We should all be able to agree on voluntary family planning as a cost-effective strategy to reduce poverty, conflict and environmental damage. If you think family planning is expensive, you haven’t priced babies.

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###### Op-Ed Columnist

# Poverty and the Pill

###### By [NICHOLAS D. KRISTOF](http://topics.nytimes.com/top/opinion/editorialsandoped/oped/columnists/nicholasdkristof/index.html?inline=nyt-per)

###### Published: May 19, 2010

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KINSHASA, Congo

Emilie Lunda, a 25-year old woman who nearly died during childbirth at a hospital in Kinshasa, had never heard of birth control

Earthquakes are more dramatic. Tsunamis make better television. AIDS is more visceral.

But here’s a far more widespread challenge, one that’s also more fixable: the unavailability of birth control in many poor countries. I’m on my annual win-a-trip journey across a chunk of Central Africa with a 19-year-old university student, Mitch Smith. He won the right to bounce over impossible roads in the region where it’s easy to see firsthand how breakneck population growth is linked to poverty, instability and conflict.

In almost every village we stop in, we chat with families whose huts overflow with small children — whom the parents can’t always afford to educate, feed or protect from disease.

Here in Kinshasa, we met Emilie Lunda, 25, who had nearly died during childbirth a few days earlier. Doctors saved her life, but her baby died. And she is still recuperating in a hospital and doesn’t know how she will pay the bill.

“I didn’t want to get pregnant,” Emilie told us here in the Congolese capital. “I was afraid of getting pregnant.” But she had never heard of birth control.

In rural parts of Congo Republic, the other Congo to the north, we found that even when people had heard of contraception, they often regarded it as unaffordable.

Most appalling, all the clinics and hospitals we visited in Congo Republic said that they would sell contraceptives only to women who brought their husbands in with them to prove that the husband accepted birth control.

Condoms are somewhat easier to obtain, but many men resist them. More broadly, many men seem to feel that more children are a proud sign of more virility.

So the pill, 50 years old this month in the United States, has yet to reach parts of Africa. And condoms and other forms of birth control and AIDS prevention are still far too difficult to obtain in some areas.

America’s widely respected Guttmacher Institute, which conducts research on reproductive health, says that 215 million women around the world are sexually active and don’t want to become pregnant — but are not using modern forms of contraception.

Making contraception available to all these women worldwide would cost less than $4 billion, Guttmacher said in [an important study published last year](http://www.guttmacher.org/pubs/AddingItUp2009.pdf). That’s about what the United States is spending every two weeks on our military force in Afghanistan.

What’s more, each dollar spent on contraception would actually reduce total medical spending by $1.40 by reducing sums spent on unplanned births and abortions, the study said.

If contraception were broadly available in poor countries, the report said, more than 50 million unwanted pregnancies could be averted annually. One result would be 25 million fewer abortions per year. Another would be saving the lives of as many as 150,000 women who now die annually in childbirth.

Family planning has stalled since the 1980s. Republican administrations cut off all American financing for the United Nations Population Fund, the main international agency supporting family-planning programs. Paradoxically, conservative hostility to some family-planning programs almost certainly resulted in more abortions.

The Obama administration has restored that financing, and it should make a priority of broader access to contraception (and to girls’ education, which may be the most effective contraceptive of all).

In fairness, family planning is harder than it looks. Many impoverished men and women, especially those without education, want babies more than contraceptives. As Mitch and I drove through villages, we asked many women how many babies they would ideally have. Most said five or six, and a few said 10.

Parents want many children partly because they expect some to die. So mosquito nets, vaccinations and other steps to reduce child mortality also help to create an environment where family planning is more readily accepted.

In short, what’s needed is a comprehensive approach to assisting men and women alike with family planning — not just a contraceptive dispensary.

Romerchinelle Mietala, a 17-year-old girl in Mindouli, Congo Republic, has one baby and told us that she doesn’t really want another child for now. But she had never heard of contraceptives and, when we explained, was ambivalent. She worried about her status in the village if she didn’t get pregnant again reasonably soon.

“If a woman doesn’t have a baby every two or three years, people will say she’s sterile,” she said.

Another woman in Mindouli, Christine Kanda, said that she is ready to stop now after eight children — two of which have died. But she doesn’t know if her husband will accompany her to the clinic to sign off, and she doesn’t know how she would pay the $1 a month that the hospital charges.

So she may just keep on producing babies.

# The Voluntary Human Extinction Movement promotes the idea of living long and dying out as a species.VHEMT: The case against humans

**STATION 4: In favor of people v. VHEMT (pgs 23-25)**

#### Last Updated: Thursday, September 4, 2008 | 3:58 PM ET

##### By Eve Savory [CBC News](http://www.cbc.ca/news/credit.html)

The Voluntary Human Extinction Movement promotes the idea of living long and dying out as a species. What do humans do for the Earth's biosphere that isn't about humans?

That's the question Les Knight, spokesman for the whimsically titled [Voluntary Human Extinction Movement](http://vhemt.org/), wants you to answer.

When we post stories and features about the environment, climate change, resource depletion and the like, readers sometimes comment that the real issue is people — too many people. And indeed, if [our current numbers](http://www.census.gov/ipc/www/popclockworld.html) are causing problems to humans and nature alike, what will the population the [United Nations projects for the year 2050](http://www.un.org/News/Press/docs/2007/pop952.doc.htm) do to the planet?

One of our commenting readers pointed us to VHEMT (pronounced "vehement").

There are no "members." You express interest by logging on to the forum at [Live Journal](http://community.livejournal.com/vhemt/) or [Yahoo Groups](http://groups.yahoo.com/group/Voluntary_Human_Extinction/) or Facebook. The intentionally childless Knight believes there are several million "volunteers" around the world, although few would have heard of VHEMT.

To be a volunteer means deciding not to have children — but not to avoid messy diapers, runny noses, "he hit me first" and 5 a.m. stints at the local hockey arena. For VHEMT believers it's a decision for the planet, for [species that aren't human](http://www.cbc.ca/technology/story/2008/05/16/species-decline.html), for frogs and lowland gorillas, polar bears and albatrosses.

As one forum poster wrote, "the worst environmental crime any individual can commit is making more people."

Knight, a substitute high school teacher in Oregon, made that decision some 40 years ago. Is he serious? Should humans really try to make themselves extinct?

****We asked.

(Excerpts from the interview with Les Knight of The Voluntary Human Extinction Movement.)

**Les Knight Les Knight:** Yes, we are serious.

If we are to voluntarily go extinct, the very best way would be to simply live long and die out. That is the bumper sticker. We just don't add more [people], and through natural attrition eventually there will be no more of us.

**CBC.ca:** But why? What are you trying to achieve?

**Les Knight:** There are two things.

One is our reproductive choices. The other is homo sapiens place in the biosphere.

The intentional creation of one more human by anyone, anywhere, cannot be justified today, not as long as tens of thousands of children are dying of malnutrition or lack of care, and as long as species are going extinct at a greater number than have at any time in the last 65 million years. And it is all because of us.

**CBC.ca:** What sort of problems are people causing for the planet?

**Les Knight:** Every problem that faces the planet can be traced back to humans and is [exacerbated](http://www.footprintnetwork.org/gfn_sub.php?content=national_footprints) by the number of humans. I don't need to make a list because everyone is well aware that there are many problems facing Earth's biosphere. The more humans there are the greater those problems will be.

We could possibly have world peace if there were fewer of us. We could have more of everything for everyone: Potable water … the air would be cleaner … there would be more room for everyone.

**CBC.ca:** That sounds as if you're saying we don't have to go extinct.

**Les Knight:** We do. Because as long as there is one breeding couple of homo sapiens, we will be right back where we are [now]… We are just incredibly fecund.

**CBC.ca:** What do you think is the likelihood of this happening?

**Les Knight:** Slim or none.

Our involuntary extinction is what we are really working towards collectively. We are eliminating strands from the web of life, we are increasing the weight on that web of life and we keep thinking that it is going to endure, whatever we do to it. And of course it won't.

**CBC.ca:** Your other point was "reproductive choices." Meaning?

**Les Knight:** What we want is to make sure that everyone who doesn't want to reproduce has the [wherewithal](http://www.ippf.org/en/) not to reproduce. Hundreds of millions of couples around the world do not have the means to avoid the pregnancy that they do not want.

In Africa, they can't get condoms. Catholic charities are well established in Africa and so it is difficult for any other charity to get established. And they don't do anything about contraception so they have effectively, just by being there and being established and helping in other ways, prevented other people from coming in.

Without reproductive freedom it doesn't do much good to encourage people not to breed.

**CBC.ca:** That's one reason for the rapid growth in population; what are the others?

**Les Knight:** I think the biggest reason that people reproduce is because they've never considered not doing so. Our culture instills the idea that what we do is grow up and reproduce.

Religion is part of culture and indoctrination is part of both of those.

However … we can take parts of whatever religion we are in and follow those instead of the "be fruitful and multiply" part. We have been fruitful. We have multiplied. Now it's time to move on to other things.

**CBC.ca:** Why not just go for fewer people?

**Les Knight:** That's what we are trying for.

**CBC.ca:** No, you're going for no people.

**Les Knight:** Give me one good reason why homo sapiens should continue to exist — and that good reason would have to be one that does not involve humans. Something that humans are good for other than other humans, something in the biosphere.

**CBC.ca:** That's an interesting question. Maybe we should ask our readers (use the Comment link at the bottom of the page to share your views). So you think humans have no place [in the biosphere] because of the way we breed? Or is there a size of population you think the Earth can handle?

**Les Knight:** The optimum number of people that could be on the planet — optimum meaning you wouldn't be displacing other species — that number is constantly going down because of the damage we are doing to the biosphere.

If we continue to eliminate habitat that cannot recover because there is no adjacent habitat, then even if there were none of us here, our past actions would continue to impact the biosphere.

**CBC.ca:** A colleague asked me why you don't kill yourself.

**Les Knight:** [I get that a lot](http://vhemt.org/suicide.htm).

[It] is a valid question because the premise is a human being cannot be a net positive influence on Earth's biosphere. And if we are detrimental to Earth's biosphere and you care about Earth's biosphere, then you should kill yourself.

**CBC.ca:** So why isn't it valid for you then?

**Les Knight:** Oh goodness, it would kill my mother … And there is enough misery in the world, and I think high death rates cause high birthrates.

It just wouldn't work, besides being immoral. I'm not about to advocate people killing themselves. People die far too young as it is. There is far too much death in the world.

# Men Without Women

**STATION 6: A World without Women (pgs 26-30)**

## The ominous rise of Asia’s bachelor generation.

by [Niall Ferguson](http://www.thedailybeast.com/contributors/niall-ferguson.html)  | March 6, 2011 12:00 AM EST



Children play at a primary school in Fuli, China., Tim Graham / Getty Images

In 1927, Ernest Hemingway published a collection of short stories titled *Men Without Women.* Today, less than a century later, it sums up the predicament of a rising proportion of mankind.

According to the United Nations, there are far more men than women on the planet. The gender gap is especially pronounced in Asia, where there are 100 million more guys than girls. This may come as a surprise to people in the Western world, where women outnumber men because—other things being equal—the mortality rate for women is lower than for men in all age groups. Nobel Prize–winning economist Amartya Sen calls it the mystery of Asia’s “missing women.”

The mystery is partly explicable in terms of economics. In many Asian societies, girls are less well looked after than boys because they are economically undervalued. The kind of domestic work they typically do is seen as less important than paid work done by men. And, of course, early marriage and minimal birth control together expose them to the risks of multiple pregnancies.

When Sen first added up the missing women—women who would exist today if it were not for selective abortion, infanticide, and economic discrimination—he put the number at 100 million. It is surely higher now. For, even as living standards in Asian countries have soared, the gender gap has widened. That’s because a cultural preference for sons over daughters leads to selective abortion of female fetuses, a practice made possible by ultrasound scanning, and engaged in despite legal prohibitions. The American feminist Mary Anne Warren called it “gendercide.” Notoriously common in northwestern India, it’s also rampant in the world’s most populous country: China.

In China today, according to American Enterprise Institute demographer Nicholas Eberstadt, there are about 123 male children for every 100 females up to the age of 4, a far higher imbalance than 50 years ago, when the figure was 106. In Jiangxi, Guangdong, Hainan, and Anhui provinces, baby boys outnumber baby girls by 30 percent or more. This means that by the time today’s Chinese newborns reach adulthood, there will be a chronic shortage of potential spouses. According to the Chinese Academy of Social Sciences, one in five young men will be brideless. Within the age group 20 to 39, there will be 22 million more men than women. Imagine 10 cities the size of Houston populated exclusively by young males.

The question left open by economists is what the consequences will be of such a large surplus of young men. History offers a disquieting answer. According to the German scholar Gunnar Heinsohn, European imperial expansion after 1500 was the result of a male “youth bulge.” Japan’s imperial expansion after 1914 was the result of a similar youth bulge, Heinsohn argues. During the Cold War, it was youth-bulge countries—Algeria, El Salvador, and Lebanon—that saw the worst civil wars and revolutions. Heinsohn has also linked the recent rise of Islamist extremism in countries like Afghanistan, Iraq, and Pakistan to an Islamic youth bulge. Political scientists Valerie Hudson and Andrea den Boer warn that China and India could be the next countries to overdose on testosterone.

That has scary implications. Remember, most of Hemingway’s stories in *Men Without Women* are about violence. They feature gangsters, bullfighters, and wounded soldiers. The most famous story is called simply “The Killers.”

It may be that the coming generation of Asian men without women will find harmless outlets for their inevitable frustrations, like team sports or videogames. But I doubt it. Either this bachelor generation will be a source of domestic instability, whether Brazilian-style crime or Arab-style revolution—or, as happened in Europe, they and their testosterone will be exported. There’s already enough shrill nationalism in Asia as it is. Don’t be surprised if, in the next generation, it takes the form of macho militarism and even imperialism. Lock up your daughters.

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Asia's shortage of brides stirs social upheaval around region

Fewer girl babies and educated women who resist marriage are altering societies

**By Jonathan Manthorpe, Vancouver Sun** October 31, 2011

# China, already short of women, provides 32 to 70 per cent of the foreign brides for the three main wife-importing countries, South Korea, Taiwan and Japan.

As the world's population passes seven billion, there is growing unease in Asia about the social and economic implications of a dramatic shortage of women and a disinclination among educated young females to submit themselves to a life of traditional wifely duties.

The problem of shortages of women is particularly acute in India and China, where cultural preferences for boys - and in the case of China, a vigorously enforced one-child policy - has led to millions of abortions of female fetuses.

Left to itself, nature produces from 104 to 106 boy children for every 100 girls because fewer boys survive childhood.

But sex-selective abortion in India has resulted in 112 boys being born for every 100 girls, and in China the ratio is about 120 to 100. The direct repercussions of this imbalance are bad enough, with at least 30 million Chinese men of marriageable age with no women candidates available. There is a vast criminal industry in China kidnapping women in neighbouring countries like Burma and Vietnam, and even from among the female factory workers in coastal China to sell to womenless men, who tend to be poor peasant farmers.

But this problem is compounded by some abrupt social changes in the rich and developed countries and jurisdictions of Asia such as Japan, Taiwan, South Korea, Hong Kong and Singapore.

There, years of investment in the education and training of girls and young women have produced a generation for which economic independence and career satisfaction have greater appeal than marriage and child-bearing in cultures where male supremacy is still prevalent.

As a result, men in these industrialized countries who can't find willing local women often turn to marriage brokers who for a substantial fee - $10,000 or more - arrange unions with young women from less-developed parts of Asia.

But this trade, which is often the crude trafficking in women with a very thin veneer of respectability, tends to compound the problem of the gap between male and female populations in the developing countries.

For example, by far the largest sources of bartered brides in the Far East are China and Vietnam, which already have major shortages of women of their own.

China provides from 32 per cent to 70 per cent of the foreign brides for the three main importing countries, South Korea, Taiwan and Japan. Vietnam, the Philippines and Thailand are the next largest sources, though Cambodia has also been drawn into the market.

Last year, the Phnom Penh government became so concerned by evidence of Cambodian women being forceably trafficked by unscrupulous brokers that it embargoed international marriages to South Koreans.

A new study of the foreign bride phenomenon in five jurisdictions in Asia done by Soohyung Lee for the Samsung Economic Research Institute in South Korea has found that the practice is growing steadily, and that the economic and social implications for the region are profound.

Lee found that in 1991 fewer than one per cent of brides in South Korea came from foreign countries, but in 2007 that percentage had risen to eight.

Over roughly the same period in Japan the percentage of foreign brides rose from two to five. In Taiwan, the number of foreign brides is 22 per cent and in Hong Kong it is 39 per cent, up from two per cent in 1991.

In both those cases the foreign brides are almost exclusively from China, though since Hong Kong's return to Beijing's sovereignty in 1997 the imported brides are culturally alien rather than technically so.

Lee found that the main reason why there are significant numbers of men in Taiwan, South Korea and Japan who cannot find local brides is the improved education and career opportunities for women.

But because the cultural expectations that they bear the main burden of household management and child rearing have not changed, many women feel they face an either-or choice and opt for their careers.

Lee, an economics professor at the University of Maryland, found that the Asian market in foreign brides is highly interconnected, volatile and easily disrupted, especially by government regulations or other interventions.

From this she speculates that other changes, such as the economic rise of China leading to young women finding acceptably rich husbands at home, may have serious consequences on the prospects for family life of unmarried men in other parts of Asia.

Lee also documents what is often evident: that the imported foreign brides are usually far less well-educated than their husbands.

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# China, already short of women, provides 32 to 70 per cent of the foreign brides for the three main wife-importing countries, South Korea, Taiwan and Japan.

## Photograph by: Frederic J. Brown, AFP, Getty Images, Vancouver Sun

Global list of AIDS cases worldwide:

**STATION 3: AIDS in Africa (p. 31)**

| [**Rank**](http://www.globalhealthfacts.org/data/topic/map.aspx?ind=3&fmt=3&by=Rank&order=d) | [**Country Name**](http://www.globalhealthfacts.org/data/topic/map.aspx?ind=3&fmt=3&by=Location&order=d) | [**Percent**](http://www.globalhealthfacts.org/data/topic/map.aspx?ind=3&fmt=3&by=Data&order=a) |
| --- | --- | --- |
|   | Global | 0.8% |
| 1 | Swaziland | 25.9% |
| 2 | Botswana | 24.8% |
| 3 | Lesotho | 23.6% |
| 4 | South Africa | 17.8% |
| 5 | Zimbabwe | 14.3% |
| 6 | Zambia | 13.5% |
| 7 | Namibia | 13.1% |
| 8 | Mozambique | 11.5% |
| 9 | Malawi | 11.0% |
| 10 | Uganda | 6.5% |
| 11 | Kenya | 6.3% |
| 12 | Tanzania | 5.6% |
| 13 | Cameroon | 5.3% |
| 14 | Gabon | 5.2% |
| 15 | Equatorial Guinea | 5.0% |
| 16 | Central African Republic | 4.7% |
| 17 | Nigeria | 3.6% |
| 18 | Chad | 3.4% |
| 18 | Congo | 3.4% |
| 18 | Cote d'Ivoire | 3.4% |
| 19 | Burundi | 3.3% |
| 20 | Togo | 3.2% |
| 21 | Bahamas | 3.1% |
| 22 | Rwanda | 2.9% |
| 23 | Djibouti | 2.5% |
| 23 | Guinea-Bissau | 2.5% |
| 24 | Belize | 2.3% |
| 25 | Angola | 2.0% |
| 25 | Gambia | 2.0% |
| 26 | Haiti | 1.9% |
| 27 | Ghana | 1.8% |
| 28 | Jamaica | 1.7% |
| 29 | Sierra Leone | 1.6% |
| 30 | Liberia | 1.5% |
| 30 | Trinidad and Tobago | 1.5% |
| 31 | Barbados | 1.4% |
| 32 | Guinea | 1.3% |
| 32 | Thailand | 1.3% |
| 33 | Benin | 1.2% |
| 33 | Burkina Faso | 1.2% |
| 33 | Estonia | 1.2% |
| 33 | Guyana | 1.2% |
| 34 | Sudan | 1.1% |
| 34 | Ukraine | 1.1% |
| 35 | Mali | 1.0% |
| 35 | Mauritius | 1.0% |
| 35 | Russian Federation | 1.0% |
| 35 | Suriname | 1.0% |
| 36 | Dominican Republic | 0.9% |
| 36 | Panama | 0.9% |
| 36 | Papua New Guinea | 0.9% |
| 36 | Senegal | 0.9% |
| 37 | El Salvador | 0.8% |
| 37 | Eritrea | 0.8% |
| 37 | Guatemala | 0.8% |
| 37 | Honduras | 0.8% |
| 37 | Niger | 0.8% |
| 38 | Latvia | 0.7% |
| 38 | Mauritania | 0.7% |
| 38 | Somalia | 0.7% |
| 39 | Myanmar | 0.6% |
| 39 | Portugal | 0.6% |
| 39 | USA | 0.6% |
| 40 | Argentina | 0.5% |
| 40 | Cambodia | 0.5% |
| 40 | Colombia | 0.5% |
| 40 | Malaysia | 0.5% |
| 40 | Uruguay | 0.5% |