

# DEMOCRACY CANNOT SURVIVE OVERPOPULATION

Albert A. Bartlett

Professor Emeritus

Department of Physics

University of Colorado at Boulder, 80309-0390

Albert.Bartlett@Colorado.EDU

## ABSTRACT

This article addresses increasing concerns about the decline of democracy at all levels of government. It is shown that overpopulation and technology are major causes of this decline. Because it would be unwise to try to stop the development of technology, it is all the more urgent that we move quickly to address the problems of overpopulation.

## INTRODUCTION

We sometimes read the angry statements of citizens who claim that democracy in the United States is being willfully destroyed by evil and sinister public servants. It is easy to share the frustration that these citizens feel, because our lives each year are becoming more regulated and more crowded, our individual freedoms are diminishing, and individually, we seem to be less and less able to affect the flow of the events that diminish our freedoms.

But is this loss of freedom the result of willful actions of our public servants? Probably not. But the loss of freedoms is due in part to negligence of public officials, and this negligence may or may not be willful.

One can see two main causes of this diminution of our freedoms: technology and overpopulation.

## TECHNOLOGY AND REGULATION

Technology has given us amazing new ways to annoy each other. These technological "aids to annoyance" range from cans of spray paint, to automobiles, to electronic megaphones, to high speed jet aircraft. One person with a can of spray paint can vandalize buildings; an act that annoys a few people. One careless person driving a car at high speed on a freeway can trigger a chain-reaction collision that involves dozens of cars. Electronic megaphones allow one person to annoy hundreds of people, and a high speed jet aircraft in supersonic flight over the crowded eastern seaboard of the U.S. can generate a sonic boom that affects millions of people.

It is necessary to regulate each new technology that enhances our ability to annoy others. Since science and technology have been characterized as the "endless frontier," (Bush 1960) we can expect that we will see an endless progression of new regulations which become necessary to permit society to cope with the consequences of an unending series of annoying new technologies.

## OVERPOPULATION AND THE LOSS OF DEMOCRACY

Let's look at the loss of democracy that results from overpopulation. Here is a portion of an interview that the prominent journalist Bill Moyers conducted with the eminent scientist and science writer, Isaac Asimov: (Moyers 1989)

Bill Moyers: "What happens to the idea of the dignity of the human species if this population growth continues at its present rate?"

Isaac Asimov: "It will be completely destroyed.  
I like to use what I call my bathroom metaphor:  
If two people live in an apartment, and there are two bathrooms,  
Then both have freedom of the bathroom.  
You can go to the bathroom anytime you want,  
Stay as long as you want, for whatever you need.  
And everyone believes in Freedom of the Bathroom;  
It should be right there in the Constitution.

But if you have twenty people in the apartment and two bathrooms,  
Then no matter how much every person  
Believes in Freedom of the Bathroom, there's no such thing.  
You have to set up times for each person,  
You have to bang on the door, 'Aren't you through yet?'  
And so on."

Asimov continues with what could be one of the most profound observations of the 20th Century:

"In the same way, democracy cannot survive overpopulation;  
Human dignity cannot survive [overpopulation];  
Convenience and decency cannot survive [overpopulation];  
As you put more and more people into the world,  
The value of life not only declines, it disappears.  
It doesn't matter if someone dies,  
The more people there are, the less one individual matters."

#### EXAMPLES

Here are two examples to illustrate the point that Asimov makes so eloquently, namely that democracy cannot survive overpopulation.

Article I of the Constitution of the United States, (1790) describes the House of Representatives, and says that "The number of Representatives shall not exceed one for every thirty thousand..." In the year 2000 there are over 600,000 persons per member of the U.S. House of Representatives. Thus in 210 years we have seen democracy at the national level being diluted by a factor of approximately  $600,000 / 30,000 = 20$ . From these figures one can estimate (Bartlett 1993) that since the founding of the United States, the average rate of loss of democracy at the national level has been about 1.4% per year.

Indeed, in the year 2000, the population of the United States is growing at a rate of about 1% per year, but the number of members of the U.S. House of Representatives remains constant at 435. Thus one can say that, as we start the 21st Century, the rate of loss of democracy at the national level in the United States is about 1 % per year.

A similar loss also occurs at the local level. In 1950, the population of Boulder, Colorado was approximately 20,000. In the year 2000 the population of Boulder is approximately 100,000. Throughout this period from 1950 to 2000, the

size of the elected Boulder City Council has remained constant at 9 persons. So in 50 years, democracy in Boulder has been diluted by about a factor of five. This corresponds to an annual loss of democracy at the local level of approximately 3.2 % per year averaged over the last 50 years. (Bartlett 1993)

We can generalize and state a fundamental law:

In a political subdivision that is governed by an elected representative body of unchanging size, the rate of decline of democracy is approximately equal to the rate of growth of the population of the subdivision.

#### CAN YOU SPEAK TO YOUR ELECTED REPRESENTATIVES?

The ideal democracy is perhaps the New England Town Meeting, where every citizen is expected to participate in the debates and decisions. As towns become larger, elected representatives carry out many of the functions of governance, and citizens can usually address the governing body. As the towns become cities, citizens who want to address the governing body must sign up in advance of the meeting and then confine their comments to a three-minute period whose end is signaled by a loud buzzer or a flashing light. For the largest domestic governing body, the U.S. Congress, citizens can testify before a committee if they are invited, and addressing the whole Congress is an honor reserved for a few visiting heads of state. At the global level, a powerful governing organization such as the World Trade Organization (WTO), is so large and so remote that ordinary citizens have no input. The objectionable actions of the WTO and the complete absence of participatory democracy in the WTO led to the recent "Battle of Seattle" in early December 1999.

#### POPULATION GROWTH AND REGULATIONS

The actions of local public bodies to establish zoning and land-use regulations such as urban growth boundaries, are driven by population growth, yet these actions, which are made necessary by population growth, are clear infringements of individual freedoms. People, angered by these losses of freedoms, advocate passage of "Takings Laws" in an attempt to stem the loss of freedoms, but unfortunately neither the takings laws nor their advocates make any recognition of the fact that it is population growth which triggers the actions that take away our treasured freedoms. Ironically, the persons who complain most loudly about these losses of freedom are often those who advocate continued population growth for the self-serving reason that they profit personally from it. People's eagerness to profit from population growth is beautifully explained in Garrett Hardin's essay, "The Tragedy of the Commons." (Hardin 1968)

#### LOSS OF FREEDOM BY BOTH TECHNOLOGY AND POPULATION GROWTH

The loss of freedom that follows gun control is a hotly debated issue. We can see that both technology and population growth play roles in this loss of freedom.

Two hundred years ago one could have had an artillery piece at the site that is now downtown Boulder, Colorado, and one could have fired it in any direction at any time as often as one wished. The range of the gun was so small, the time required to reload it was so long, and the population density here was then so low, that there was little chance that random repeated firings of the gun in any direction would hurt anyone.

But now technology has given us guns with greater range, which can be reloaded and refired automatically in a fraction of a second. The population density in Boulder is now so high that there are always lots of people within the range of a gun. Consequently we have to have regulations to the effect that it is illegal for individuals to fire artillery in Boulder. Another freedom has fallen victim to population growth and to advances in technology.

Because of the present high population density, the gun situation is one where people lose freedoms no matter what happens in terms of gun control. If guns are controlled, those who oppose control have lost their freedom to have unrestricted access to artillery. If guns are not controlled, those who wish to live safely in a non-violent society have lost this freedom.

The total cost of the present lack of gun control is enormous. The headline said, "America 'in trouble' Violence Panel Warns." (Lichtblau 1999) The article said that a new report:

"...issued by the Milton S. Eisenhower Foundation... said violence is much more prevalent today than 30 years ago, and the odds of dying in a violent crime remain much higher in the United States than in almost any other industrialized nation. In part, the report suggested, this is because the number of firearms has doubled to nearly 200 million - many of them high-powered easily concealed models 'with no other logical function than to kill humans.'"

Bearing on Asimov's observation that:

"... human dignity cannot survive overpopulation;  
convenience and decency cannot survive overpopulation..."

is the statement in the report:

"Prisons have become our nation's substitute for effective policies on crime, drugs, mental illness, housing, poverty, and employment of the hardest to employ."

#### OVERPOPULATION AND CAMPAIGN FINANCE REFORM

The widespread concern about campaign finance reform is a reaction to the perceived decline of democracy, in which power is shifted from the many to the powerful few who use their wealth to buy influence in the halls of our "democratic" government. One of the reasons for the increased role of money in politics is the dilution of democracy which results from overpopulation. As has been shown, overpopulation causes a decline in the role of the individual in participatory democracy. The consequent partial political vacuum leaves the way open for an increase in the role of dollars in democracy. Politicians like to talk to people, but because of overpopulation, they can't talk to everyone. So they talk to a few, a self-selecting small group of wealthy and influential people. Because of this dilution, the old statement, "One person, one vote," is now being replaced by "One dollar, one vote."

#### DESTRUCTION OF DEMOCRACY BY THE PRIVATE SECTOR

Powerful forces in the private sector in our communities use population growth as an excuse to find more effective ways to destroy our democracy. In an article, "Western Cities Grapple with Rapid Growth," (Parker 1999) we read that "In Scenic Colorado Springs, Groups Battle Builders to Preserve Lifestyle." The story tells how the real estate developers are battling "community groups [that are] concerned about preserving the natural beauty of their surroundings." The second paragraph of the story in the Wall Street Journal quotes one of the Colorado Springs builders as follows:

"...local officials have allowed community groups to hijack the development process. Neighborhood groups 'shouldn't be in control of what happens,' he says. 'You can't be an elected official and let people dictate the law of the land.'" Wealthy influential developers are good at getting pretty much what they want from public officials, so when citizens organize to protect themselves from the rapid degradation of the environment that is the consequence of the continued population growth and development, it is said that the citizens are "hijacking" the development process. In Colorado Springs, the pressure for continued population growth is so intense that a local leader in the private sector is saying that we can no longer "let people dictate the law of the land."

#### LIBERALS vs. CONSERVATIVES

The liberal philosophy of government suggests that the government, under the guidance of "experts," should do more to control the flow of events, while the conservative philosophy suggests that government should do less. Although the

person who said it would probably claim to be a conservative, the suggestion that we can't "let people dictate the law of the land" presents a profoundly liberal point of view, both from the advocacy of governance by an elite few, but also as an implied expression of the belief that population growth is no problem, that resources are so enormous that there is no need to reduce consumption or to conserve. In contrast, true conservatives (who are usually called liberals) worry about the effects of population growth, they practice conservation, and they advocate a reduction of our consumption of resources so that some resources are saved for our children and grandchildren.

It should not be surprising that the traditional political labels of "liberal" and "conservative" are reversed in a world where powerful people seem to be happy with continued population growth and the resulting overpopulation.

An exception to this reversal of labels is Fred C. Ikle, who is a bona fide political conservative, having served as an undersecretary in the Reagan administration. Ikle argues (Ikle 1994) that "It is the unintended consequences that these conservatives ignore [when they argue for more population growth]," and he points out that more growth results in more government and more governmental regulations. Writing as a political conservative, Ikle summarizes his arguments with these words:

"Population growth is the paramount, the most elemental anti-conservative force. It unleashes a flood of social change that will cascade onto every level of society. It creates irresistible pressures for farflung, and usually irreversible government interventions, allegedly to cope with all the social changes that rapid population growth has unleashed. It thus helps the radical left to garner political support for its social engineering schemes. It dilutes the reach of religious institutions that seek to preserve society's moral fiber. It empowers the unprincipled and the rootless to tear down vastly more civilizing tradition and riches of culture than they will ever create."

#### POPULATION GROWTH AND TECHNOLOGY

The main things that are robbing us of our democratic freedoms are continued population growth and the advancement of technology. The advance of technology has redeeming features: it contributes to higher quality of life for those who are able to afford the latest technological devices. In contrast, population growth has no redeeming features, yet, as our political leaders struggle to find solutions to the problems caused by population growth, they neglect to identify population growth as the cause of the problems. Even more distressing is the fact that the watchdogs of the Free Press seem never to speak out about this neglect.

The lack of redeeming features in population growth is illustrated by the following challenge: (Bartlett 1997)

Can you think of any problem  
On any scale, from microscopic to global,  
Whose long-term solution is in any demonstrable way,  
Aided, assisted, or advanced,  
By having larger populations at the local, state, national, or global levels?

Even more important, population growth is not sustainable, (Bartlett 1994) yet the sustainability gurus provide glib recipes for sustainability that talk about everything except overpopulation.

#### CONCLUSION

It is a shame that those who are most vocal about their loss of freedom almost invariably blame the loss on alleged conspiracies of persons in government. Our loss of freedoms are probably not the result of actions of evil people who are plotting the demise of democracy, but rather are due to negligent people in government (and it's nearly all of them) who willfully ignore the problem of overpopulation and the destructive consequences of this negligence. When people

are denied their rights to participate in the decisions that affect their lives, they are predictably unpredictable, and history is full of examples of violence that has been precipitated by those who feel they have been disenfranchised. Such are some of the costs of overpopulation.

Thus, several lines of evidence point to population growth as being a major causal factor in the decline of democracy in the United States, yet, as Garrett Hardin observes: (Hardin 1993)

"No one ever blames it on overpopulation."

#### ACKNOWLEDGMENT

I no longer remember who it was that called my attention to Bill Moyers' interview with Isaac Asimov, but I am deeply grateful for his calling this important text to my attention.

#### BIBLIOGRAPHY

Bartlett, A.A., 1993: For a tutorial on the calculation of these average growth rates, see:

A.A. Bartlett, "The Arithmetic of Growth, Methods of Calculation"

Population & Environment, Vol. 14, March 1993, Pgs. 359-387

Bartlett, A.A., 1994 "Reflections on Sustainability, Population Growth and the Environment"

Population & Environment, Vol. 16, No. 1, September 1994, Pgs. 5-35

Reprinted in:

Renewable Resources Journal, Vol. 15, No. 4, Winter 1997-1998, Pgs. 6-23

Bartlett, A.A., 1997, "Is There a Population Problem?"

Wild Earth, Vol. 7, No. 3, Fall 1997, Pgs. 88-90

Bush, Vannevar, 1960, "Science, the Endless Frontier: A Report to the President on a Program for Postwar Scientific Research"

United States: Office of Scientific Research and Development

Hardin, Garrett, 1968, "The Tragedy of the Commons"

Science, Vol. 162, Pages 1243-1248

Hardin, Garrett, 1993, "Living Within Limits", Oxford University Press

Much of this book is devoted to documenting the lengths to which people go to deny that overpopulation is a problem.

Ikle, Fred Charles, 1994, "Our Perpetual Growth Utopia,"

National Review, (Cover Story) Vol. 46, March 7, 1994, Pages 36-44

Reprinted in Focus, (Carrying Capacity Network, Washington, D.C.)

Vol. 4, No. 2, 1994, Pages 13-17

Lichtblau, Eric, "America 'In Trouble' Violence Panel Warns"

Denver Post, December 6, 1999, Page 1A

The byline identified the author as writing for the Los Angeles Times

Moyers, Bill, 1989: "A World of Ideas" Doubleday, New York City 1989, Page 276

Parker, V.L. 1989, "Western Cities Grapple With Rapid Growth"  
Wall Street Journal, September 22, 1999, Page B14