

Apocalypse juggernaut, goodbye - population growth - The Global Teenager

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THE ORTHODOX DOGMA for the last couple of decades has been that there is no end in sight for the increase of population of humans on earth. Nearly everyone can draw the generic graph of surging human population rocketing further off the charts, nearing infinity with each passing year. That's the population bomb.

The proposition that in the future we might actually be in for a population fizzle is so unthinkable, so contrary to our common agreement, that it borders on the laughable. What sane or compassionate person could suggest that there is no population problem on earth? Yet when I set out to verify the population statistic underlying the premise for the Global Teenager theory, I found sane and compassionate people holding what could only be called population heresies.

My first alarm came in trying to pin down the exact year in the nineties when the world's population of people under 20 reached 50 percent of the total (see Premise on page 2). It didn't take very long looking at the statistics to see that the sheer number of teenagers in the world will increase dramatically for the next several decades. There will be six million additional teenagers for each year you live.

Further study showed that in the less-developed countries, the ratio of teenagers to non-teenagers often exceeds 50 percent right now, and is due to grow. The numbers from the World Bank and UN pointed to whole countries, like Mexico, where the average age was 15. Here indeed were global teenagers. Literally billions of them. And 90 percent of these kids will be coming of age in the nonindustrialized world. But much to my surprise, as plentiful as they are, the ratio of under-20s to adults taken worldwide is currently only 43 percent, and projected to drop for as long as any demographer is willing to estimate.

The human population on the planet as a whole, then, is aging. Getting older by the minute. The average age of a human citizen on the planet Earth will slowly creep from 23 now to 32 in another 50 years. "Wow! 32, is that old!" said the population expert Carl Haub when he uncovered this statistic for me. "What do you mean old?" I asked him. "Well, we usually associate a median age like that with a very developed country. That's the median age of the US now, and it's an aging society."

Maybe different figures would give a different story. A few phone calls made it evident that almost all worldwide population figures ultimately come from only two sources. No matter who was quoting them, conservative, liberal, scholar, crook, the fountainhead was either the UN or the World Bank. I can't speak for the accuracy of their data, but everyone talking global is playing with the same numbers. The World Bank is more ambitious in publishing projections of where they think population trends are pointed, so the numbers cited below derive from them. In particular I used a new, unpublished Working Paper (#WPS 115, October 1988) from the World Bank for their latest projections as of October 1989.

According to this report, within 35 years (by 2025) the world's birth rate will decline by 10 points (a point is a tenth of a percentage); the death rate will decline by less than 2 points, yielding a fall in the world's annual growth rate from 1.7 percent to less than 1 percent. The rapid decline in birth rates experienced by developed countries will be a worldwide phenomenon. Within the last several months alone, several nations thought to be population basket-cases, Brazil and Kenya, astounded the world with news that their birth rates have been plunging. Especially striking is Kenya, because it has the world's highest birth rate, even counting its decline. When the fastest slow down, we are in for a turn.

At this rate, how long will it take the world to reach global zero population growth? The amazing answer is: 50 years - about 2045. This date, technically called the Replacement Year, or the date when the average woman's fertility will exactly replace herself and her mate, is fairly widely accepted by the various population agencies. But, as these same experts say, it is not rates that crowd the earth, but absolute numbers of people. The date when the actual population of Earth reaches its "peak" of human passengers (called the Stationary Population) does not occur until a century later. The population of Earth then is projected to be 10.8 billion.

The lag between the two stabilization points is due to something called demographic momentum. Absolute population can continue to increase while growth rates are falling because, although reproduction may be merely sufficient to replace the parents, the parents are still around for a generation or two, padding the count. And all the while the reproductive rate is above replacement there is an expanding base that will reproduce. When you are starting out with billions, and you drop the rate quickly, you still wind up with a humongous bulge that has to run itself out. We are riding that wave.

Malthus was wrong. As the granddaddy of population study he was quite right about the population dynamics of animals, but human population behavior is far more complex and slippery because we are so adaptive and meddlesome. Malthus posited that 1) Populations are limited by available food and subsistence resources, and 2) Populations always increase when the means of subsistence increases. Neither of these postulations is true for humans. Because of human ideas, innovation and work, the amount of food has increased as population has increased. There are food surpluses in many nations, and few have true famines. Most famines in recent decades are due to maldistribution of available food. And because humans, unlike animals, deliberately self-regulate their fertility even in primitive societies, population growth does not follow standard of living. There is ample evidence in old times of marriage and childbearing following the patterns of good and bad harvests. And population growth is declining the quickest in societies with the greatest abundance of food/resources, the complete opposite of what Malthus claimed. In fact a better case can be made that an increase in population numbers will increase the availability of subsistence resources.

That's the argument of population heretic Julian Simon, who maintains in *The Ultimate Resource* (p. 51) that population growth has long-term benefits. He traces the variable rate of population growth in the past (ancient Egypt and Babylon were at one time as populous as in the 1960s) and shows how a rise in population is linked to a rise in inventions and innovation throughout history. He goes on to relate the historical and continuing drop in real costs for all resources including energy, and finally argues that the wealth of any society is in its population. People are not drains on the wealth and resources of a nation, but the producers of it. If a person produces more than they consume after society invests in their 20 years of childhood and education, then that person is a net gain -- the more of them, the bigger the collective net gain.

That "if" is a big if that isn't happening in many places in the world at the moment. But it is equally clear to me that Simon is right. High population size, density, and growth rate are currently scapegoats of a mythic dimension. In reality, properly cultivated by institutions that work, hefty populations are the engine of sustainable human advancement.

So where do we put all these people we are supposed to welcome with open arms?

The world's population is estimated to peak at 10.8 billion. That's roughly twice the present world population. What will it be like if we double the world's population density? Right now the earth is peopled at an average density of 100 persons per square mile. Doubling that at our peak makes it 200 persons per square mile. To give you an idea of what breathing space at 200 psm would be like, here are some density figures for countries (in 1989) in persons per square mile: Taiwan, 1,604; Netherlands, 1,031; Japan, 857; Belgium, 841; Germany, 640; France, 266; Indonesia, 251; Kenya, 107; Ethiopia, 105; Nicaragua, 70; USA, 69. At the peak of the earth's population bulge its average density would be equivalent to the current population density in modern Greece.

Of course, nowhere is population spread out evenly to an "average" thickness. According to a recent Sierra Club report, about one third of the Earth's land mass remains in wilderness. While that wilderness could potentially hold newcomers, it's mostly hostile to habitation -- tundra, polar regions, swamps, and deserts -- and so will probably remain uninhabited.

Most likely the new population will follow the pattern we already see. They will settle in the cities. The countryside will produce more food with about the same number of people (and in many cases with less people), while the cities swell. Small cities will become large. Large cities will blossom into huge cities. And huge cities will mushroom into megacities.

According to Peter Calthorpe and other progressive urban planners, a city can be the most environmentally innocuous place to live. A city with mass transit, multi-family dwellings, and active recycling systems would be the most

environmentally efficient place to put a human. Japan and Holland have proved that high-density urban living can be high-quality living. Most cities outside of America, particularly in developing countries which have no choice but to be resourceful, are far closer to an ideal than our cities are. They are already intensely recycling, while we are not.

Simply put, the worry in the future will not be planetary elbow room. The worry is that these global newcomers will abandon their sensible ways and adopt the wasteful practices of America. If they do that, the world's population of automobiles will grow at a rate four times the growth rate of people. Several observers have noted that an American does not really consume significantly more raw resources than an Asian peasant, if said American does not own a car. It's the automobile population bomb we should be worried about, which will guzzle resources for its fuel, roads, construction, support, and burial, if we let it. My own experience of global teenagers (and the results of their attitudes about cars in our survey confirms the same) suggest that they are wiser than that, and thus wiser than we are.

Yet as futurist Peter Schwartz has pointed out, even if recycling, cities, and transit ran at 95-percent efficiency (and they don't, but that's about the highest that one could expect) there is still 5 percent waste and entropy that we depend on the Earth's environment to absorb. No one knows the renewing capacity of the Earth now, nor whether it could handle the least of our wastes at the level of 10 billion. On the other hand, early Dutch travelers to Java in Indonesia found it "crowded with the unemployed" to the point of sinking and were flabbergasted that the island could hold as many as it did, 4 million. It now holds 113 million, and visitors are equally flabbergasted, but holding their tongues.

I don't think our journey to 10 billion will be rosy. I have no doubt that 10 billion will leave the face of the earth changed as much as the last 4 billion have. I've lived in the thick human soup that is the city of Calcutta and try to keep it in mind as I write all this. So I agree with Michael Ventura who writes that this coming period will be our Age of Endarkenment (see page 44). It will be a century of blind re-ordering, erasing the past, scary rites of passage, vague glimpses of new things, and strong emotions but No Answers. He calls it the world's adolescence. A potentially dark time between childhood and adulthood when one tries to figure out who one is. In this case the "one" is the collective human life on Gaia. And it seems certain this dawning started in the 1960s.

That date sparked something in me so I went back to my population statistics. I asked the Population Reference Bureau, the non-profit agency that supplies organizations such as World Watch with population analysis, to chart the median age of the earth's human population as far back and as far forward as they could. This is what they came up with:

The day of the Global Teenager is not someday in the future. It has already begun. The apex of human youthfulness in this cycle of history was the legendary period between 1965 and 1970. The zest, excess, rebellion, and animus that we associate with sex, drugs, rock'n'roll, and student revolutions around the world were the first rush of hormones in the global teenager. It first erupted like a rash in the West and is now spreading worldwide. It won't leave until every cell of human culture has undergone its baptism.

Most importantly this Coming of Age is a closing -- childhood's end. Management guru Peter Drucker says that there are passes much like geographical ones that divide one watershed of political and social landscape from the next, and that sometimes in the course of time, the world eases over a gentle rise of land and passes the divide without even noticing it. In his most recent book (*New Realities*, 1989) he says, "Sometime between 1965 and 1973 we passed over such a divide and entered 'the next century.' We passed out of creeds, commitments, and alignments that had shaped politics for a century or two. We are in political terra incognita with few familiar landmarks to guide us." Francis Fukuyama, a deputy director at the U.S. State Department, is bolder. In a very provocative think-piece ("The End of History?" in *The National Interest*, Summer 1989) that was widely discussed in foreign-policy circles, he says we are entering a period that heralds "the end of history" in an ideological sense. He exaggerates, of course. But the spirit of his paper follows "the age of endarkenment." When a child enters puberty, the laws of childhood are no longer a sufficient guide to forming her new identity; as the world enters global adolescence, its previous history becomes inadequate for the invention of its new self. At this edge in history, looking back won't tell us what to replace our old identity of "nation" with. We look forward into an unlit teenage whirlwind.

Adding to the tempest of this storm is the curious phenomenon called "high adolescent density," the observation that when the number of youth in a society overshadows the number of mature adults, kids have no role model except other kids in the same boat. Call it the Lord of the Flies syndrome. Anything can happen, and whatever does happen

forms the psychological basis for the rest of that generation's life. In the long run, the most important thing about global teenagers is that, like the baby boom in America, their character will be the main event of world culture long after they outgrow pimples.

As many have pointed out, teenage adolescence is a modern invention (first introduced in 1904). In ancient times a person passed from child to grown-up through a rite of passage that lasted at most several weeks. In contemporary times, a person passes into perpetual rites of passage that have become their own domain -- teenagism. Teenagism seems to feed on middle-class nutrients, first appearing whenever and wherever a middle class sprouts. In America -- history's first society to be dominated by a middle class -- we have the first culture dominated by teenagism. Extended teenagism, actually, since teenage perspective and lifestyle in the US start at 10 and continue to about 35 years old.

As the world's developing countries enter a period of "demographic transition," shifting from a two-tier culture (child/adult as well as lower/upper class) to a three-tier one (add adolescence and middle class) they become ripe for ideas on how to behave in this new context. One of the most infectious ideas is America's chief export: How To Be A Teenager.

It's not all Levi's jeans, Coca-Cola and Michael Jackson. It's also about exploration, trying stuff, not believing the past, increasing mobility, employing irresponsibility sometimes, flexing muscles, being preoccupied with self, allowing brilliance, and channeling highways of fresh energy into never-before risks. In short, the global teenager is in charge of making up our new identities as he goes along. The answers to the questions we aren't asking yet will come from someone who is just a kid in Sri Lanka or Brazil.

My readings in demographics have made it very clear that the worst weather forecast is more accurate than population predictions have been in the past. In the 1930s, when US birth rates were nosediving steadily, no demographers forecast the sudden boom in babies in the '50s, and none forecast the boom's equally sudden demise. Merely twenty years ago, at the height of the population-bomb scare, Paul Ehrlich and friends were loudly predicting a US population of 400 million in the year 2000. (Stop having babies, please!) Even while they were shouting, the US was headed into a birth dearth. Without immigration, it would be losing population soon. To many people's surprise population decline has hit other countries as well. Germany and Hungary struggle politically about what to do about very low birth rates, while child-poor Singapore charges ahead and offers state-financed dating exchanges to boost marriage rates and kids. More countries could very easily be at the threshold of stationary populations with modest drops in growth rates. Like mortgage payments, small reductions now can reduce the final tally enormously.

I'll take my chance and make this prediction: During the coming century, the issue will not be explosive population, but the problems brought by receding populations. Environmental issues will remain, but they will eventually feel the new political pressures of low birth rates (fewer laborers, aged and infirm population, overall less robustness in solutions). We'll live through an entire planet full of teenagers, somehow. When they are much older they will fill up the world with Global Geezers. They may rightfully wonder who is going to take care of them when they're 64. All will marvel at the hysterical and supersitious belief in the late 20th century of a runaway population monster that was going to gobble up the world.

But since I'm a rank amateur heretic, I'll hedge my bet with an alternative scenario, more in keeping with the times. On the following three pages, R. Crumb, one of this generation's greatest iconoclasts and no man's fool, revs up the projectors and show what it'll be like if I am wrong.

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