

THE GLOBALIZATION OF THE HUMAN CONDITION: A HISTORICAL OVERVIEW

Q WHERE, MY CHILD, DO YOU LIVE IN TIME?

A I LIVE BEYOND THE BEND OF MANY J CURVES.

These two lines are from a catechism I am writing for my children. They provide an appropriate starting point for recounting the history of the globalization of the human condition because we can best begin this story by locating the twentieth century in historic time. And when we plot this location, we find that our century is situated beyond the bend of many J curves.

All of you are familiar with J curves, but at the risk of insulting your intelligence let me briefly review the essential properties of a J curve. A J curve is a graphic representation of the pattern of change in any system that grows by doubling, that is 1, 2, 4, 8, 16, 32, 64 . . . This type of change is geometric or exponential growth.

For a long time the rate of change is slow, indeed, so slow as to be hardly perceptible. Then at some point the rate of change dramatically accelerates. When this type of change is graphically plotted the result is a curve that resembles the letter J. A line that is for a long time essentially horizontal suddenly bends and becomes almost vertical.

Dr. Anderson then proceeds to provide numerous examples of J curves from the historical record: a simple investment scheme, world population growth, books published, explosive power, life expectancy, communications speed, increase in carbon dioxide in the atmosphere, the reach of different weapons, world consumption of

key metals, energy consumption, deaths attributable to wars, use of fertilizers, percent of civilian war deaths, development of antibiotics, increase in travel speed. Ed.

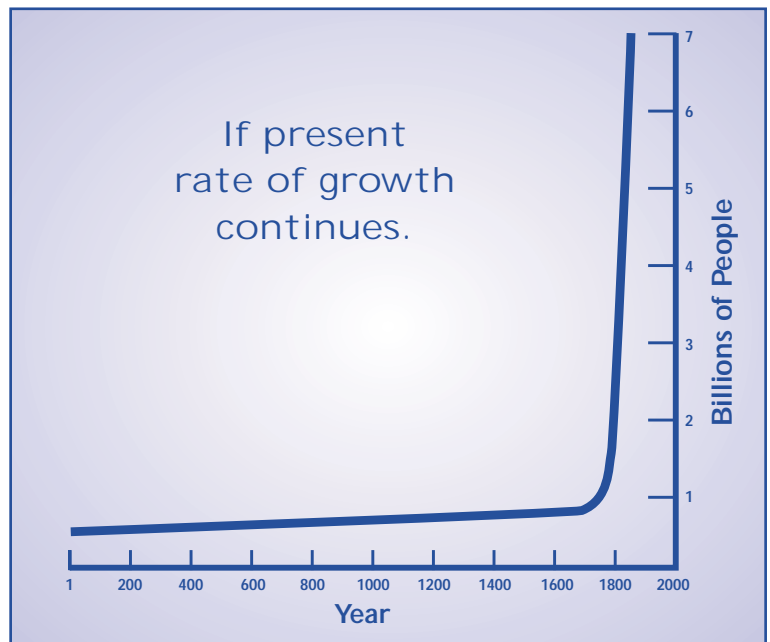
The graphs on the preceding pages [of the original text] are pictures. If they (and many other graphs like them) were put in color, framed and hung on the walls of a single room, we would have an art gallery that might be appropriately named "Our Time in Historic Perspective." I don't know what a walk through this gallery would do for you, but I can anticipate my reactions. I would have some minor quarrels about the quality of some of the paintings. As a social scientist I might wonder about

the reliability of some of the data represented in some of the paintings. As a mathematician I would realize that the term J curve, while useful, is somewhat imprecise mathematically, since an "artist" can distort reality by expanding or contracting the scale of the plot. But in my identity as a human being I think I would leave the gallery overwhelmed by a sense of involvement in "one of the great revolutionary transformations of mankind."

This phrase is the historian C. E. Black's effort to characterize the current transformation that is taking place in the human condition. Black dramatizes, but probably does not exaggerate, the magnitude of this transformation in this way:

The change in human affairs that is now taking place is of a scope and intensity that mankind has experienced on only two previous occasions, and its significance cannot be appreciated except in the context of the entire course of world history. The first revolutionary transformation was the emergence of human beings, about a million years ago, after thousands of years of evolution from primitive life . . . The second great revolutionary transformation in human affairs was that from primitive to civilized societies . . .

While not all historians would agree that these two epochal events exhaust the periods of revolutionary transforma-



J Curve of the World's Population Growth, Past and Projected

Source: Miller, Jr., G. Tyler, *Living in the Environment: Concepts, Problems, and Alternatives*. Belmont, CA: Wadsworth Publishing Co., Inc., 1975, p. 8

tion in human affairs, most serious students of man's contemporary condition are likely to concede that they serve as useful analogues in our efforts to understand what is happening in the twentieth century. For, as Black goes on to note: "The process of change in the modern era is of the same order of magnitude as that from prehuman to human life and from primitive to civilized societies . . ."