

# AWAKENING FROM THE AMERICAN DREAM

The Social and Political  
Limits to Growth

Rufus E. Miles Jr.

# AWAKENING FROM THE AMERICAN DREAM

The Social and Political  
Limits to Growth

Rufus E. Miles Jr.



Universe Books  
New York

Published in the United States of America in 1976  
by Universe Books  
381 Park Avenue South, New York, N.Y. 10016

© 1976 by Rufus E. Miles, Jr.

80 81 82 83 / 10 9 8 7 6 5 4 3

*All rights reserved. No part of this publication  
may be reproduced, stored in a retrieval system, or  
transmitted, in any form or by any means, electronic,  
mechanical, photocopying, recording, or otherwise,  
without the prior permission of the publishers.*

Library of Congress Catalog Card Number: 76-34516

Cloth edition: ISBN 0-87663-274-6  
Paperback edition: ISBN 0-87663-940-6

Printed in the United States of America

To Nelle  
and Bobbi and Mary and Joe  
and Jessica and Molly

# *Preface*

This book is a work of disturbing cogitation. It did not start out to be what it ended up by being. Nor is the author quite the same person after putting his ideas through a systematic examination as to what seems possible and feasible within the context of what we know about human behavior. Important as may be an optimistic and idealistic view of human possibilities, an excessive degree of faith in the innate goodness of humankind is often the prelude to discouragement and cynicism. A careful assessment of those basic forces most likely to be dominant in shaping the future seems requisite to self-preparation for the world of tomorrow. If such an assessment should run contrary to parts of one's cherished beliefs, it is much easier to dismiss it than to re-examine the soundness of the belief. I ask only for an open mind on the part of the reader, knowing from experience how hard that is to achieve. The more it is achieved, though, the more evident it will become that much of our traditional ideologies—both liberal and conservative—demand reconsideration and reformulation.

For contributions to my thinking, I am indebted to more people than I can acknowledge. Though their names do not appear, I thank them. For helpful criticism of my manuscript, I am deeply in the debt of Junius J. Bleiman, Lester R. Brown, Lynton K. Caldwell, Lester V. Chandler, Rowland Egger, Tomas Frejka, Gerald Garvey, Robert Gilpin, M. King Hubbert, and Robert W. van de Velde. And to Alan Gelperin I am most grateful for a helpful bit of research. For any errors that remain, I accept full responsibility. To Scott McVay, I owe a very special word of thanks for his enthusiastic support of my project. I am also much in the debt of William Watts for wise counsel and Barbara Grindle for her competent typing of my manuscript. And for its editing, I owe much to the skill and pencil of Arnold Dolin. Most of all, I am forever grateful to my patient and loving wife for her support and assistance in more ways than can be mentioned.

All arrogance will reap a harvest rich in tears,  
God holds men to a heavy reckoning  
For overweening pride.

—Aeschylus

I 712.45

R E M

# CONTENTS

Preface	ix
Introduction	1
I. Recession, Depression, or the End of a Two-Century Boom?	7
II. The Fortuity of American Affluence	21
III. The Closing of the Second Frontier	45
IV. The Internal Vulnerabilities of Modern Technological Society	62
V. The Chasm Between Rights and Responsibilities	76
VI. The Centrifugal Social Effects of Energy	89
VII. The Energy Trap: The Search for a Way Out	104
VIII. The Ethics and Politics of Nuclear and Solar Energy	121
IX. Human Procreation: A "Right" Without Social Responsibility	136
X. The Ethics and Politics of Food	152
XI. The Political Limits to Human Interdependence	170
XII. The Limits to the Political Management of Nature	191
XIII. An Upheaval in Religion, Ethics, and Ideology	208
XIV. A Profound Turning Point	223
Reference Notes	237
Index	244

# Introduction

The confident belief in unending economic and social progress as a natural condition of free men has been almost a secular religion in America. The seeds of this blend of thought and faith sprouted during the Enlightenment and were fertilized by the new scientific spirit, but only the reality of a living, growing example of such a magnetic concept could convince skeptics that it might be true. That example began with the formation of the United States of America and lasted for nearly two centuries, a more than respectable period as historians count the survival of political experiments. But many thoughtful Americans have begun to wonder whether there is anything natural about the idea of continuous progress. The economic and social development of the United States over the last two centuries might better be characterized as extraordinary, fortuitous, and nonsustainable.

Increasingly, during the 1970s, Americans have shown skepticism about the inevitability and even the desirability of continuing physical growth, supposedly the touchstone of what is left of the free-enterprise system. The adverse side-effects of the American high-consumption, high-waste economy began to trouble a significant and articulate segment of the American public in the late 1960s. Then, in 1972, a report (prepared by Donella and Dennis Meadows, Jørgen Randers, and William W. Behrens III), for the Club of Rome's Project on the Predicament of Mankind, *The Limits to Growth*, captured the attention and imagination of an enormous audience. (Hundreds of thousands of copies were sold in the United States, and nearly two million abroad.) The book's sensational doomsday warning seemed to strike a responsive chord—almost untouched by any previous work—in the strong intuitive feelings of many thoughtful citizens that the end of the era of dependable economic growth and high-energy affluence might be nearer than supposed by economic analysts and forecasters.



Perhaps this corroboration by computer technology explains the book's extraordinary acceptance. For its computer printouts indicated that it was impossible for exponential growth to continue at past rates for very much longer. In the "World Model Standard Run," four of the five principal variables—resources, food per capita, industrial output per capita, and pollution—showed crash curves early in the 21st century, and the crash of the fifth—population—was to come shortly thereafter, in mid-century. Such a doomsday scenario—if recent trends continued—was promptly pooh-poohed by most economists, many of whom felt that various adjustments—substitute and recycled materials, new energy sources, better systems of pollution control, improved agricultural production, and the like—would prevent any such debacles as those projected by the authors. The controversy was joined: The discussion stimulated by the book generated other books and a host of articles, and the dialogue concerning the limits to growth seems likely to go on in varying forms for at least the rest of this century.

Although my book was conceived and begun before *The Limits to Growth* was published, it now becomes part of this debate about how much longer the growth trends of the past can be sustained—or would be healthy even if they could be sustained. My perspective is very different from that of *The Limits to Growth*, though. It springs from the conviction that the most significant limits to growth are buried deep within the human psyche and are not yet susceptible of quantification and computerization. They are limits set by the already overstrained capacity of human beings to conceive, design, manage, support, and adapt to extremely complex systems of human interdependence. In short, it is the political limits that are likely to constrain the continuity of physical growth well ahead of all other factors. The United States and other members of the world community are now pressing against their political limits and will find it increasingly difficult to take actions that would be required to assure continuing growth. Affluence, my analysis concludes, may already have reached its zenith and if it has not, that point is probably much nearer than the Club of Rome study indicated.

In a sense, the slowdown that has already occurred and will continue in varying degree far into the future is a fortunate development for the next two generations. The crash curves projected in *The Limits to Growth* for the first half of the 21st century were precipi-

tous because of the expected rapid buildup before the collapse. Recent rates of growth were assumed to continue for several decades until they created unsustainable conditions; excessive physical growth, it was conjectured, would thus create the preconditions for catastrophic declines. If physical growth slows down and comes to an end well before the end of this century, as I project, then the crash curves need not come about. Such a slowdown was advocated by the authors of *The Limits to Growth*. In any event, the lurching that will occur as we round the sharpest turn in recorded history at a reckless speed is bound to produce severe strains.

It is a basic premise of this analysis that the only way we can speculate usefully about the most probable course of the future is to try to understand those dynamics of the past which have been especially influential in shaping the present. Only after attempting to understand the behavior of the forces that have shaped modern civilization is it useful to try to establish tentative hypotheses about how those forces are likely to behave in the future. A major part of this book, therefore, is devoted to that purpose.

It is obviously impossible to analyze all of the significant determinants of the present and future. One can only select those that, from one's perspective, seem to be the most basic and decisive. Influences that are not addressed here are far more numerous than those that are, and some will no doubt turn out to be more important than this set of conjectures anticipates. Nevertheless, if we are to prepare ourselves psychologically for what lies ahead, it seems desirable to seek to comprehend what appear now to be the most basic forces affecting our lives. It is to that purpose that this book is devoted.

The analyses in this book proceed from the assumption that there will be no nuclear holocaust foreclosing a future for mankind in the 21st century—none too solid an assumption. Whether humankind will be able to avoid self-annihilation is chancy. Our greatest hope lies in a generational change of political and military leaders the world over, ushering onto the international stage a group that should be more disillusioned about the benefits of war in relation to its costs than any of its predecessors. For only a new generation of leaders, uncommitted to anachronistic diplomatic and military strategies of the pre-nuclear age, can have any chance of breaking out of that mental prison.

The sequence of chapters in the book deserves explanation. The

theory I am seeking to formulate resembles a seamless web rather than a mathematical theorem: All the strands of evidence and logic are connected to all others, and it is difficult or impossible to proceed in the style of a linear argument from start to finish. It is necessary to describe one quadrant of the web and then another, and finally the pattern of the entire web emerges.

The first three chapters deal with the origins and future prospects of American affluence—the intention being to probe beneath the customary assumptions about why the United States is so wealthy a country and to speculate about the economic future of American society in the decades immediately ahead. The next two chapters identify and discuss several serious vulnerabilities of American society, arising from its social dynamics, which are now sufficiently great to undermine the durability of social structures. Three chapters analyzing what energy has been doing to our society and where it is leading us are followed by two chapters concerned with the dynamics of population and food, both within American society and, more important, in the Third World; energy and population are viewed here as probably the two most fundamental and important determinants of the future. Finally, a group of four chapters seeks to bring together the threads from all four sectors of the web. They examine the political limits to economic growth, the ecological hazards of the “one world” ideal, and the environmental and ethical implications of continuing on the road of further physical growth, especially if it means shifting from a massive addiction to petroleum to an even more massive addiction to nuclear energy.

Although the book ends without a road map for Americans moving into their third century, it sees us at the most important crossroads in our two-hundred-year journey—one, in fact, faced by all of Western civilization. What Americans need for the future is a changed set of values and a new sense of direction. The compass we have been following has gone awry.

The experience of living in a civilization that suddenly loses momentum and begins to veer off course may be perceived in different ways. Some will surely be extremely depressed if the theories set forth in this analytical and conjectural essay should turn out to have some validity. The curtain will seem to be coming down on a golden era, and nothing they can visualize will ever be so interesting and exciting. To others—the “true believers” in the

American dream of unlimited economic growth and progress—doubts about the correctness of our course are inadmissible. We need only to maintain the faith, in their view, and redouble our efforts to put the economy back on the growth track from which it has been derailed. To still others, even though it may take patience that rivals that of Job, the very idea of participating in a thoughtful search for a different destiny for Americans can be a deeply satisfying and self-renewing adventure.



# *I. Recession, Depression, or the End of a Two-Century Boom?*

On March 4, 1933, when Americans were desperately grasping for help to sustain faith in their economic system, the newly inaugurated President, Franklin Roosevelt, rallied them with his memorable words, "The only thing we have to fear is fear itself." Just over a hundred days later, Walter Lippmann wrote: "At the end of February, we were a congeries of disorderly, panic-stricken mobs and factions. In the hundred days from March to June we became again an organized nation, confident of our power to provide for our own security and control our own destiny." Lippmann did not overstate the contrast or exaggerate the resilience of the American people. The Great Depression was the worst in the nation's history, but the faith of Americans in the essential continuity of progress had deep roots. Not even in the worst of times could the Socialists or the Communists shake the belief of most Americans in the basic soundness of their economic and political system. The vast majority of people wanted changes made, and they got them in the form of the New Deal, but they wanted progress, not revolution.

Four decades later, Americans found themselves in a very different mood. The twin gods of growth and progress, which had earlier usurped the place of the Biblical God for vast numbers of self-confident, upwardly mobile members of the production system, were not performing their duties properly. The two-centuries-old faith in the capacity of the gods or the system to continue to improve the human condition was in deep trouble. That the economic downturn of the mid-1970s might be no mere recession or depression but

an augury of the approaching end of the era of physical growth\* became a gnawing suspicion among an increasing number of people.

Even before there were any serious signs of recession, significant numbers of Americans had begun to show deep concern about the *effects* of rapid and seemingly endless physical growth upon the quality of their surroundings and their lives. In their view, diminished growth within a finite environment was not benign but malignant, just as it is in biological organisms, so they decided to do something about it. The environmental movement sprang into being with broad public support. It is surprising to realize that Earth Day, a kind of first birthday for the ecological awakening of the American people, occurred as recently as April 22, 1970. Concern for the environment turned out to be considerably more than the passing fad that many people predicted it would be. To the dismay of businessmen and economists, an increasingly vocal minority began to lay the blame for the deterioration of the environment not only on the conspicuous polluters but at the doorstep of physical growth itself.

Almost overnight, the members of the environmental movement manned the barricades to prevent or retard at least those forms of growth that seemed to threaten the country's precious and precarious natural heritage. Several states turned their welcome signs to the wall, hoping to fend off new industry, boxy subdivisions, and even tourists, whose presence palled when they settled down and overloaded the demand for public services. Antipathy to environmental pollution and the other tangible negative results of physical growth moved from the talk stage to the arena of action, with public protests and legal suits against numerous forms of new construction, from prefabricated suburbs to oil refineries and nuclear power plants. And such protests became very effective in impeding expansion plans of some of the nation's largest corporations, who were not used to having their will thwarted. Nothing comparable to this had ever

\*The term "physical growth" is used throughout to mean what it implies: growth in the number of people and the goods and energy they consume, and in the numbers and size of their structures, roads, vehicles, capital equipment, and the like. A rough but useful indicator of the rate of physical growth of Western societies is the rate of increase in the consumption of energy. Physical growth has been the most important component of economic growth, but the Gross National Product might continue to rise even if physical growth did not, by a further shift away from the production of goods toward the exchange of services.

happened before; the god of growth was losing his magic power. What we were witnessing seemed to be the beginning of a profound shift in human attitude toward physical growth.

It is important to note that there are two differing concepts of growth: the compound-interest curve, or exponential curve, used by economists, and the biological-growth curve. An examination of their contrasting forms and their implications should serve as an aid to understanding what is happening to our society.

#### THE EXPONENTIAL CURVE

The compound-interest, or exponential, curve (see Fig. 1) is a steeply rising curve that points in the general direction of infinity. It doubles at periodic intervals: At a 7 percent annual increase, it doubles every decade; at 3.5 percent, it doubles five times a century. In his *Treatise on Money* (1930), John Maynard Keynes vividly illustrated the power of compound interest by describing what happened to the booty brought back by Sir Francis Drake in the *Golden Hind* after he had intercepted the Spanish galleons and deprived them of their treasure.

[This booty] may fairly be considered the fountain and origin of British Foreign Investment. Elizabeth paid off out of the proceeds the whole of her foreign debt and invested a part of the balance (about £42,000) in the Levant Company; largely out of the profits of the Levant Company there was formed the East India Company, the profits of which during the seventeenth and eighteenth centuries were the main foundation of England's foreign connections; and so on. In view of this, the following calculation may amuse the curious. At the present time (in round figures) our foreign investments probably yield us about 6.5 percent net after allowing for losses, of which we reinvest abroad about half—say 3.25 percent. If this is, on the average, a fair sample of what has been going on since 1580, the £42,000 invested by Elizabeth out of Drake's booty in 1580 would have accumulated by 1930 to approximately the actual aggregate of our present foreign investments, namely £4,200,000,000—or, say, 100,000 times greater than the original investment.

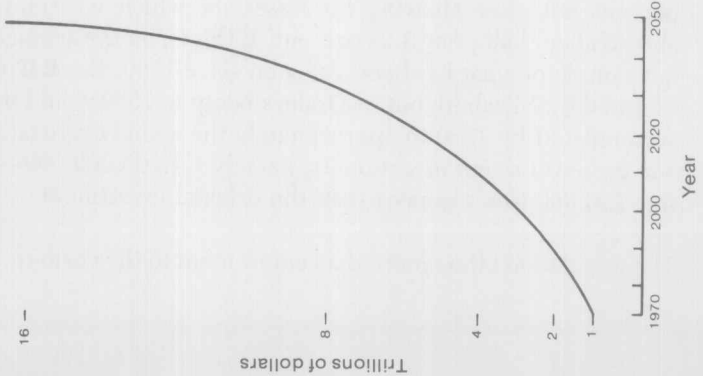
The calculation offers more than amusement to the curious, and it



MODELS OF GROWTH

The Exponential Curve

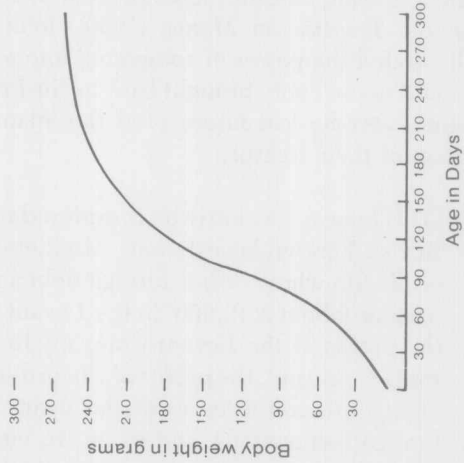
(A 3.5% annual growth rate, e.g., the GNP in constant dollars.)



(Figure 1)

The Biological Growth Curve

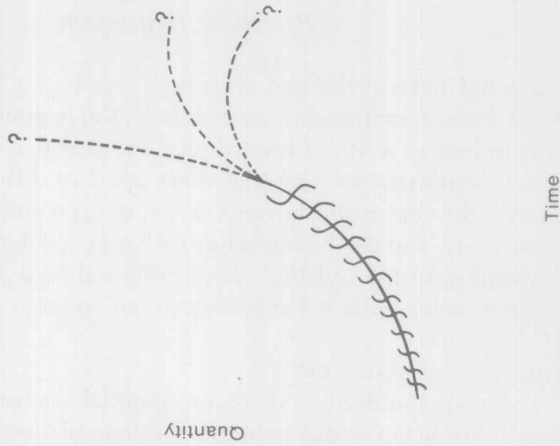
(Body weight of the male white rat from birth; similar to the market saturation curve of new product lines.)



(Figure 2)

Three Models of the Future

(Which curve are we on, and how far along on it? To sustain an exponential GNP, it will be necessary to increase product lines including services in size, number, or both, indefinitely.)



(Figure 3)