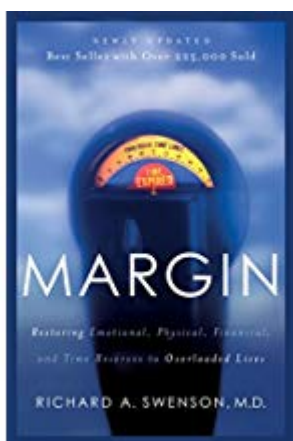


Margin: Space Between Ourselves and Our Limits

Margin is "The space that once existed between ourselves and our limits." When we reach the limits of our resources and abilities, we are out of margin. Former Probe staffer Lou Whitworth reviews a very important book by Dr. Richard Swenson, Margin: How to Create the Emotional, Physical, Financial, and Time Reserves You Need.

The Problem with Progress

Until very recently most Americans had a blind faith in progress; we acknowledged that modern life brought problems but considered that such were inevitable and could be dealt with and eventually overcome. Over the past few years, however, discerning people have begun to ask, "What went wrong? With all the advancements we have made, life should be better. Instead, many aspects of our lives are worse than they were just a few years ago. What happened?"



In this article we are looking at a very important book by Richard A. Swenson, a medical doctor. The book is *Margin: How to Create the Emotional, Physical, Financial, and Time Reserves You Need*. Dr. Swenson's thesis is that though scientific progress benefits us in numerous ways, it also brings with it inevitable pains that must be ruthlessly resisted if one is to live a balanced life, and especially a life that reflects Christian values/virtues.

Margin is "the space that once existed between ourselves and

our limits." When we reach the limits of our resources and abilities, we are out of margin. Progress, contrary to our expectations, is like Pacman; it incessantly eats up margin. Progress and margin are often opposing forces.

The author recognizes the pains of the past and acknowledges that life for previous generations was no picnic. Nevertheless, he amply illustrates the staggering number of challenges facing contemporary mankind, challenges that have no precedent in human history. The pace of modern life has been steamrolled by progress.

Many have resisted the notion that life in the waning years of the 20th century was unusually painful and stressful. After all, didn't our history teach us of those intrepid men and women who crossed oceans and braved the harsh winters of the new world to have personal and religious freedom? Shouldn't we be ashamed to complain about the stress in our lives when brave pioneer men, and their even braver wives, piled their children and all their belongings into covered wagons and headed west across unknown and unforgiving lands surrounded by potentially hostile Indians? Did not our fathers win World War II? After 50 years of strife and struggle and staring eyeball to eyeball with Russia, didn't America finally face down the threat of world dominion by implacable, godless communism? Where then do we get off saying that life today is hard and stressful?

As Swenson clearly points out, without minimizing the horrors of the past, modern progress brings problems never before faced by mankind. Some of our problems are very different from those of the past perhaps, but they are real, formidable problems just the same. For example, a partial list of problems would include the speed of travel, the power of computers, levels of litigation, pervasiveness of the media, specialization, business layoffs, indebtedness, vulnerability to terrorism, spiraling medical costs, AIDS, numbers of teen mothers and illegitimate births, aging population, overcrowded

prisons, environmental pollution, overcrowding, traffic congestion, prevalence of divorce, disintegration of the family, drugs, prevalence of sexual diseases, complexity at all levels, and on and on the list could go. Never before have we had to face problems of this – and certainly we have never before had to face them all at the same time.

As Swenson writes, “Each item has played a significant role in making our era different from all those that preceded it. And when we factor in the interrelatedness of issues, the dimensions involved, and the speed of change, then unprecedented become too mild a word.”

The Pain of Life Without Boundaries

In his book *Margin*, Dr. Swenson says that our problems have no precedent because of the rate of change. In the past we faced a slightly upward pattern of linear change; now we are looking at a skyrocketing pattern of exponential change in practically every area of life. Yet most of us still think and live with a linear mind-set. Suddenly we are encountering limits in our time, energy, health, finances, ability to concentrate, to care, to even feel. Minds, bodies, systems, plans that were adequate on a linear timescale may self-destruct at warp speed. We are perilously close to burnout. We hope beyond hope that things will level out and slow down, but even if that happens, much that makes life worthwhile and manageable will be destroyed in the meantime.

Examples abound of life without natural boundaries. Once it was a given that the night was for sleeping, and the day was for work. Now a hundred years after the electric light bulb, whole cities never sleep. Sunday was once a day of rest; nearly everyone had one day off from work. Now the boundaries between work and play and home and the office are so confused some people can never relax or let down. A few years back we might have known someone who had borne a child out of wedlock,

been divorced, had emotional problems, or gone bankrupt, but today we are in an epidemic of such problems.

Swenson asks, "Is there a critical mass of problems beyond which a society—or, for that matter, an individual—will be destroyed no matter how wonderful the benefits it enjoys? If so, what is that critical mass? Are we approaching it? Have we reached it?" He answers, Yes, there is a point of critical mass; what that point is we don't know, but clearly we are approaching it. He says it remains to be seen whether we have already reached it. As George Gallup wrote, "I've come to feel a deep sense of urgency about the Future Forces at work today. . . . If swift, forceful steps aren't taken to defuse the political and social time bombs facing us, we may well find ourselves on a track that could lead to the destruction of civilization as we know it."

It is critical to note here that progress has brought man much power— power that can be used for good or for evil. The sobering truth, then, is that the power to do evil advances exponentially, and modern secular man is not known for restraint nor does he recognize his fallenness and the danger it holds for himself and all humanity.

We have benefited from progress in two main areas. First, we have seen positive gains in medicine, technology, and in our standard of living and material well being. Second, our intellectual and educational opportunities have expanded enormously, and knowledge and information are increasing with unimagined speed.

The pain that progress has brought us is evident in three areas. First, we have lost ground in the social sphere as pressures have increased on all relationships: family, friendships, neighborhoods, community spirit, and church life. Second, we are often emotionally drained, stressed, angry, isolated, and frequently unfulfilled and don't know what to do about these problems. Third, we are spiritually weakened by

the pace of life, the lack of community, lack of time and energy to cultivate our relationship with God and with our fellow man. This, Dr. Swenson says, is the price we have paid for progress.

The Problem of Stress

Because of the unprecedented level of problems today people live with very high levels of stress. Stress is “the nonspecific response of the body to any demand made upon it.” Note that stress is not the circumstance but the response to the circumstance.

We normally think of such a crisis as the “fight or flight” reaction which pumps adrenaline into our system, makes us stronger and more alert, etc. If these responses are occasional there is little harm done, but if triggered too often or if “stuck” in a constant state of anger, rage, anxiety, fear, or frustration, we begin to overdose on our own adrenaline. This can bring about irreversible damage to the body and set it up for heart attack, stroke, cancer, etc.

Our stress levels are unprecedented. One reason is that most of us today experience constant mental strain without the offsetting benefits of strenuous physical work. When, for example, the commercial property deal we’ve worked on for months falls through, or the accounts don’t balance, or the computer just won’t cooperate, there is no place to run and no one to hit. We just have to try again. The physical laborer, even if he has some mental strain, still has the labor to drain off his adrenaline, and he usually has the ability to think about other things occasionally as he works.

Closely related to stress is overload; in fact, overload is a primary cause of stress. Our culture adds detail on top of detail; one more choice, one more option, one more change, and the details never end. “We must now deal with more ‘things per person’ than at any other time in history. Yet one can

comfortably handle only so many details in his or her life. Exceeding this threshold will result in disorganization or frustration. . . . The problem is not in the 'details.' The problem is in the 'exceeding.' This is called overloading."

The facts are that there are physical limits and man has performance limits, emotional limits, and mental limits. The work load a twenty-five year old athletic, single man can carry may differ greatly from the load a fifty-five year old man can carry if the latter has two teenage children and two children in college, dependent parents, and a wife in menopause. When such overload occurs, the person may experience anxiety, have a physical or nervous breakdown, exhibit hostility, slip into depression, or become bitter and resentful.

We are overloaded with activities, change, choices, commitments, competition, debt, decisions, education, expectations, fatigue, hurry, information, media, ministry, noise, people, pollution, possessions, problems, technology, traffic, waste, and work.

So why do we overload? First, we are usually unaware of our overload until it's too late. Second, some people are too conscientious. Third, others get overloaded because their bosses are driven people who overload their employees. Generally people don't intend to go down the path to overload; they just think that "one more thing won't hurt." But if they are at or near overload, it will hurt.

As the author says, learning "to accept the finality and non-negotiability of the twenty-four hour day" will help us avoid overload and excessive stress.

Building Margin into our Lives

Of all the areas in which we need margin, having adequate emotional energy is the most important because with emotional

margin one can work to gain the other margins.

The amount of emotional energy we have is finite and must not be squandered. Though it is difficult to measure and quantify we must not be embarrassed to admit to ourselves or to others when our emotional reservoir is low. Then we need to replenish our emotional reserves for the good of others and ourselves.

Restoring emotional margin is aided by cultivating our social and family support network. Serving others or doing volunteer work is proven to enhance and lengthen life. Extending forgiveness and reconciling relationships can stop the negative drain on our emotional stores. Cultivating a spirit of gratitude, a hopeful outlook, and love for God and our fellow human beings is energizing, whereas their opposites are negative and debilitating. Finally, establishing appropriate limits and boundaries will help in maintaining emotional reserves.

Dr. Swenson's recommendations for gaining a margin in physical energy are fairly routine to the knowledgeable reader, but he puts particular stress on the need for the need for rest and sleep. The need for correction is clear since America has now become a 24-hour society: many of our cities never sleep and many businesses never close. People of all types, college students, policemen, nurses, taxi drivers, shift workers, and mothers of young children, may go long periods without a good night's sleep. Such people push (or are pushed) to their limits during the day and push on into or through the night. Sleep disorders plague more than 50 million of us; in fact, sleep deprivation "has become one of the most pervasive problems facing the U.S." Unfortunately the ability to go without sleep is sometimes a matter of pride for some, but sleep and rest are God's ideas, and we should not be ashamed of our need for both. The author gives several helpful suggestions on making sleep more natural and effective.

Dr. Swenson strongly stresses the need for all types of

physical exercise, but says that aerobic exercise for the heart “will do more to establish margin in physical energy” than anything else. He endorses exercise not only for its physical benefits but also for its emotional and mental benefits.

When the subject turns to time the author writes, “The spontaneous flow of progress is to consume more of our time, not less . . . to consume more of our margin, not less.” He adds that for “every hour progress saves by organizing and technologizing our time, it consumes two more hours through the consequences, direct or indirect, of this activity.”

Clearly time becomes a problem for a society like ours. Some the author’s suggestions for countering the time crunch are countercultural and tough to implement, but then continuing on in the same direction most of us are going is difficult as well. He suggests practicing saying “No,” turning off the television, practicing simplicity, and getting less done but doing the right things. Many of us need to make some thoughtful and hard choices.

The author’s suggestions for gaining a margin in time are preceded with a reminder that of the ten top stressors of family life, four have to do with insufficient time: insufficient couple time, “me” time, family play time, and overscheduled family calendars.

Why do we need to prune our time wasters? Because time is for people and relationships, subjects very dear to God.

A Plan of Action

There are many ways we can spend our time. We could follow the “Excellence” gurus and pour all our energy into one part of our lives. We would probably have no extra margin since other parts of our lives had been sacrificed and in a condition of “negative excellence.”

At some point, all things being equal, we would become quite accomplished in a given area. The end result, however, might be similar to having one magnificently developed right arm attached to puny, stooped shoulders, a scrawny left arm, and skinny, weak legs. This is like the person who is a powerhouse in his professional life and a dwarf in his relationships.

Dr. Richard Swenson suggests a different way in his book *Margin*. He suggests an approach to life that neglects no important area. He suggests being willing to sacrifice excellence in one or two areas in order that no area be in a condition of negative excellence. This would be similar to the athlete who is toned and conditioned all over, but not overly developed in any one area.

A similar balance in our lives will increase our emotional margin because we and our families will be happier.

Simplicity has much to offer harried twentieth-century man. But it isn't easy. It takes effort to discard the superfluous and concentrate on the core elements of life. There has always been an attraction to simplicity; the difficulty has been in achieving it. The simple life the author calls us to is not so much to escape modern life as to transcend it.

Envy is the enemy of contentment and form of self-inflicted torture. Yet because envy is the chief ingredient of advertising and the mainspring of political and social movements, it is difficult for many to see its destructiveness. We need to follow Paul who learned contentment in whatever circumstance he found himself (Phil. 4:11-12; 1 Tim. 6:6-10). The practice of contentment brings margin into our lives.

The pain that progress has brought us is mostly in the area of our emotions, our relationships, and our spiritual natures. What are some additional steps start dealing with the pain and achieving some margin?

First, thank God for the pain. The pain pointed out that something is wrong. Second, repent in a way that leads to permanent, tangible change. Third, prune activities and habits that waste time, sap energy, and stifle relationships. Fourth, cooperate with God. Bathe plans in prayer and leave wiggle room for yourself, your family, and people God may send your way.

- How did we relate to God?
- How did we relate to ourselves?
- How did we relate to others?

The road to health and blessing in the path of relationship. Love and relationships are hard work, and sometimes costly because superfluous, unimportant things may need to be put aside, but the payoff is happiness, contentment, peace, and margin. I hope some of the things we have shared in this article turn you from the path of overload and start you down the path of margin.

©1995 Probe Ministries

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 greater 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 it 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 Christians 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.