

Peak Oil and the Steep and Thorny Way to a Walden Two.

Introduction

Paul Chance recently published an essay in the Behavior Analyst (2007) in which he noted that B. F. Skinner was increasingly pessimistic about the future of our species before he died. A personal discussion I had with Skinner back in 1981 established the same conviction for me. Today, I am going to tell you why I am pessimistic about what is happening in our economic environment. Many believe it promises to make wrenching changes in how we live. To some extent we can prepare ahead. I believe "the race is to the swift." And I will argue that we must move swiftly in our personal lives.

Operant behavior has a problem, however. An old rule says that "humans are creatures of habit." Skinner reformulated this in this way-- "Operant behavior, like natural selection, prepares the organism for a future, but it is only a future that is similar to the selecting past." What he was pointing out is that what we do is what our contingencies have prepared us to do. The places

we live in and what we do there each day are all products of operant reinforcement contingencies.

But habits outlast the contingencies that established them. What we have done in the past, we are likely to do in the immediate future. We, here at ISB, believe that ALL of our behavior is predictable IF we could specify the past and current variables responsible for it. We assume that behavior is never truly whimsical. We are not the architects of our own behavior-- we are merely loci where variables converge. Our personal habits may have once been reasonable, but the world is rapidly changing and many of them no longer align with a bright future.

Without the influence of others, we are "prisoners of our contingencies." If no immediate variables change significantly, our behavior will not change significantly. (And I might add-- this is just as true for the behavior analyst (or behaviorologist) as it is for the next person. If you turn the sound off, most students of behavior are not much different from the next person.) When behavior becomes "irrational" a sub-culture can rescue us from our prisons.

I am going to propose that we who better understand the reasons for behavior should use our knowledge to save ourselves

from ominous current trends. But let me first turn to the looming "icebergs" in our pathway, before I eventually discuss what immediate actions I believe we must quickly take.

[Two looming crises]

Two very serious events are happening together for the first time in our personal world--the energy crisis and a U.S. financial crisis. James Howard Kunstler in his recent book "The Long Emergency" carefully outlined the global energy picture. He, as well as many other writers, argued that we are beginning to run out of energy. Here is a series of figures that tell an alarming story about world energy consumption and reserves:

WorldConventionalCrudeOilProduction.jpg

UsOilProduction.jpg

MexicoOilProduction.jpg

CanadianOilProduction.jpg

NorthSeaOilProduction.jpg

WorldNaturalGasReserves.jpg

USnaturalGasProduction.jpg

GlobalUraniumReserves.jpg

UScoalProduction.jpg

This series of figures was self-explanatory. With the exception of coal and methane hydrate reserves, we are running out of non-renewable energy. Coal and methane hydrate use will radically increase the rate of global warming. They are not solutions to our energy crisis.

[THE DEVELOPING U.S. FINANCIAL CRISIS]

Now, let me turn to another and more immediate problem. In the U.S, we are experiencing the development of a debt crisis of alarming proportions—a meltdown in our system of credit. During the past 20 years, the U.S. financial system has experienced the evolution of poorly regulated and increasingly complex debt instruments held and issued by companies, banks, and government institutions. But at this moment contraction—**not expansion**-- is happening. Falling confidence, increasing pessimism, and the stock market sell-off have been accompanied by the move to hard assets like gold. These U.S. events are spreading world-wide.

Debt has become necessary to the functioning of our financial system. But the debt risk has been shifting from borrowers and issuers to investors who purchased complex instruments sold in the stock market. Home mortgage failures have pulled down the market

price of homes. And the farther prices go down, the more home owners come into "upside-down" mortgage debt situations.

As a result, forms of debts and their conveyances are now less trusted. The US banking system is in very deep trouble and the Federal Reserve has taken the most aggressive actions to flood the market with liquidity since the great depression. The first symptoms in subprime-mortgage debt seemed to be confined to the home-construction industry. But we have learned that mortgages had been turned into "securities" traded in the stock market. These securities have suffered serious losses in market value. To make matters worse, these securities have been used as collateral by banks for further loans, amplifying the losses, because "margin calls" have required the selling of them at deteriorating prices.

But recently we have learned that not just banks, but also corporations, states, and cities have created and traded their own version of the convoluted debt instruments and risk-transfer mechanisms that once seemed so promising. It is now suggested that the \$45 trillion market for insurance on all of these commercial and government credit instruments is also at risk because **that** market has also been engaging in speculative and poorly unregulated practices.

Virtually every week we discover that some new large, but obscure, corner of the U.S. and world financial system depends on the confidence of investors in order to survive. All of this suggests more troubles that spill into **yours** and **my** personal finances.

External analysts argue that the current debt problems influencing the market are not ultimately solvable by fiscal or monetary policy changes, political gestures, or hundreds of billions of dollars in new investments. They argue that we are already in an economic recession regardless of what our administration says. Further, they recently argued that--to reverse the credit developments--hundreds of billions of dollars are needed just as a start. It was no surprise that in the last two weeks the Federal Reserve did just that.

It has been suggested that we will need a restoration of confidence in dishonored regulatory bodies, bank executives, and ratings agencies. We will need whole-scale changes in the way financial companies are governed and managed worldwide. However, this will take precious time and on an unprecedented world-wide scale. Until that happens short-term fixes appear not be working. Federal executive power to muscle things around hasn't worked. Congress is now injecting \$160 billion through rebate checks, but

this amounts to only 1 percent of Gross Domestic Product. In all of this, people who really know what is happening have become ardent sellers of investments and more are turning to gold as a haven.

The deficits of financing are apparently growing by each day. Where will this money come from? Apparently nowhere and this is the problem. The Federal Reserve can "print money" to solve the problem, but everyone knows this constitutes the direct inflation of the dollar. There seems to be no magic bullet. Especially worrisome for many of us **in this room** is that our retirement funds contain troublesome securities. In a sense **all** of our holdings relate in some way to the debt crisis. It is quite possible **that our future income may go down** while higher **inflation eats away at our purchasing power.**

[WHO WILL COME OUT OF THIS ON THEIR FEET?]

Now that I have sufficiently cheered you up about the energy and financial futures, let me turn to what we can do personally, and why it will be difficult.

But before I do that, let me define a term used by recent writers. It is called the "**consensus trance.**" A trance is a

half-conscious state, a dazed or bewildered condition.

"Consensus" is a collective judgment or belief--a general agreement or concord. **A "consensus trance" is the collective judgment or belief arising in the midst of a bewildering situation.** Saying "We will get through this, we always have, something will bale us out, nothing bad lasts forever" can be called a "consensus trance." "Change always happens slowly, we will adapt when we need to." "Don't get upset about this." "We are all together in this--we have a lot of company." All of these are examples of the "consensus trance" because they are simply a continuation of current behavior without an analysis of its rationality. I will return to this term shortly.

The looming icebergs of finances, energy, global warming, and nuclear conflict are far beyond our personal reach. Let us assume that we cannot change the world. It is too big and we do not have the power. Let us further assume that the variables we **can** change are in our personal lives--the environments of our personal day-to-day actions. Because we cannot change the world at large and we **can** change variables in our personal lives, the remainder of this paper will be devoted to what we **can** do.

[Immediate practical actions:]

We must bring the facts and predictions of science to bear upon what we do each day. If science predicts we will run out of non-renewable energy sources, we can personally turn to renewable sources for our home, for example, wood, solar, or wind power. If fuel for traveling will dwindle, we must move closer to our work, or better yet, find occupations conducted largely at home. If petroleum-based fertilizer and transportation fuel will dwindle, we must find local organically grown food--better yet, raise as much of it as possible ourselves. If energy sources will no longer support cities, we must relocate to small towns. If we can no longer travel to concerts, we must learn how to make our own music and enjoy that produced by our friends. If we like to play tennis, we must walk to the courts. If we can no longer support school busses, we must maintain schools in our small communities where our children can walk to them. If we can no longer afford specialized housing for our disabled or aged population, we must arrange for their care in our local communities or at home.

Does a small community like this sound familiar? Have you heard about it before?

[WE ARE GOING THERE, SO LETS PLAN TO GET THERE WITH THE LEAST POSSIBLE PAIN]

It is all but unthinkable to imagine that the nature of our personal lives will eventually return that typical of the pre-oil era. But unless something miraculous happens--it is inevitable. As resources dwindle, we will have little choice but to return to local communities and more investment of physical labor. Cities will become increasingly dangerous places to live. I am 63 years old and now moving in the directions I have outlined. I no longer engage in the "consensus trance."

I believe that Skinners model for small community living--Walden Two--would be a good place to start. Indeed, much of the daily behavior described in Walden Two is exactly what is quite likely to happen **by necessity, not choice**. But few of us are prepared for this. We need to formulate a plan of personal action and share it with others in our group. What seems extreme, foolish, and alarmist, may simply be good planning. We would prepare **long ahead** for a hurricane or tornado in the same way--even though many people around us are engaging in the "consensus trance."

Here are some specific suggestions. We could create and share charts showing the achievement of progressive goals toward self-sufficiency. We could each post these charts in conspicuous

places--helping to keep us on target. They might be weekly charts of the consumption of kilowatts, gallons, etc., for example. We could maintain internet contact on a frequent basis with others of "we happy few" --to maintain enthusiasm. Websites at which we all posted our progress charts should occasion helpful support.

Through such websites we could share information about access to all kinds of resources that support our goals toward greater self-sufficiency and the preparation for hardships that will undoubtedly come. There is little question that we will experience blackouts, brownouts, gas lines, fuel rationing, and much more in the not very distant future. All it would take is one massive terrorism incident or wide-spread bird flu. The Boy Scout motto "Be prepared" has never been more relevant.

Here are further actions we can take. We can acquire a personal policy of buying locally produced goods whenever possible. We can take workshops and acquire practical skills for dealing with health emergencies. We can take personal actions that better insulate ourselves from the coming energy disruptions. While it may seem to be extremist, many families have stockpiled provisions necessary to carry them through a flu epidemic without the necessity of coming into contact with people in public places. Some families have purchased generators that can carry them through blackout periods. Many of us in Florida are now making a practice

of this. If it takes electricity to run a fan or pump in **your** home heating system, you are also a candidate.

Let me summarize. I am afraid that most of us in this room will quickly assume the "consensus trance" when I finish this presentation. That would be easy to explain. If our personal environments do not support changing our behaviors, we will not change. We will simply go home to the same environment and behave in the same ways.

But it is a crucial point of this paper that **WE** are the "happy few" that Skinner referred to at the end of his life. I believe that we are the "chosen few" -those very few people who better understand the defect in operant conditioning that makes it difficult to make rapid changes in personal behavior. Our knowledge of operant reinforcement has arrived late in evolution. Our understanding of the importance of supportive cultures has arrived even later. It is critical that "we happy few" ensure the survival of our understanding. To do this we must translate our knowledge into corrective action in our personal lives. I submit that we can do this only **if we help each other change our personal contingencies and maintain them** in ways that promote the survival of our special culture. In creating and maintaining this culture,

I believe we will be creating a "virtual" Walden Two--if not a physical one.