

Joel Barker's The New Business of Paradigms: 21st Century Edition

Introduction

When you think about it, the last two decades of the 20th century were amazing. A series of revolutionary changes occurred that have affected almost everyone on planet Earth:

- ◆ The Space Shuttle making regular flights to the International Space Station.
- ◆ The wide spread application of Total Quality and Six Sigma Management.
- ◆ The birth of the Internet, the World Wide Web and e-commerce.
- ◆ The dissolution of the second mightiest nation on earth, the Soviet Union, without having a war.
- ◆ The global commercialization of cellular phones and pagers giving people around the world access to communications that had once only been a dream.
- ◆ The adoption of the Euro-dollar, by countries who used to fight over the sanctity of their own national money.

Even this building, The Weisman Museum at the University of Minnesota, is a revolution in design. Everywhere, across the world, there have been revolutions in the way we do things.

Paradigm Shifts

My name is Joel Barker and I'm a futurist. For more than 25 years, I've been helping corporations and institutions prepare for revolutionary change.

Those changes I just listed have been called 10X change, radical innovation, disruptive technology and sometimes "out of the box" thinking.

But, all of those are just variations on a much more powerful theme. All of those changes were "paradigm shifts."

That term was introduced to popular culture in the 1980's. Yet, even now, in the 21st century, many people do not understand what a "paradigm" is or why "paradigm shifts" are so important.

From my years of research, I can tell you that if you want to enhance your ability to innovate, be a better leader, run a more competitive organization...if you want to discover the future, you need to understand the business of paradigms.

Paradigm Definitions

I first ran into the word PARADIGM in Thomas Kuhn's book, *The Structure of Scientific Revolutions*.

When you look up "paradigm" in the dictionary, you find it means "pattern" or "model."

Let me offer you a more extended definition:

A paradigm is a system of rules and regulations that does two things:

First, some of the rules set limits or establish boundaries—just like a pattern sets the edges.

Then, the rest of the rules offer you guidance on how to be successful by solving problems that exist inside those boundaries—in a sense, they offer you a model for problem solving.

So a paradigm is a problem-solving system. And a paradigm shift is when you change from one set of rules to another.

In his book, Thomas Kuhn explored how paradigms affected scientists.

He discovered that scientific paradigms act like filters that screen data coming into the scientists' minds. Data that agreed with the scientists' paradigms passed through those filters easily. In fact, scientists saw “agreeable” data amazingly well. That's positive and valuable.

But Kuhn also discovered a startling negative effect. Some kinds of data were very difficult for the scientists to perceive.

What kind? Data that didn't match the scientists' expectations. In fact, the more exceptional the data was, the more trouble scientists had dealing with it.

It was as if their paradigms interfered with their ability to clearly see the data.

Kuhn discovered, in some cases, that scientists were literally – physiologically – incapable of perceiving the exceptional data.

For all intents and purposes, that data was invisible.

Now, let me put Kuhn's findings in more general terms: all human beings, not just scientists, have paradigms that influence the way we see the world. We all constantly select that data that best fits our rules and try to ignore the rest.

As a result, what may be perfectly obvious to a person with one paradigm may be totally imperceptible to someone with a different paradigm. Because each paradigm filters the world in a different way.

I call this filtering phenomenon the Paradigm Effect.

And it is the Paradigm Effect that makes dealing with change and anticipating the future so difficult.

The Paradigm Effect can prevent any one of us, no matter how smart we are, no matter what line of work we are in, from finding breakthrough solutions to the problems in our lives. No one is immune.

Now up to this point, we've only been talking in abstractions. So let's take a look at some concrete examples that demonstrate just how powerfully our paradigms influence the way we see and understand the world.

The Adding Problem

I've set up a simple experiment to test your adding paradigm. I'm going to show you a series of numbers, one at a time. And yes,

they are in the base 10. I want you to add them silently in your head.

Ready? Lets go:

1000

40

1000

30

1000

20

1000

10

Total

Please call out your total!

For those of you who got 5000, would you please raise your hand?

That's the answer most people get. Unfortunately, it is not the right answer.

Let's look again.

1000, 2000, 3000, 4000. Right.

40 + 30 is 70 +20 is 90+10 is 100. Right?

4000 + 100 is 4100.

Would those of you who got 5000 please raise your hands again?

Don't feel bad. I once showed this problem to 280 Certified Public Accountants. Almost every one of them got it wrong. And these are the guys who do our taxes!

But seriously, why did we mess up? Instead of helping us, our adding paradigm actually got in the way and kept us from seeing what was really happening. We had to carry this one somewhere, and it was "obvious" that we should carry it to the four. Our adding paradigm made us feel sure that what we were doing was right and blinded us to the correct answer. That's the Paradigm Effect in action.

Now, this may seem like a trivial example and not connected to real life. So let's look at some real life examples.

The MP3 Story

In the late 1970's, Sony created a new paradigm in personal music access. They called it the "Walkman." It had a new set of rules: portable, playback only, headphones, cassette tapes with linear access to the music. It was an immense success.

Ten years later, the Walkman was challenged by another paradigm shift: the portable CD player. A disk instead of tape. Laser readout. The music put on that disk only by the recording companies and access to the music is nonlinear—you can start and stop wherever you want.

In 1998, it happened again. The CD paradigm was challenged by the MP3 player. This time, no tape, no disks, no moving parts at all. Instead memory chips store the music that you transcribe from your personal music inventory via computer or download from the Internet. You erase and replace to change your music.

Based on this pattern, I suppose we can expect another paradigm shift in portable music soon. But that's the way it works. Notice, what was impossible to do in one paradigm, was easy to do in the next. That's why paradigm shifts are so powerful.

The Frog Story

This story illustrates how serendipity and curiosity play an important part in discovering new paradigms.

In connection with his research, Dr. Michael Zasloff was performing surgery on frogs in his laboratory.

Instead of killing them after the surgery--standard operating procedure--he sutured them up and returned them to the aquarium.

Now get this: eight years into his research, it dawned on him that not only were the frogs surviving, but their incisions were healing without infection or inflammation. Despite all those nasty bacteria in the water!

Everything he knew about infection told him that was not possible.

So, he stopped doing his official research and tried to find out why.

Dr. Zasloff found a new category of biochemicals--antimicrobial peptides--that the frog secretes to protect itself from pathogens.

These potent chemicals represent a new antiseptic paradigm that could alter forever the way we deal with infection.

By the way, Michael Zasloff wasn't planning to discover these peptides. His specialty had nothing to do with antibiotics.

But he was willing to get "out of his box" in order to try to understand what was going on.

The Michael Dell Story

Personal computers. All sizes. All shapes. Multiple colors. Portable. Rows of them in retail stores.

What is conspicuously absent from all these models is a computer from Dell, one of the great computer makers in the world.

To understand why, we need to go back to 1983. Imagine this: you are in your early 20's. You want to get into a new industry that is dominated by one of the largest companies in the world. You have almost no money. So you decide you are going to get your customers to give you their money before you even begin to build the product you're going to sell to them.

Crazy, right? That's exactly what everyone told Michael Dell when he started his company. Impossible! Ridiculous!

But he didn't stop there. He decided he would sell his computers only over the telephone. Then he and his team created a manufacturing process so efficient that ultimately, it required only five days of inventory and could assemble the customer's computer in just 20 minutes. These advantages were impossible for Dell's competitors to match.

What Michael Dell created was not just a computer company, but a new paradigm of how to do business and he and his company have reaped the benefits for more than 15 years. All because he was unafraid to break the rules.

Going Back to Zero Rule

There is a crucial and profound truth hiding behind the paradigm examples I've shown you.

No matter how tall your skyscrapers, or how big your market share, or how global your organization...

When a paradigm shifts, everyone goes back to zero.

Your past success guarantees nothing in your future.

Toyota put General Motors back to zero.

Dell did it to IBM.

Wal*Mart did it to Sears.

Nokia did it to Motorola.

The Cell Phone Story

Motorola dominated the world of analog cellular phones from the mid 1980's to 1994.

They were so good, they were able to gain substantial market share in Japan, almost unheard of in electronics.

In 1994, the cell phone paradigm shifted...from analog to digital. In spite of their leadership position...maybe because of it...Motorola didn't seem to recognize what was happening.

So dominant were they in the analog paradigm that they decided not to enter the digital market until they had a product that sounded at least as good as their analog phones.

But there was only one problem with that strategy. Key customers wanted to enter the digital arena as quickly as possible—AT&T being one of them. When AT&T came to visit Motorola, they discovered, much to their dismay, that Motorola wasn't ready.

Meanwhile, 500 miles south of the Arctic Circle, where long nights are common, a Finnish company named Nokia was lighting up the landscape.

They had planned and designed for the digital revolution. So when AT&T declared

their need for a digital cell phone, Nokia was ready with the 2110.

While the 2110 was not perfect in a Six Sigma kind of way, it was perfectly acceptable to AT&T and their customers.

Within a matter of months, Nokia became AT&T's lead digital phone provider.

In one bad decision, Motorola missed the opening bell for the digital revolution.

From their position of world dominance in 1994, their market share fell steadily to less than 13% by the year 2001.

And at exactly that same time, Nokia went from a small, unknown Finnish company to Global leadership with almost 40% of world market share.

Please keep in mind that this is a story not just about the Motorola and Nokia. It's about you. It's about me. It's about any organization, any culture, any nation that assumes what has been successful in the past must continue to be successful in the future.

Let me remind you once again. When a paradigm shifts, everyone, even the most successful, goes back to zero.

Key Paradigm Observations

What I want you to remember here is that paradigms dramatically affect our judgments and our decision making by influencing our perceptions.

We must never forget: we see best what we're supposed to see. And poorly, or not at all, that data that doesn't fit our paradigm.

So if we want to make good judgments about change, if we want to lead successfully to the future, we must become aware of our present paradigms, and then be unafraid to replace them.

Now, let me share with you some key observations about paradigms.

Observation Number 1. Paradigms are common. We have many paradigms in almost all aspects of our lives, whether it's personal or professional, spiritual or social.

Observation Number 2. Paradigms are useful. They help us identify what's important and what's not. They focus our attention. They give us invaluable guidance for solving problems. That's good.

But, and this is Number 3, and it's a warning. Sometimes your paradigm can become the paradigm – the only way to do something. And when you're confronted with an alternative idea, you reject it. This can lead to a nasty disorder I call "Paradigm Paralysis."

Paradigm paralysis is a terminal disease of certainty. It's easy to get and more than a few institutions have been destroyed by it.

This reminds me of a maxim: "Those who say it cannot be done should get out of the way of those who are doing it."

Observation Number 4. The people who discover new paradigms are usually outsiders, like Michael Zasloff. They are not part of the established paradigm community. Therefore, they have nothing to lose by creating the new one.

So, if you want to find the new paradigms developing in your field, you must look beyond the center, way out to the fringes.

Because almost always, the new rules are written at the edge.

That's where Apple started. That's where micro-loans were invented. That's where the Green party began. That's where the Women's Movement was born. All of them at the edge.

Number 5. Those practitioners of the old paradigm, who choose to change to the new paradigm early in its development, have to be very courageous.

Let me quote from Thomas Kuhn:

"The person who embraces a new paradigm at an early stage must often do so in defiance of the evidence provided by the problem solving. A decision of that kind can only be made on faith."

The mark of these paradigm pioneers is great courage... and trust in their intuitive judgment.

Now, for the last point, and the most important. You can choose to change your paradigm. Perhaps the greatest strength human beings have is that we are not

genetically encoded for seeing the world only one way. You can choose to shrug off your old paradigm and adopt a new paradigm.

That's why I'm such an optimist about the future.

Conclusion

Let me leave you with a couple of thoughts.

Even though that building represents a recent paradigm shift, sooner or later, it will become history and another paradigm of design will replace it.

That kind of turnover scares some people. They want the world to stop changing. But it won't. It won't because the world is designed to grow and change.

And if you think about it for a minute, that is a wondrous thing. It's a kind of promise of continuous opportunities for those of us willing to seek them out.

The great French novelist, Marcel Proust said it this way: "The real voyage of discovery consists, not in seeking new lands, but in seeing with new eyes."

The new worlds are waiting. And so are the new paradigms.

The key to their discovery is your willingness to open your eyes to the possibilities ahead.