Exponential Times – Applying Christian Discernment

Kerby Anderson discusses some of the trends in our rapidly changing world, calling for Christians to "understand the times" with discernment.

You may have seen the YouTube video asking, "Did you know"? Sometimes it has the title "We are living in exponential times." I want to look at some of the trends that illustrate the fact that we live in exponential times. While I will use the video as a starting point, I will also be citing other authors and commentators as well.

The video begins by talking about population. How often we forget that there are countries like China and India that have a billion people. For example, the video says that if you are one in a million in China, there are thirteen hundred other people just like you. That is because there are over a billion people in China.
The video also points out that twenty-five percent of India's population with the highest IQs is actually greater than the total population of America. Put another way, India has more honors kids than America has kids.

This reminds me of a statement in *The World Is Flat* by Thomas Friedman. He says that when he was growing up his parents would tell him "Finish your dinner. People in China and India are starving." Today he tells his daughters, "Girls, finish your homework—people in China and India are starving for your jobs."{1}

Consider the population explosion. There were one billion people in 1800. We did not reach two billion until 1930. The planet had three billion people in 1960 and four billion in 1975. We reached five billion people in 1987 and six billion

people in 1999. It is estimated that the planet will hold seven billion people in 2012.

Of course, life expectancy has been going up, and this is changing the demographic of various countries. Many more people are living to age 100 and beyond. For example, there were only two hundred centenarians in France in 1950. The number is projected to reach a hundred fifty thousand by year 2050. That is a seven-hundred-fifty-fold increase in one hundred years.{2}

Or consider the United States population increase in this demographic group. In 1990, there were approximately, thirty thousand centenarians. Some believe that estimate may be a bit too high, but it provides an approximate baseline. The U.S. Census Bureau estimates there will be two hundred sixty-five thousand centenarians by 2050.{3}

One last trend is that world population growth is slowing down as populations are aging. Demographers tell us that we need 2.1 children per woman to replace a population. Back in the 1950s, the average number of babies per woman of child-bearing age was 5.0 but has been dropping ever since. It will most likely reach 2.3 in 2025.{4}

In the developing world, fertility is already moderately low at 2.58 children per woman and is expected to decline further to 1.92 children per woman by mid-century.{5} While only three countries were below the population replacement level of 2.1 babies in 1955, there will be one hundred and two such countries by 2025.{6}

Exponential Growth

What is the impact of exponential growth on society? Richard Swenson argues in his book *Margin* that this has created unprecedented problems for us:

> *One major reason our problems today are unprecedented is because the mathematics are different. Many of the linear lines that in the past described our lives well have now disappeared. Replacing them are lines that slope upward exponentially.{7}*

Exponential growth is very different from arithmetic growth. We live our lives in a linear way. We live day-to-day, week-to-week, month-to-month. But the changes taking place around us are increasing not in a linear way but in an exponential way.

Exponential growth is not something that we would consider intuitive. Scott Armstrong demonstrated that when he asked a graduate class of business students the following question. If you folded a piece of paper in half forty times, how thick would it be? Most of the students guessed it would be less than a foot. A few guessed it would be greater than a foot but less than a mile. Two students guessed it would be great than a mile but less than two thousand miles. The correct answer is that the paper would be thick enough to reach from here to the moon.{8}

This is the challenge of living in exponential times. If the graph is linear, we have a fairly good grasp of what that will mean for us in the future. When the graph curves upward exponentially, we have a difficult time comprehending its impact.

But will the graph continue to trend upward? It will until it reaches some limit. Eventually there is an upper limit to most of the trends we are seeing. Objective things (people, government buildings, and organizations) have limits. Subjective things (relationships, creativity, and spirituality) also have limits.

At this point the curve changes from a J-curve to an S-curve. The exponential slope begins to flatten and reach a new

equilibrium. Eventually there is a turning point at which the upward curve no longer grows exponentially. Finally, the curve levels as growth and limits reach an equilibrium.

One of the challenges of living in exponential times is that the various trends are at different points on the curve. The amount of new information seems to be exploding exponentially and looks like a J-curve. The number of e-mails you receive might not be growing exponentially like it did a few years ago but may still be increasing. Population in many developing countries has been leveling off (and often decreasing), and so the graph looks more like the S-curve. All of these trends are at different parts of the curve and are happening simultaneously. Thus, it is often difficult for us to comprehend what this means to us personally.

Futurists who are trying to understand what will happen in the future are faced with an even more daunting task. If they look at each trend in isolation, they can begin to get an idea of what might happen. But as soon as someone tries to integrate all of these trends into a comprehensive whole, the future becomes blurred.

Trying to integrate all the various trends (many growing exponentially) creates a challenge for anyone trying to accurately predict the future. We might know the individual trends, but trying to integrate hundreds of trends into a comprehensive picture is difficult, if not impossible.

Warnings About Exponential Growth

In the past, a number of authors have warned about the dangers of exponential growth. And because their predictions did not come to pass, the concept of exponentiality and its impact have faded from current discussion.

In the early nineteenth century, Thomas Malthus wrote his famous *Essay on the Principle of Population* in which he argued

that population growth would outstrip food production. He reasoned that population would grow exponentially while food production would merely grow arithmetically. Thus, he predicted a future crisis due to this exponential growth.

In 1968, Stanford biologist Paul Ehrlich published his controversial best-seller, *The Population Bomb*. He also noted that population was growing exponentially and made numerous predictions about catastrophes that would befall the human race in the 1970s and 1980s.

Dennis Meadows and others with a group known as The Club of Rome published their report in the book *The Limits to Growth*. The authors used a computer simulation to consider the interaction of five variables (world population, industrialization, pollution, food production and resource depletion). By changing the various assumptions about population and resources, they predicted various dire scenarios for the future.

Of course these doomsday predictions never came to pass. So it was inevitable that discussion and warning about exponential growth were no longer published on the front pages of newspapers and newsmagazines.

Another reason we have ignored the potential impact of exponential growth is due to the remarkable technological achievements of the twentieth century. Automobile manufacturers have been able to significantly increase gas mileage in cars. Petroleum engineers have been able to find more effective and efficient ways to pull oil from the ground. Farmers and scientists have essentially tripled global food production since World War II, thereby outpacing even population growth.

Nevertheless, there are indeed limits to growth. If we understand what those limits are and work within them, then the future will be bright. If we ignore them, the human race

could be in for some rough times. Harvard biologist E.O. Wilson expressed this dichotomy when he asked, “Are we racing to the brink of an abyss, or are we just gathering speed for a takeoff to a wonderful future? The crystal ball is clouded; the human condition baffles all the more because it is both unprecedented and bizarre, almost beyond understanding.”{9}

Columnist Tom Harper is more pessimistic: “Currently we are behaving like insane passengers on a jet plane who are busy taking all the rivets and bolts out of the craft as it flies along.”{10}

Whatever our future, it is certain that is will be more complex than ever before. And it will be a world in which information has exploded exponentially.

Information Explosion

One aspect of exponential times is the information explosion. The YouTube video by the same title reminds us that information is exploding exponentially. For example, it points out that there are thirty-one billion searches on Google every month. The best estimate is now there are about thirty-six billion searches on Google each month. In 2006, it was 2.7 billion. That’s a thirteen-fold increase in just three years.

In order to keep up with this information explosion, engineers have been working at a breakneck pace to increase the efficiency and capacity of computers and other devices that process and store information. Every year, fifty quadrillion transistors are produced. That is more than six million for every human on the planet.{11}

Look at the exponential growth of Internet devices. In 1984, there were a thousand. By 1992, there were one million. By 2008, there were one billion and the number is about to exceed two billion. Some experts believe that there will be fifteen billion Intelligent Connected Devices by the year 2015.{12}

The YouTube video estimates that a week's worth of *The New York Times* contains more information than a person was likely to come across in a lifetime in the eighteenth century. This figure is more difficult to quantify even though it, or variations of it, is cited all the time.

In fact, this may be our biggest challenge in the twenty-first century. There is so much information that most of us are having a difficult time trying to make sense of all the data. Facts, figures, and statistics are coming at us at an accelerating rate. That is why we need to evaluate everything we see, read, and hear from a Christian worldview in order to make sense of the world around us.

One last point is that most of this information is still in the English language. The YouTube video says that there are about 540,000 words in the English language. And this is five times as many words as in the time of Shakespeare.

It turns out that these estimates may be a bit off. Part of the problem is deciding what constitutes a word. After all, we have so many derivatives of a word and we have many words that have multiple meanings. Do you count the word or the various meanings of a word?

Let's start with the English vocabulary at the time of Shakespeare. We know how many words he used. If you count all the words in his plays and sonnets there are 884,647 of them. The estimate for the number of different words he used varies from eighteen to twenty-five thousand. I might also mention that it appears that Shakespeare coined or invented about fifteen hundred new words. Even so, it seems like the estimate that there were a hundred thousand English words in Shakespeare's time might be too high.

Do we have over five hundred thousand words in the English language today? Again, it depends how you count words. The largest English dictionary has about four hundred thousand

entries. A more realistic number is around two hundred thousand. The latest edition of the *Oxford English Dictionary* contains entries for 171,476 words in current use, and 47,156 obsolete words.

Nevertheless, English has become the language of choice for the world. Approximately three hundred seventy-five million people speak English as their first language. Another seven hundred million speak English as a foreign language. English is also the language most often studied as a foreign language in the European Union. English is more widely spoken and written than any other language.

English is the medium for eighty percent of information stored in the world's computers. English is the most common language used in the sciences as well as on the Internet. Not only have the number of English words expanded since Shakespeare's time, its influence has expanded as well.

Exponential Times and a Biblical Worldview

The Bible tells us that we are to understand the times in which we are living. First Chronicles 12:32 says that the sons of Issachar were "men who understood the times, with knowledge of what Israel should do." Likewise we need to understand our times with knowledge of what we as Christians should do.

We have also been looking to the future by trying to plot trends from today into tomorrow. The Bible also tells us that we should plan for the future. Isaiah 32:8 says that "the noble man devises noble plans, and by noble plans he stands." Proverbs 16:9 says "the mind of man plans his way, but the Lord directs his steps." So we should not only plan for the future, but commit those plans to the Lord and be sensitive to His leading in our lives.

When you live in a world that is increasing exponentially, you have to be ready for change. In fact, it is probably true that most of us now expect change rather than stability in our world. Not so long ago, there were those telling us that change would shock our senses and disorient us.

As commentator Mark Steyn points out, we developed a whole intellectual class of worriers. He says:

> *The Western world has delivered more wealth and more comfort to more of its citizens than any other civilization in history, and in return we've developed a great cult of worrying. You know the classics of the genre: In 1968, in his bestselling book The Population Bomb, the eminent scientist Paul Ehrlich declared: "In the 1970s the world will undergo famines—hundreds of millions of people are going to starve to death." In 1972, in their landmark study The Limits to Growth, the Club of Rome announced that the world would run out of gold by 1981, of mercury by 1985, tin by 1987, zinc by 1990, petroleum by 1992, and copper, lead and gas by 1993.{13}*

Obviously none of that happened. But we shouldn't dismiss the potential impact of exponential growth, but learn to be more careful in our predictions.

> *I believe one of the greatest challenges for Christians will come from the information explosion. Not only are we inundated with facts, figures, and statistics, but we must also confront various philosophies, worldviews, and religions. It is absolutely essential that Christian develop discernment. We must work to evaluate everything we see, read, and hear from a Christian worldview.*

This is one of the foundational goals of Probe Ministries. We are dedicated to helping you to think biblically about every area of life. I would encourage you to visit the Probe website

(www.probe.org) to read other articles. You can also get a podcast of this program or any other program, and even sign up for the *Probe Alert*.

Kerby Anderson discusses some of the trends in our rapidly changing world, and calls for Christians to 'understand the times' with discernment.We live in a world of change. And as I have discussed above, many of these changes are not linear but exponential. May all of us be found faithful in speaking biblical truth to a culture in the midst of change.

Notes

1. Thomas Friedman, *The World is Flat: A Brief History of the Twenty-First Century* (New York: Farrar, Straus and Giroux, 2005), 237.

2. "50 Facts: Global health situation and trends," World Health Organization, 1998.

3. "Centenarians in the United States," U.S. Census Bureau, 1999.

4. "50 Facts: Global health situation and trends."

5. "World population to increase by 2.6 billion over next 45 years," World Population Prospects, 24 February 2005.

6. "50 Facts: Global health situation and trends."

7. Richard Swenson, *Margin: How to Create the Emotional, Physical, Financial, and Time Reserves You Need* (Colorado Springs: NavPress, 1992), 44.

8. Scott Armstrong, *Long-Range Forecasting: From Crystal Ball to Computer* (NY: Wiley, 1985), 102.

9. E.O Wilson, "Is Humanity Suicidal?" *The New York Times Magazine*, 30 May 1993, 27.

10. Tom Harper, quoted by William Goetz, *Apocalypse Next: The*

End of Civilization as We Know It? (Camp Hill, PA: Horizon Books, 1996), 15.

11. George Gilder, "Happy Birthday Wired: It's Been a Weird Five Years," *Wired*, January 1998, 40.

12. "15 Billion Connected Devices – Powered by the Embedded Internet," Small Forms Factors Blog, 28 April 2009.

13. Mark Steyn, "It's the Demography Stupid," *Wall Street Journal*, 4 January 2006.

© 2009 Probe Ministries

Globalization and the Wal-Mart Effect – How Wal-Mart Changes the Way Products are Sourced and Sold

Kerby Anderson helps us understand the foundational principles and some the current factors which make Wal-Mart the dominant force in consumer sales in the world. Wal-Mart has fundamentally changed the way products are sourced and sold as shown in the examples presented in this article. Kerby does not take a position for or against those changes but encourages us to consume in ways that consider the impact of our consumption.

Introduction

In this article, we revisit the issue of global trade and the process of globalization. In an earlier article I asked, Is

the world flat?{1} I talked about the various things that have made our world flat and used Wal-Mart as one of the examples.

I would like to further develop our discussion by using Wal-Mart as an example of what is happening in our world. Thomas Friedman, in his book *The World is Flat*, says that if Wal-Mart were an individual economy, it would rank as China's eighth-biggest trading partner, ahead of Russia, Australia, and Canada.{2}

Often I will be referring to many of the facts and figures from Charles Fishman's book *The Wal-Mart Effect*.{3} For example, he points out that more than half of all Americans live within five miles of a Wal-Mart store. For most people, that's about a ten- to fifteen-minute drive. Ninety percent of Americans live within fifteen miles of a Wal-Mart. In fact, when you drive down the interstate, it is rare for you to go more than a few minutes without seeing a Wal-Mart truck.

Wal-Mart has over 3800 stores in the United States. That is more than one Wal-Mart store for every single county in the country.{4} And they don't exactly fade into the landscape. They sit on vast aprons of asphalt parking and stand out because of their sheer size.

Wal-Mart has also become the national commons. Every seven days more than one hundred million Americans shop at Wal-Mart (that's one third of the country). Each year, ninety-three percent of American households shop at least once at Wal-Mart.

Wal-Mart's sales in the United States are a bit more than $2000 per household. And Wal-Mart's profit on that amount was just $75.00.{5}

The size of this company is hard to grasp. Wal-Mart isn't just the largest retailer in the nation and the world. For most of this decade, it has been both the largest company in the world as well as the largest company in the history of the world.

In 2006, Wal-Mart will be bumped from the number-one spot on the Fortune 500 list of the largest companies by ExxonMobil, whose sales will surge past Wal-Mart's because the world price of oil rose so much in the last year.

But if you consider payrolls, there is no comparison. ExxonMobil employs about 90,000 people worldwide. Wal-Mart employs 1.6 million.{6} And there's another difference. ExxonMobil is growing by raising prices. Wal-Mart is growing despite lowering prices.

Put another way, Wal-Mart is as big as Home Depot, Kroger, Target, Costco, Sears, and Kmart combined. Target might be considered Wal-Mart's biggest rival and closest competitor, but it is small in comparison. Wal-Mart sells more by St. Patrick's Day (March 17) than Target sells all year.{7}

The Wal-Mart Effect

Ask people to give you their opinion about Wal-Mart and you are likely to get lots of different responses. They may talk with enthusiasm about the "always low prices." Or they might talk about the impact Wal-Mart had on small businesses in their community when the first store arrived. They may even talk about the loss of American jobs overseas. Believe me, most will have an opinion about Wal-Mart.

Wal-Mart had its creation in the mind of Sam Walton who promoted a single idea: sell merchandise at the lowest price possible. It began with Wal-Mart working hard to keep the costs of their company as low as possible. This idea moved from their company to their suppliers as they asked them to be as frugal as possible. As the company grew in size, they began looking for every way to wring out the last penny of savings from materials, packaging, labor, transportation, and display. The result was "the Wal-Mart effect."

Consumers have embraced "the Wal-Mart effect." As a store

moves into a community bringing lower prices, it drives down prices in other stores. And either they compete or close their doors. And it also reshapes the shopping habits of those in the community.

But with "the Wal-Mart effect" comes fears of "the Wal-Mart economy." This is the nagging feeling that there are social and economic costs to be paid for "always low prices." Critics talk about low wages, minimal benefits, and little chance for career advancement.

The company has found itself under attack from many quarters. There is a lawsuit on behalf of 1.6 million women who have worked at Wal-Mart that alleges systematic sex discrimination. Add to this the allegations that managers have required employees to work off the clock and even have locked employees in stores overnight.

There is also the constant complaint that Wal-Mart does not provide adequate health care benefits. Last year, for example, the Maryland legislature passed a bill that forces companies with more than 10,000 employees to spend at least eight percent of their payroll on health care or pay the state the difference. Since Wal-Mart is the only employer with over 10,000 employees in the state, it is easy to see that the legislation was only targeting Wal-Mart.

Wal-Mart recently settled a federal investigation of its use of illegal aliens to clean its stores. The company made a record-setting payment to the federal government.

Sam Walton's goal from the beginning was an unrelenting focus on controlling costs in order to provide "always low prices." He instilled in his employees core values like hard work, frugality, discipline, and loyalty.{8}

In his book *The Wal-Mart Effect*, Charles Fishman says these values have become inverted. He points out how the company has changed. When Sam Walton died in 1992, Wal-Mart was a $44

billion-a-year company with 370,000 employees. The number of employees has now grown by 1.2 million, and sales have grown by $240 billion. “Wal-Mart is not only not the company Sam Walton founded, it is no longer the company he left behind.”{9}

Out of the Box

You probably never thought about the packaging around deodorant, but Wal-Mart did. Until the early 1990s, nearly every brand of deodorant came in a paperboard box. Most consumers opened the box, pulled out the deodorant container, and tossed the box into the garbage. Some of us recycled them, but we were a very small minority.

In the early 1990s, Wal-Mart (along with a few other retailers) decided the paperboard box was a waste. The product came in a can or plastic container. These were at least as tough as the box. The box took up wasted space, and it wasted cardboard. Shipping the weight of the cardboard added weight to trucks and wasted fuel. And the box itself cost money to design and produce. It even cost money to put the deodorant into the box.

Wal-Mart began to apply pressure on the suppliers to eliminate the box. Deodorant manufacturers calculated that the box cost about a nickel for every consumer. Wal-Mart split the savings. Deodorant makers keep a few pennies, and Wal-Mart passed a couple of pennies savings on to the consumers.

Walk into Wal-Mart today and look at the deodorant aisle. You will probably find eight shelves of deodorant, sixty containers across. In this sea of nearly five hundred containers of deodorant, not one box.

Consider the impact of this one decision. First, there is the environmental impact. Whole forests were not cut down to provide a box that consumers did not use. A few recycled them,

but the vast majority threw them away seconds after they removed their deodorant. Was Wal-Mart's pressure to unbox deodorant a good thing? It certainly was, if you are concerned about environmental issues. And Christians should be concerned about our stewardship of the environment.

The economic impact was also considerable. A savings of one nickel might seem trivial until you multiply it by the two hundred million adults in the United States. If you just account for the container of deodorant in every American bathroom, you have a savings of $10 million, of which consumers got to keep half. But don't forget that the savings is recurrent. Americans are saving $5 million in nickels about five to six times a year.

But there is also a third impact. The impact this decision had on jobs. So far the decision looks like a win-win. But you might not feel so excited about the decision if you work in the forestry industry or are in the paperboard box business.

This story illustrates only so well the problem with providing a clear, unambiguous analysis of consumer behavior in American markets and, even more so, the ethics of corporations in a global market. And this story is probably easier to analyze if your first priority is the environment. But the ethics of other situations that arise from globalization aren't quite so easy to evaluate.

Wal-Mart illustrates the world in which corporate entities significantly influence our decisions and even transform an economy. While we might like the outcome of saving paperboard boxes, we certainly don't like other aspects of "the Wal-Mart effect." The company has grown so large and evolved in unexpected ways that it is difficult to predict what the future holds. And when we begin to ask moral questions, it isn't so easy to always determine whether the outcomes are good for us or the country.

Salmon

Americans love to eat salmon. In fact, we eat more than 1.75 million pounds of salmon a day.{10} We eat it at home and when we go out to a restaurant.

And Americans buy lots of cheap salmon from Wal-Mart. But they are probably unaware of the impact their purchase has on the environment. Most of the salmon served in the United States is Atlantic salmon (which is a species that is not only found wild but is also the species of choice for salmon farmers).

The salmon that you buy in Wal-Mart is "a factory product." In other words, they are hatched from eggs, raised in freshwater hatcheries, and then grown to maturity in open-topped ocean cages in cold coastal waters.{11}

Wal-Mart sells more salmon than any other store in the country. Wal-Mart also buys all its salmon from Chile. In fact, they purchase about one-third of the annual harvest of salmon that Chile sells. Wal-Mart sells the salmon for $4.84 a pound. It seems incredible that they can sell it for so little, but there are hidden costs.

Atlantic salmon are not native to Chile (its coastline runs along the Pacific). It's an exotic species that is literally farmed and processed by thousands of Chileans. The labor conditions are certainly a concern (long hours, low pay, processing of salmon with razor-sharp filleting instruments).

Another concern is the environment. Salmon farming is already transforming the ecology of southern Chile "with tens of millions of salmon living in vast ocean corrals, their excess food and feces settling to the ocean floor beneath the pens, and dozens of salmon processing plants dumping untreated salmon entrails directly into the ocean."{12}

When we buy salmon from Chile are we contributing to this environmental damage? Charles Fishman asks, "Does it matter

that salmon for $4.84 a pound leaves a layer of toxic sludge on the ocean bottoms of the Pacific fjords of southern Chile?”{13} After all, these salmon are raised in pens (with as many as one million per farm). They are fed antibiotics to prevent disease. As a result, you have quite a mess. One million salmon produce about the same amount of waste as 65,000 people. And add to that additional waste from unconsumed food and antibiotic residue. In essence, the current method of salmon farming creates a toxic seabed.

So how do we change this? The answer is simple: by changing consumer behavior. If shoppers won’t buy salmon until Wal-Mart insists on higher standards, Wal-Mart will insist on them. The same company that created this huge market for salmon can also change it. But this will only happen if consumers voice their concerns and back it up with their behavior.

Consumer Behavior

As I said earlier, mention the name Wal-Mart and you are likely to get lots of varied reactions. While shoppers love the “always low prices,” critics point to the impact that the company has had on the economy and the environment.

In fact, it is a bit misleading to think of Wal-Mart as merely a company. In reality it’s a global market force. Without a doubt it is one of the most efficient entities at improving its supply chain not only in this country but around the world. Most of us just shop at the store and don’t think of the implications of what we buy and where we buy it.

The size of Wal-Mart gives it the power to do many positive things. It recently announced fuel-savings plans for its stores and trucks. This could provide a model for the nation.

Wal-Mart also provided a model of how to deal with a disaster like Hurricane Katrina. Even though they had 171 facilities in the path of the storm, they were able to recover and reopen

eighty-three percent of their facilities in the Gulf area within six days.{14}

One key to Wal-Mart's success was associates who were dedicated to their communities. The local connection helped it deliver goods when the government failed. Wal-Mart sprang into action even before the hurricane hit. Whenever there is a possibility of a hurricane, its supply chain automatically adjusts and sends in plenty of non-perishable food and generators.

What is Wal-Mart's effect on the local economy? One famous study found that the arrival of a Wal-Mart store had a dramatic impact. "Grocery stores lost 5 percent of their business, specialty stores lost 14 percent of their business, and clothing stores lost 18 percent of their business—all while total sales were rising 6 percent, mostly due to Wal-Mart."{15}

Critics of Wal-Mart say that it forces small businesses into bankruptcy. But if you think about it, it is the consumers who put people out of business. We vote with our wallets. Shoppers are the ones who have made it possible for Wal-Mart's phenomenal growth. And we are the ones who need to pay attention to what we buy and where we buy it.

In this article, we have identified a few economic and environmental issues that result from "the Wal-Mart effect." Previously, we have produced articles discussing the Christian's responsibility towards economics{16} and the environment.{17}

Our consumer behavior can have a positive impact on our world. As individuals, we have a minimal impact, but collectively we have an impact on our lives and our economy every day when we spend money. For too long, Christians have been willing to separate ethics from economics. Yet in earlier centuries theologians asked important questions about the relationship

of morality to money.

It is time to return to that moral reflection, especially in this age of globalization. Christians should be alert consumers in this global economy.

Notes

1. Kerby Anderson, "Is the World Flat"? (Probe Ministries, 2005) http://www.probe.org//faith-and-culture/society/is-the-world-flat.html.
2. Thomas Friedman, *The World is Flat: A Brief History of the Twenty-First Century* (New York: Farrar, Straus and Giroux, 2005), 137-138.
3. Charles Fishman, *The Wal-Mart Effect* (New York: Penquin, 2006).
4. Ibid., 6.
5. Ibid.
6. Ibid., 7.
7. Ibid.
8. Ibid., 27.
9. Ibid., 48.
10. Ibid., 169.
11. Ibid., 170.
12. Ibid., 171.
13. Ibid., 172.
14. Edwin J. Feulner, "Learning from Wal-Mart," Townhall.com, 24 Feb. 2006, www.townhall.com/opinion/columns/edwinfeulner/2006/02/24/187795.html.
15. Fishman, 156.
16. Kerby Anderson, "A Biblical View of Economics" (Probe Ministries, 2001), www.probe.org/a-biblical-view-of-economics.

17. Ray Bohlin, "Christian Environmentalism" (Probe Ministries, 2005), www.probe.org/christian-environmentalism/.

© 2006 Probe Ministries

Is the World Flat? How Should Christians Respond in Today's Global World

Drawing from Thomas Friedman's book, The World is Flat, Kerby Anderson looks at some of the major new factors in our world which cause not only countries and companies, but also individuals to think and act globally. Most of the factors discussed are givens against which Kerby helps us to consider their impact on Christianity and the spread of the gospel on a global basis.

Introduction

Is the world flat? The question is not as crazy as it might sound in light of the book by Thomas Friedman entitled *The World is Flat: A Brief History of the Twenty-First Century.* His contention is that the global playing field has been leveled or flattened by new technologies.

In fourteen hundred and ninety-two when Columbus sailed the ocean blue, he used rudimentary navigational equipment to prove that the earth was *round*. More than 500 years later, Friedman discovered in a conversation with one of the smartest engineers in India that essentially the world was *flat*. Friedman argues that we have entered into a third era of

globalization, which he calls Globalization 3.0 that has flattened the world.

The first era of globalization (he calls Globalization 1.0) lasted from when Columbus set sail until around 1800. “It shrank the world from a size large to a size medium. Globalization 1.0 was about countries and muscles.”{1} The key change agent in this era was how much muscle your country had (horsepower, wind power, etc.). Driven by such factors as imperialism and even religion, countries broke down walls and began the process of global integration.

The second era (he calls Globalization 2.0) lasted from 1800 to 2000 with interruptions during the Great Depression and World Wars I and II. “This era shrank the world from size medium to a size small. In Globalization 2.0, the key agent of change, the dynamic force driving global integration, was multinational companies.”{2} At first these were Dutch and English joint-stock companies, and later was the growth of a global economy due to computers, satellites, and even the Internet.

The dynamic force in Globalization 1.0 was *countries* globalizing, while the dynamic force in Globalization 2.0 was *companies* globalizing. Friedman contends that Globalization 3.0 will be different because it provides “the newfound power for *individuals* to collaborate and compete globally.”{3}

The players in this new world of commerce will also be different. “Globalization 1.0 and 2.0 were driven primarily by European and American individuals and businesses. . . . Because it is flattening and shrinking the world, Globalization 3.0 is going to be more and more driven not only by individuals but also by a much more diverse—non-Western, non-white—group of individuals. Individuals from every corner of the flat world are being empowered.”{4}

The Flatteners

Friedman argues in his book that the global playing field has been flattened by new technologies.

The first flattener occurred on November 9, 1989. “The fall of the Berlin Wall on 11/9/89 unleashed forces that ultimately liberated all the captive peoples of the Soviet Empire. But it actually did so much more. It tipped the balance of power across the world toward those advocating democratic, consensual, free-market-oriented governance, and away from those advocating authoritarian rule with centrally planned economies.”{5}

The economic change was even more important. The fall of the Berlin Wall encouraged the free movement of ideas, goods, and services. “When an economic or technological standard emerged and proved itself on the world stage, it was much more quickly adopted after the wall was out of the way.”{6}

Thomas Friedman also makes a connection between the two dates 11/9 and 9/11. He noted that in “a world away, in Muslim lands, many thought [Osama] bin Laden and his comrades brought down the Soviet Empire and the wall with religious zeal, and millions of them were inspired to upload the past. In short, while we were celebrating 11/9, the seeds of another memorable date—9/11—were being sown.”{7}

A second flattener was Netscape. This new software played a huge role in flattening the world by making the Internet truly interoperable. Until then, there were disconnected islands of information.

We used to go to the post office to send mail; now most of us send digitized mail over the Internet known as *e-mail*. We used to go to bookstores to browse and buy books, now we browse digitally. We used to buy a CD to listen to music, now many of us obtain our digitized music off the Internet and download it

to a MP3 player.

A third flattener was work flow software. As the Internet developed, people wanted to do more than browse books and send e-mail. “They wanted to shape things, design things, create things, sell things, buy things, keep track of inventories, do somebody else’s taxes, and read somebody else’s X-rays from half a world away. And they wanted to be able to do any of these things from anywhere to anywhere and from any computer to any computer—seamlessly.”{8}

All the computers needed to be interoperable not only between departments within a company but between the systems of any other company. Work flow software made this possible.

Where will this lead? Consider this likely scenario. When you want to make a dentist appointment, your computer translates your voice into a digital instruction. Then it will check your calendar against the available dates on the dentist’s calendar. It will offer you three choices, and you will click on the preferred date and hour. Then a week before your appointment, the dentist’s calendar will send you an e-mail reminding you of the appointment. The night before your appointment, a computer-generated voice message will remind you.

The fourth flattener is open-sourcing. Open-source comes from the idea that groups would make available online the source code for software and then let anyone who has something to contribute improve it and let millions of others download it for free.

One example of open-source software is Apache which currently powers about two-thirds of the websites in the world. Another example of open-sourcing is blogging. Bloggers are often one-person online commentators linked to others by their common commitments. They have created essentially an open-source newsroom.

News bloggers were responsible for exposing the bogus documents use by CBS and Dan Rather in a report about President Bush's Air National Guard service. Howard Kurtz of *The Washington Post* wrote (Sept 20, 2004): "It was like throwing a match on kerosene-soaked wood. The ensuing blaze ripped through the media establishment as previously obscure bloggers managed to put the network of Murrow and Cronkite on the defensive."

Another example of open-sourcing is the Wikipedia project which has become perhaps the most popular online encyclopedia in the world. Linux is another example. It offers a family of operating systems that can be adapted to small desktop computers or laptops all the way up to large supercomputers.

A fifth flattener is outsourcing. In many ways, this was made possible when American companies laid fiber-optic cable to India. Ultimately, India became the beneficiary.

India has become very good at producing brain power, especially in the sciences, engineering, and medicine. There are a limited number of Indian Institutes within a population of one billion people. The resulting competition produces a phenomenal knowledge meritocracy. Until India was connected, many of the graduates would come to America. "It was as if someone installed a brain drain that filled up in New Delhi and emptied in Palo Alto."{9}

Fiber-optic cable became the ocean crosser. You no longer need to leave India to be a professional because you can plug into the world from India.

A sixth flattener was offshoring. Offshoring is when a company takes one of its factories that is operating in Canton, Ohio and moves the whole factory to Canton, China.

When China joined the World Trade Organization, it took Beijing and the rest of the world to a new level of offshoring. Companies began to shift production offshore and

integrate their products and services into their global supply chains.

The more attractive China makes itself offshoring, the more attractive other developed and developing countries have to make themselves. This created a process of competitive flattening and a scramble to give companies the best tax breaks and subsidies.

How does this affect the United States? “According to the U.S. Department of Commerce, nearly 90 percent of the output from U.S.-owned offshore factories is sold to foreign consumers. But this actually stimulates American exports. There is a variety of studies indicating that every dollar a company invests overseas in an offshore factory yields additional exports for its home country, because roughly one-third of global trade today is within multi-national companies.”{10}

The seventh flattener is supply chaining. “No company has been more efficient at improving its supply chain (and thereby flattening the world) than Wal-Mart; and no company epitomizes the tension the supply chains evoke between the consumer in us and the worker in us than Wal-Mart.”{11}

Thomas Friedman calls Wal-Mart “the China of companies” because it can use its leverage to grind down any supplier to the last halfpenny. And speaking of China, if Wal-Mart were an individual economy, it would rank as China’s eighth-biggest trading partner, ahead of Russia, Australia and Canada.

An eighth flattener is what Friedman calls *insourcing*. A good example of this is UPS. UPS is not just delivering packages, the company is doing logistics. Their slogan is Your World Synchronized. The company is synchronizing global supply chains.

For example, if you own a Toshiba laptop computer under warranty that you need fixed, you call Toshiba. What you

probably don't know is that UPS will pick up your laptop and repair it at their own UPS-run workshop dedicated to computer and printer repair. They fix it and return it in much less time than it would take to send it all the way to Toshiba.

A ninth flattener is in-forming. A good example of that is Google. Google has been the ultimate equalizer. Whether you are a university professor with a high speed Internet connection or a poor kid in Asia with access to an Internet café, you have the same basic access to research information.

Google puts an enormous amount of information at our fingertips. Essentially, all of the information on the Internet is available to anyone, anywhere, at anytime.

Friedman says that, "In-forming is the ability to build and deploy your own personal supply chain—a supply chain of information, knowledge, and entertainment. In-forming is about self-collaboration—becoming your own self-directed and self-empowered researcher, editor, and selector of entertainment, without having to go to the library or movie theater or through network television."{12}

A tenth flattener is what he calls "the steroids." These are all the things that speed the process (computer speed, wireless).

For example, the increased speed of computers is dazzling. The Intel 4004 microprocessor (in 1971) produced 60,000 instructions per second. Today's Intel Pentium 4 Extreme has a maximum of 10.8 billion instructions per second.

The wireless revolution allows anyone portable access to everything that has been digitized anywhere in the world. When I was at graduate school at Yale University, all of us were tied to a single mainframe computer. In order to use the computer, I had to hand computer cards to someone in the computer lab in order to input data or extract information. Now thanks to digitization, miniaturization, and wireless I

can do all of that and much more from my home, office, coffee shop, airport—you name it.

Biblical Perspective

Although futurists have long talked about globalization and a global village, many of these forces have made that a reality. At this point it might be valuable to distinguish between *globalization* and *globalism*. Although these terms are sometimes used interchangeably, I want to draw some important distinctions. Globalization is used to describe the changes taking place in society and the world due to economic and technological forces. Essentially, we have a global economy and live in the global village.

Globalism is the attempt to draw us together into a new world order with a one world government and one world economy. Sometimes this even involves a desire to develop a one world religion. In a previous article ("Globalism and Foreign Policy"), I addressed many of the legitimate concerns about this push towards global government. We should be concerned about political attempts to form a new world order.

On the other hand, we should also recognize that globalization is already taking place. *The World is Flat* focuses on many of the positive aspects of this phenomenon, even though there are many critics would believe it may be harmful.

Some believe that it will benefit the rich at the expense of the poor. Some believe it will diminish the role of nations in deference to world government. These are important issues that we will attempt to address in future articles.

For now, let's look at some important implications of a flat world. First, we should prepare our children and grandchild for global competition. Thomas Friedman says that when he was growing up his parents would tell him "Finish your dinner. People in China and India are starving." Today he tells his

daughters, “Girls, finish your homework—people in China and India are starving for your jobs.”{13}

Another implication is the growing influence of the two countries with the largest populations: China and India. Major companies are looking to these countries for research and development. The twentieth century was called “the American Century.” It is likely that the twenty-first century will be “the Asian Century.”

These two countries represent one-third of the world’s population. They will no doubt transform the entire global economy and political landscape.

Students of biblical prophecy wonder if these two countries represent the “Kings of the East” (Rev. 16:12). In the past, most of the focus was only on China. Perhaps the Kings (plural) represent both China and India.

A final implication is that this flattened world has opened up ministry through the Internet and subsequent travel to these countries. Probe Ministries, for example, now has a global ministry. In the past, it was the occasional letter we received from a foreign country. We now interact daily with people from countries around the world.

Last month the Probe website had nearly a quarter of a million visitors from over 140 countries. These online contacts open up additional opportunities for speaking and ministry overseas.

The flattening of the world may have its downsides, but it has also opened up ministry in ways that were unimaginable just a few years ago. Welcome to the flat world.

Notes

1. Thomas Friedman, *The World is Flat: A Brief History of the Twenty-First Century* (New York: Farrar, Straus and

Giroux, 2005), 9.
2. Ibid.
3. Ibid., 10.
4. Ibid., 11.
5. Ibid., 49.
6. Ibid., 52.
7. Ibid., 55.
8. Ibid., 73.
9. Ibid., 105.
10. Ibid., 123.
11. Ibid., 129.
12. Ibid., 153.
13. Ibid, 237.

© 2005 Probe Ministries