



FACILITATOR'S GUIDE

# THE BUSINESS OF PARADIGMS

WITH  
JOEL BARKER



DISCOVERING THE FUTURE SERIES

FACILITATOR'S GUIDE



STAR  
THROWER

# THE BUSINESS OF PARADIGMS

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JOEL BARKER



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DISCOVERING THE FUTURE SERIES

FOR PREVIEW ONLY

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## SECTION 1: INTRODUCTION

### About the Author

In “*Discovering The Future: The Business Of Paradigms*”, Joel Barker, eminent futurist, shows what paradigms are and explains their effects. As presented in the film, Mr. Barker’s paradigm concepts empower people to better anticipate and deal with revolutionary change.

Mr. Barker is an author and lecturer, and president of Infinity Limited Inc., an internationally known consulting firm that invented the concept of Strategic Exploration. He has been studying the process of change since 1973.

Mr. Barker first brought the concept of paradigms to the business world in 1974. Since then he has worked with thousands of companies in North America, Europe and the Pacific Rim, helping them to understand the influence of paradigms in their organizations.

### About this Master Trainer’s Manual

We have received numerous “success stories” from trainers like yourself who have had excellent results in using *Discovering The Future* in a wide variety of situations. This manual is based in part on their suggestions as well as Joel Barker’s extensive experience in leading discussion on innovation and change. The manual is broken into 6 sections. This first section (the one you are reading now) is intended to provide general suggestions on leading discussions, as well as an overview of the material in the guide. The “heart” of the manual appears in sections 2 and 3. There we explore two of the most beneficial approaches to discussion which can be based on *Discovering The Future*.

## SECTION 2: THE PROCESS OF INNOVATION

The first subject area will help your group focus on the process of innovation—specifically, what helps and what inhibits innovation. This section offers a complete overview of paradigms and shows how a better understanding of them leads to innovation. With the group, you will examine paradigms throughout history, paradigms that have changed in the past twenty years, and current paradigms that might be on the brink of change. Exercises focus on the paradigms of the organization and the group member’s personal paradigms.

From there discussion moves to exercises that will help stretch the group's ability to anticipate the future. We will discuss potential innovations that, if they occurred, might change the course of your organization, your industry, maybe even the world! Finally the group explores innovations of the future.

The movement in this section is from the broad spectrum of past paradigms, to paradigms that are important in your group's sphere at present, then out again to the possibilities of the future. This discussion can be very powerful for everyone involved in it and can be used as an ongoing reference for change and improvement within the organization.

### **SECTION 3: DEALING WITH CHANGE**

The second group of exercises (section 3) is designed to help your organization deal more effectively with change. In the context of change, the program can be used in at least three ways: 1) To create an open atmosphere in which to introduce a specific change that an organization is experiencing or about to experience; 2) As a way to get people thinking ahead to possible changes that your organization may face in the future, rather than reacting to changes once they occur; 3) As a way to help everyone overcome fear of change, and to see the opportunities that changes can present.

The group will explore a variety of changes, from small to sweeping, from personal to global. We explore how change "feels," starting with our natural resistance and fears of change. The discussion then moves to the positive aspects and opportunities that are associated with change.

Movement in this section is from an acknowledgement of the negative aspects of change to emphasizing the positive outlook. The exercises can be used to facilitate discussion about a specific change that needs to happen, or is about to happen in your organization. This section of exercises can help your organization understand why we resist change, why it is important to be open to change, and how to overcome our resistance.

### **SECTION 4: GROUP SPECIFIC DISCUSSIONS**

This section focuses on the needs of some target groups within an organization—research and development teams, management, and sales and marketing. In this section, you will find questions about change that relate to these groups and examples of how such groups have made use of the program to tackle some of the common problems that confront them.

**SECTION 5: TRANSCRIPT**

Many trainers have expressed their interest in having a printed copy of this program for their reference as they prepare notes. The complete transcript of *Discovering the Future: The Business of Paradigms* is provided here for your use.

**SECTION 6: MASTER VISUALS**

At the end of this guide, you will find printed typeset “masters” for your use in preparing slides, transparencies or other visual aids. The masters are all numbered. You will find references to the master(s) appropriate to the exercises in the left margins of the guide.

**Benefits of the Program**

*Discovering the Future: The Business of Paradigms* helps people understand what paradigms are and how they can act as barriers to change and innovation. This program has been used by thousands of groups around the world. Applications are as varied as the organizations using the program, but some common benefits defined by the users are as follows:

Helps people understand the forces that often prevent us from being successful in dealing with change.

Provides a “common language” for discussing change.

Explains why there are negative reactions to new ideas.

Reduces the degree to which change is seen as threatening.

Increases people’s abilities to become more exploratory.

Shows organizations where to look for the kinds of revolutionary changes that fundamentally rewrite the rules of “the game”.

Provides key insights on how to improve the process of innovation.

### Suggestions for Leading Discussions

This manual offers a step-by-step guide for leading discussions with a group that has seen “Discovering the Future: The Business of Paradigms.” It does this by further developing the ideas set forth in the program and by presenting some new ideas and exercises which allow participants to link these ideas to their own experiences and those of their organizations.

Before going on to the body of the guide, you may wish to review the following general suggestions for facilitating a group discussion of change and paradigms. Change can be a loaded issue. The future, for some, is especially threatening. Being sensitive to those feelings can greatly assist you in leading worthwhile discussion.

#### REDUCE TENSION

As soon as everyone is assembled go over what you will present to them so that everyone knows what is to come. Be informal and reassuring. Create a climate of trust. The atmosphere is important because only if people feel comfortable will they venture into new territory. Phrase the problems you hope to deal with in the form of questions whenever possible.

#### ENCOURAGE DISCUSSION

Address the group rather than individuals; in other words, avoid singling anyone out. Give everyone a chance to speak. Speak of “us” and “we” rather than “you” and “I”. Watch out for hidden agendas, yours or others. Control dominating speakers. Avoid criticizing anyone’s remarks. Bounce your own opinions off the group in the form of questions.

#### LISTEN CAREFULLY

Formulate a reply after someone has finished making a statement. Concentrate on what the person is saying while they are speaking. Don’t get emotionally involved. Listen carefully when someone proposes something that is contrary to your opinions because this behavior is the essence of dealing with new paradigms. Keep off tangents, but be receptive to off-beat solutions and dissenting opinion.



**ASK “WHAT IF?” QUESTIONS**

A good way to keep the discussion moving is to ask “what if...?” Such a question allows the imagination to come into play. Ask “how might” rather than “how should” questions. If discussion dries up, encourage more alternatives. Listen for ideas that might lead to new topics.

**EXPLORE ALTERNATIVES**

One of the principal benefits of *Discovering the Future: The Business of Paradigms* is the way it can open people up to new or unusual solutions. Be sure to listen for these kinds of ideas. Don't dismiss anything out of hand. If the group gets “single solution” minded, suggest more exploration.

**BE ENTHUSIASTIC AND INVOLVED**

Prior to leading this discussion, it will be helpful if you take a few notes on the film —jot down what intrigued you most and connect it with your own life or your organization. Although examples are usually offered within the exercises of this guide, come up with some of your own—You'll usually use your own examples best because they will be more meaningful to you.

**BE FLEXIBLE**

There is an order to the exercises in the discussion plans, but it can be revised. Each exercise takes about fifteen minutes, although if a good discussion gets going you might choose not to hurry the group on to the next exercise. Please feel free to make the exercises your own. They are starting points—good suggestions—but not the only way to lead a discussion. Be selective about which ones you use if you have a limited amount of time. If you are using the program to focus on a specific issue in your organization, pick out the exercises that will best do this.

**GROUP DISCUSSION**

A number of exercises involve group discussions that are intended to open people to exploration. It is important to try to get everyone involved. A good way to get the groups to share ideas without one group dominating is to rotate answers. By that we mean that each group should make one comment or give one answer from the list they developed in their small group discussions. Then the next group should make

a comment. Rotate until each group has contributed an answer. If more material is needed, keep rotating through the group for the next round of comments.

This method keeps one group from dominating and allows all the groups to contribute evenly.

#### **ROOM SETUP**

Many different sizes of groups can use this program and obviously, the size of the group will determine the room size. Ideally, you should locate a room that can both accommodate your group sitting together and facilitate the group breaking down into smaller units. There should be a writing surface for everyone.

Most of the exercises involve writing people's responses where everyone can see them. It would be helpful to have a large blackboard or large flip chart with felt-tip pens. Masters for transparencies are provided at the back of this manual. The use of an overhead or slide projector will enhance discussions.

## SECTION 2: THE PROCESS OF INNOVATION

We all develop our own perspectives and ways of doing things...our “Paradigms.” Sometimes, paradigms are rather trivial. But sometimes, the paradigms of an individual or an organization can become so deeply rooted—so unquestioned—that they can become barriers to our abilities to explore new ideas and to see new opportunities. As Barker puts it:

“We are always seeing the world through our paradigms, through the rules and regulations that we hold. Our paradigms constantly filter reality.”

In this series of exercises, we examine the ways that our paradigms can filter and shape our thinking. The exercises are designed to create awareness of the paradigms of the individual and the paradigms of a department or organization. A good discussion based upon these exercises should help participants gain a much greater understanding of some of the barriers to innovation. Discussion should also help develop positive strategies to overcome those barriers.

### Exercise 1: Synonyms for Paradigms

Let's start by getting a clear sense of what a paradigm is. Once again, Barker's definition is “a set of rules and regulations that establish boundaries, and tell us what to do to be successful within those boundaries.”

In *Powers Of Mind*, Adam Smith wrote, “A paradigm is a shared set of assumptions. The ‘Paradigm’ is the way we see the world.” Marilyn Ferguson put it this way in *The Aquarian Conspiracy*, “A Paradigm is a framework of thought, a scheme for understanding and explaining certain aspects of reality.”

In order to establish what a paradigm is, ask everyone to list as many words as they can think of that act as paradigms. Give a few examples first.

One word you might use is “etiquette.” It's relatively easy to see how etiquette is a set of rules that has been established by convention and been passed down from generation to generation. It defines boundaries. And it fulfills the second part of Barker's definition: It shows us how to be successful within the boundaries. We know what we are “supposed to do” whether in writing a thank you note or using cutlery at a fancy meal ... we know how to succeed within the rules of etiquette.

After everyone has finished writing, (a few minutes), ask for a few of their words.

Write them on a blackboard or a large sheet of paper. Ask the person who made the suggestion to describe how the word functions as a paradigm.

Once you have the words on the board, refer back to your initial suggestion, “etiquette.” What happens when one person confronts another person who has a completely different set of rules about etiquette? A person from a different culture perhaps? You might go through a few of the words on the list in this way. Ask the person who suggested the word to describe the kinds of problems that might arise when sets of rules collide.

You may wish to display transparencies of paradigm synonyms at this point. The list moves from the more positive and flexible examples of paradigms to more restrictive, negative and inflexible examples. From those that are “OK to challenge” to those that are not. Make a point of this. Sometimes people end up thinking that paradigms are always bad. In fact they simply exist. It is their effect on us which can be positive or negative.

### Exercise 2: Historical Paradigms

The purpose of this exercise is to show how powerful paradigms can be. This will be accomplished by looking back in history at paradigms that only changed after considerable work and effort. Give an example or two of paradigms that have changed throughout history—paradigms that have been dramatically proven wrong and thus have forced mankind to rethink our vision of the world (for example, from “the earth is flat” to “the earth is a sphere.”) Barker calls these moments of dramatic collective change “paradigm shifts.”

Talk about the example from *Discovering the Future: The Business of Paradigms* of Galileo trying to prove that Copernicus was right—that the sun was the center of the solar system. Up until the sixteenth century it was thought that the Earth was the center, with the heavens above and hell below. At first even Galileo didn't believe Copernicus. It wasn't until he had built his own telescope and had studied the planets for several years that he saw the truth to Copernicus's theory.

Discuss how disrupting this idea must have been for the people of the day. It involved not only the scientific community but also the religious community. The Pope himself made Galileo retract his statement. Galileo's views were seen as heresy.

Have the group as a whole suggest past and recent paradigm shifts that have historic significance. In the film, Barker gives the examples of minority rights, personal computers and quality as the new norm for business. Some other possibilities are listed here:

- Divine right of kings
- Earth is round
- Night vapors will cause illness
- Women get the right to vote
- Einstein's theories of the universe
- Airline deregulation
- New superconducting materials
- Fiber optic phone lines
- Zero population growth
- Time-sharing with computers

In talking these over, start with the first few as they are the farthest in the past. Talk over several other examples and how much they changed the world in their time. Then give the group a few minutes to come up with one or two of their own “historical paradigms.” Tell them that their examples may be culled from the last ten or twenty years.

Again, when they are finished, ask for their examples and discuss some of them. Point out that it is easy to look back into history and see how obvious it was that the paradigm had to change, but ask them to try to imagine what a shift it must have been for the people of the day to come to terms with the switch. Then bring the discussion up to the present day. It is equally difficult to recognize paradigms shifts early on.

### Exercise 3: A Forest of Paradigms

This is a crucial exercise for the group so take your time with it. It can help them come to a deeper understanding of how their organization works. As Barker says in his book, organizations do not have a single paradigm but rather a great many rules that function together—“all organizations are forests of paradigms.”

There are many different paradigms that exist within every section of an organization. What are some of the paradigms that operate within the following areas:

- Sales & Marketing
- Management
- Research & Development
- Human Resource Development
- Dress Code
- Distribution
- Manufacturing
- Administration

Break participants into groups and have them take one of these areas of the organization and define the rules of its paradigms. Have them list as many as they can think of. For example, in customer support one of the “rules” might be that your customers call and leave a message and then someone on the support team returns the call within 10 minutes.

When the group has finished listing the rules of a paradigm, take a few and analyze them. Look closely at some of the rules. Could there be a different way to do this? A better way?

The word “forest” suggests an ecological relationship. If that is true then when we change a paradigm in one part of an organization, what has to happen in the rest? Too often we assume when we make a change that it doesn't really matter to anyone else. When we change paradigms, we cannot help but cause change across the organization.

Go back to one of the paradigms that you have discussed. What happens to the other rules when you change one of them in a dramatic way? Ask groups to suggest at least one other rule that would be affected if the rule you are examining was dramatically changed.

#### **Exercise 4: How to Think Innovatively**

In order to change a behavior you have to be aware that you are doing it. Until now we have been going over paradigms and coming to an understanding of how they work in everyone's life. Once we can recognize some of our rules and regulations, we can begin to see past them to new possibilities.

Once again organize the participants in different groups of three or four. Move everyone around. Put the list of your organization's rules (from Exercise 3) up where everyone can see it.

Have them change one of the rules and then discuss the positive and negative effects of such a change. Tell them to get really wild. The wilder the better. They should try to move a great distance outside the borders of the paradigm.

For example, if one of the rules is that everyone must work in the office between eight and five, change it to everyone can now work their forty hours whenever they want to during the week. Have them see what positive effects could come out of this. Less office space needed, fewer computers. Easier commuting time for many workers, therefore happier employees. Have them look at the negative side—since everyone is on different schedules, it might be harder to schedule meetings, find out information when it's needed.

After everyone has done this, get them back together to go over some of the changes they have suggested. Let other people in the group comment on the changes. Remind everyone that what they're doing is expanding their horizons.

### Exercise 5: What is Impossible?

Barker has a question that he often asks groups to get them to stretch out and think in new and innovative ways. It is: What is impossible to do right now, but if it could be done, would fundamentally change your business? Barker calls this the paradigm shift question.

This question forces everyone to come to terms directly with an organization's boundaries. Review the examples from *Discovering the Future: The Business of Paradigms* that show how we can be limited in many different ways. Start with the example of the Tarajumaran Indians and how they easily run seventy miles. Explain that we can be limited by what we think we can do.

Go over the bicycle "seat" versus the bicycle "saddle" story and tell them we can be limited by how we define things. Then using the automobile example, show how we can be limited by having worked too long in one industry so that it becomes hard for us to see the possibilities in it anymore. You may wish to go over some of the potential paradigm shifts on the transparency. What would be a few of the ramifications of these paradigm shifts? Remind the group, "Those who say it cannot be done should get out of the way of those who are doing it."

Have the group think of some ways that they have seen people in their working community limited by what they know. Talk about what they feel is limiting them as an organization.

Once again break them into groups of three or four and give them the paradigm shift question—"What is impossible to do, but if it could be done, would fundamentally change your business?" Give them about ten minutes to work through this exercise.

When the group gets back together, examine the answers that people have come up with. They will show you what your organization should be actively looking for in terms of new ideas, new products, new and better ways of doing things...remember that what is impossible to do today may be the norm tomorrow. This discussion can be very exciting and sometimes leads to real breakthroughs.

Barker always provides this advice: Share your "impossibilities" with colleagues in other departments, your customers and your suppliers. Remember that what may seem impossible for you may be the norm for people in other departments and industries. This sort of communication can often lead to exciting and unanticipated solutions to old problems.



### Conclusion

Ask if there are any final questions. If there are none, go back over just a few key points quickly. Review paradigms and remind them that once we understand our own paradigms it becomes easier to see beyond them.

Thank them for their time and congratulate them on the exciting new world they have envisioned. Encourage them to keep identifying their paradigms. Get people excited about the idea of actively directing and creating their own future, and get people sensitive to avoiding “paradigm paralysis.” There is never just one way to do something.

In his book, Barker says, “You can and should shape your own future; because if you don’t, somebody else surely will.”

## SECTION 3: DEALING WITH CHANGE

*Discovering the Future: The Business of Paradigms* is often used in conjunction with the introduction of a change within an organization. This section of the trainer's manual has been specifically designed to help implement this use.

In this discussion with your group you will examine how paradigms keep one locked into a single vision and how it feels to be forced to change that vision. Everyone will have a chance to explore their own natural resistance to change, which is also a desire for everything to stay the way it has always been.

This discussion is set up as a series of exercises in which the group will come to understand why they are resistant to change, how to move more positively toward change, and how to see change coming early enough to take advantage of it.

### Exercise 1: The Paradigm Paradox

In *Discovering the Future: The Business of Paradigms* Barker tells the story of the quartz movement watch, a revolutionary idea in watchmaking. This new electronic watch was invented by the Swiss. But because of their centuries-long history of excellence in machining, the Swiss manufacturers were actually blinded to the potential of this fundamentally different, and superior method of timekeeping. Their past success with the old paradigm made them highly resistant to the new.

This is an extreme example of the paradigm paradox, but it makes the point well.

Ask the group you're working with to think of examples of something like that happening in their own work community—a company or an individual who was blinded by their success of how things were usually done and therefore couldn't see the potential of a new opportunity.

Here are some examples of where we've seen this kind of blindness:

Mainframe computer makers were initially blind to the potential of personal computers

Railroads were blind to the advantages of trucking

Telegraph companies did not see the potential of telephones

Give everyone a few minutes to think this over and write down an example or two. When they are done, discuss their examples.

### Exercise 2: Changing the Rules

Have your group imagine that they have just learned the rules to a new game. They are doing very well—in fact they are on the verge of winning. But at the moment that victory seems certain, someone introduces a new rule that changes everything. As a result of the new rule, they lose the game. Ask the group to come up with some of the feelings they might experience in that situation and write them on the board. Now have the group imagine that, when viewed from outside, the new rule actually makes it a much better game. Ask the question, “Does the fact that the game is improved change the negative first feelings of the person who was winning at the ‘old game?’”

There are similarities between the game example and the ways we sometimes feel when a change is introduced in an organization.

*Discovering the Future: The Business of Paradigms* opens in a boardroom. Two people have just presented a new idea that represents a change from the way things were done in the past. Have the group recall some of the reactions of the participants in that board meeting. For example, one man was annoyed because it would force him to reorganize his department... another felt hostility because the idea came from people relatively new to the company. Ask the group to think of as many reasons as possible why a new idea might be rejected. But ask them to come up with reasons that have nothing to do with the relative merit of the new idea. Add these to the list of emotions you noted from the “game” example earlier.

Once you have made the list, your group will have a clearer picture of some of the feelings that can erect barriers to new ideas and positive changes. Creating awareness that change is sometimes resisted simply because of the way it makes us “feel” is a good first step towards a more flexible and open atmosphere. It is important that people recognize that change is often resisted for reasons that have little to do with the pros and cons of the change.

### Exercise 3: Going Back to Zero

When a paradigm shift takes place, it alters so many rules and regulations that everyone has to start over again. Such a change can totally redefine the way things are done and can turn the current paradigm for success upside down. This can be a very scary time for everyone involved, but it doesn't have to be.

Barker explained how this can happen using the example of the Swiss when the quartz movement watch changed the watchmaking industry. Upon when a paradigm shifts, the introduction of this great new timekeeping innovation, all the past success of the Swiss was a now obsolete technology. The expertise they had gained over hundreds of years in precision parts making was made irrelevant in the blink of an eye. Everyone in the watchmaking industry was "back to zero."

Have everyone in the large group do some exploring. Ask them if they see anything that could put their organization back to zero. It could be a change that might occur or something their competitor might do... a law that might be passed, a new patent invented. Don't be satisfied with no answer. Every organization can be put back to zero by something—no matter how farfetched it might sound.

Once you get an example of something that could put you back to zero, ask the participants to think of all the negative aspects of going back to zero. Have them talk as a large group for about five minutes. Then break them into small groups and have them list all the positive aspects of going back to zero. How could the organization make use of the paradigm shift to get a head start on everyone else in the industry? How could your organization apply what it is already good at if the shift occurred?

When they are done, have them give you the positive aspects of going back to zero. Tell them that it's important to do them in this order. The negative feelings we have when big changes are made in our lives are real. It's important that we acknowledge them. But if we are going to take advantage of the paradigm shift, we must put the most emphasis and energy on ways to take advantage of the new paradigm. By actively scouting for things that could put everyone in your field "back to zero," you are on your way towards that goal

#### Exercise 4: Overcoming Resistance to Change

Now that they have looked at how it makes them feel to face a change, have the participants work on ways that they can become more accepting of change. To do this with the group, you should pair everyone up. Ask them each to think of a major change in the company that might affect the other person. It could be something very specific if they know the person they are working with well. Or it can be change that would affect everyone in the organization.

Here are some examples:

Going to a four-day work week

Moving the organization to another town (Give a specific town.)

Decision to move into a new market

New pay incentive policy that affects all employees

When they have thought of the change, they hand it to their partner who must list all the positive things they can think of to do with this change.

#### Exercise 5: Paradigms of the Future

Start this exercise out by asking the question, “Where will we see paradigm shifts in the next ten years?” Don’t let them start listing trends. The words to watch out for are, “we’re going to have more of this, or less of that,” When people use these phrases they’re talking about a trend.

According to Barker the way to tell if something is a paradigm shift is to imagine the new idea as it would be in the year 2000. Then look back to the present and say, “Did we really do things that way back then?” For example, the phone—did they really have cords connected to the wall by wires?

For this exercise have participants work alone. Suggest to them that there are various kinds of paradigm shifts: technological (such as personal computers), social (such as integration), political (such as Glasnost), scientific (such as biological revolution.) Share these examples with them.

When they begin to offer their possible paradigm shift, ask them what indications they have seen in the world of today that might lead to or stimulate the paradigm shift they are suggesting.

### Exercise 6: Creating the Future

Thanks to Lindsay Collier

Technical Advisor, Eastman Kodak

Recall for the group the section of the film that dealt with the paradigm shifts that took place in our perceptions of Japan during the past few decades. In many cases, Japan was able to reverse our previous conceptions. They were able to move from a perceived producer of low cost, low quality goods to an acknowledged leader of the quality movement. If a nation can reverse the paradigms it projects, so can an organization or a team within an organization.

Have the group think back a decade or two. What words would have come to the mind of your customers or other stakeholders (employees, suppliers, stockholders, etc.) when they thought of your organization in the 50's or 60's? Write these down on the board for everyone to see. Were these perceptions positive or negative? Was there a pattern or an overall impression? (If you are conducting this exercise with a department or team within your organization, have the group think back and characterize how that team was viewed by its customers—those groups within the organization which it serves).

Next, ask the group to repeat the exercise. What words would come to minds of your customers (or stakeholders) to describe the organization today? List the positives and the negatives and place these on the board. Are they different than the words of the past? Are you happy with the changes?

Finally, ask the group to look into the future a few decades or a few years. What would you like people to think of when they think about your organization 5, 10, or 20 years in the future?

The words your group comes up with in the last part of the exercise suggest a direction for your organization, and comparing them to the present and past paradigms will point to the areas that your group needs to focus on to accomplish future paradigm shifts.

### Exercise 7: Your Choice

In this exercise have everyone back in the large group. After all their work with change, ask them to come up with some suggestions that would help a person to deal with changes more effectively. Here are some possibilities, but before you mention any of them see what the group suggests. After they have made their suggestions, you can use the transparency.

#### SUGGESTIONS FOR DEALING WITH CHANGE

1. Find it before it finds you. Go out and look for new ways to do things. Let other people be surprised by the changes that you are making.
2. As soon as possible, identify and enhance the positive aspects of this change.
3. When a change is first suggested to you, work through some of the negative feelings on your own before you react to it.
4. Get whoever you're dealing with to define their boundaries. What paradigms might be influencing their decisions?
5. Define your own paradigms.
6. Talk to others outside your field regularly.

### Exercise 8: Creating a Specific Change

This final exercise is listed here because many organizations use *Discovering the Future: The Business of Paradigms* as a way to help their employees deal with a specific change that is coming. If this is the case for your organization you might use the preceding exercises to lead to this final one.

The new change should be described in detail. Have an open forum in which everyone can feel comfortable talking about how this new idea makes them feel. Rather than having the session be like the beginning of *Discovering the Future: The Business of Paradigms* it would be more helpful to everyone if those thoughts were given a place to be expressed.

Allow the negative consequences to be aired. This is useful for two reasons—it gives the participants the opportunity to be heard, and more important, brings up potential problems that may not have been thought of yet. If this is done in a constructive way, it can help everyone feel more a part of the change.

Move on to all the positive aspects of this new idea. Remind them of the suggestions they came up with in the sixth exercise. Have them all do the fourth exercise, Overcoming Resistance to Change again, but now focused around this specific change. After they have finished writing down some of the positive aspects of this change, go over their ideas and have them come up with more as a group.

Examine how this change will impact on other paradigms of the organization (The Forest, remember) and then plan how to deal with those changes.

Working through these exercises around a specific issue should be a very positive and beneficial experience for everyone. Listen carefully to their ideas and another change might come out in the discussion. An organization that works hard to keep an open mind will be a workplace in which many exciting innovations can happen.



## SECTION 4: GROUP-SPECIFIC DISCUSSIONS

Because many organizations use *Discovering the Future: The Business of Paradigms* in specific training programs, this last section offers some suggestions for three groups that often are singled out for this use: Research and Development, Management, and Sales and Marketing. Here you will find specific questions and discussions to have, and also examples of how such groups have made use of the program.

### Research and Development

In Section 2, Exercise 3, we ask the group to define the paradigms of the organization. This is an especially helpful exercise to do with R&D people, but have them focus on their own group and write down the rules they work by. Break them down into groups of three or four and have them work on their rules and regulations. Then bring them back together and write them on the flipchart or blackboard.

After you have a fairly complete list, ask them to look at them carefully and see if any of them might change in the near future, or if there are any that they would like to see changed. Have them work on this individually and then have discussion.

Barker has this to say to R&D people—“Listen to your technicians.” He has spoken to large audiences that were made up of Ph.D’s and lab people, and afterwards the technicians have come up to him and said, “Great discussion, but where I work I can’t offer new ideas because I don’t have a Ph.D.”

Tell this to the R&D people and then have them come up with a list of people who they could ask about real problems they are having with something they are working on. This list might include:

- Technicians
- Librarians
- Secretaries
- High school students
- Other R&D people not involved in the project
- Sales people
- Non-technical people in company

No one can predict where an idea will come from. Sometimes the harder we work on

something, the less we are able to see it clearly. We do get stuck in our own paradigm of how it should work. Sometimes even talking the problem over with someone else will break us out of that. They might not be able to suggest anything, but they might ask the right question and get us to look at the problem in a new way.

### **Management**

One suggestion Barker has for management is that they make use of the insight a new employee brings to an organization. After the new person has been in the company for a week or two, enough time to come to understand the paradigms of the company, but not enough time to have bought into all of them, their manager should have a long talk with them. Ask them if they see anything strange or funny. Ask them if they have seen anything they would like to change. Ask them for suggestions or if there is anything they would like to try to do to improve anything.

This should also be done with anyone changing jobs within the company. Thomas Kuhn has the theory that “paradigm shifters” are often people who are moving into a new field, after some experience in another area. So rather than trying to quickly indoctrinate these people into the culture and existing paradigms of the organization, it would be worth a manager’s while to search them out and use their “innocent vision.”

Have them identify specific people in the organization whom they should talk to. Have them ask themselves, “Who have we just hired? Who has been transferred recently?”

Talk this over with the managers in the group and have them write down a series of questions they might ask such a person. They can range from specific problems that they would like solved to an overall view of how things are run.

### **Sales and Marketing**

Barker feels that the sales force, because of its position in the company and its direct contact with the world, is often the group most apt to get a glimpse of the new paradigms from the outside. He believes that the sales force is probably the single most effective group for scouting the future.

Try this out with the group. Have your sales and marketing people write down the top five unusual ideas they've heard out in the field about their own business. Have them work alone on this. Also have them recall if any of their customers are doing "strange" things with your products. After you give them about five minutes to do this, ask for some crazy ideas from them. When you get an idea, have everyone discuss it and see if something comes of it. You might get one or two that are really worth exploring.

Next ask them if they have ever had a customer say, "We really like this product. If only it could \_\_\_\_\_." The customer's needs and desires often point out the direction a product or service should go. Have them list some "if onlys" they've heard in the last year. After you put the list on the board, discuss them and see if some of them did happen. Also start to get a sense of what the customers want next. And, lastly, ask them "What is the competition doing with the customer?"

Encourage the sales and marketing people to keep a look out for the signs you have just gone over with them—crazy new ideas people suggest, "if onlys" that customers voice to them. This is information they should be bringing back to the organization that can help shape the future. \*

## SECTION 5: TRANSCRIPT

*Discovering the Future: The Business of Paradigms* SECOND EDITION

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### BOARDROOM MEETING

(1st Woman; Presenter) And while I know that this new idea does not fit in with the way we used to do things, I think we can all certainly agree it will dramatically improve operations.

(1st Man; Presenter) I hope you will consider this new plan on its merits.

(2nd Man) Thank you for a very interesting proposal. We all appreciate your efforts, and I can assure you that we will give it our full attention.

(3rd Man's Thoughts) Well, I don't appreciate it. This would rearrange my entire department. They have no idea what...

(2nd Woman's Thoughts)...this crazy proposal. And now I'm late for my next meeting. I don't know why these meetings have to drag on ...

(4th Man's Thoughts) How do they know this idea will work? They've only been here a couple months. They don't know how we do things here.

(5th Man's Thoughts) Don't they understand we're successful because we do it that way?

### BOARDROOM MEETING NEW IDEAS CAUSE CHANGE

It's so easy to say no to a new idea. After all, new ideas cause change. They disrupt the status quo. They create uncertainty. And it's less work to do it the way we've always done it before.

Less work, maybe. More dangerous, definitely.

### BARKER IN OFFICE INTRODUCTION

New ideas are resisted from boardrooms to shop floors all over the world. Good ideas are shot down by people who assume that the future is merely an extension of the past—that the ideas that brought us to where we are today are the same ideas that are going to take us to tomorrow.

My name is Joel Barker, I'm a futurist. I work with corporations and institutions all over the world, helping them to improve their ability to evaluate new ideas, and to anticipate change.

For almost twenty years I've been studying change. In particular, I've been studying the resistance to change that often keeps a great new idea from being accepted. You see, it's never been any different. Whether that great idea was a better way to do company business, or a scientific breakthrough, people have always resisted change.

#### VENICE- GALILEO'S PROBLEM RESISTANCE TO CHANGE

In Venice in the 16th century, that was Galileo's problem. He was an advocate of the Copernican theory that the sun, not the earth, was the center of the solar system. To prove that theory to the leaders of the day, he took them to the top of that tower, the Tower of San Marco.

And there, using his newly perfected telescope, he showed them the discoveries he had made in the night sky that verified that the earth revolved around the sun, and not the other way around.

Well to say the least, that was a revolutionary idea. It contradicted obvious observation. In fact, it so antagonized the voices of authority, that Galileo was threatened with torture in order to get him to retract his position. And you thought you had trouble selling your ideas.

In the end, Galileo's ideas won out. But the real question here is 'why the resistance'? Whether it's in the 16th century or the twentieth century, what prevents us from seeing, accepting and understanding new ideas?

#### ESCALATOR SEQUENCE REVOLUTIONS

Think about some of the new ideas we've seen in the past two decades. From minorities fighting for their basic rights to those rights being guaranteed by law. From room size computers costing millions of dollars to desktop computers just as powerful that almost anyone can afford, From an attitude that quality was a luxury for the few to quality being expected by everyone.

These changes and hundreds like them are more than mere improvements. They are revolutions. They are changing the world forever. They are causing us to reevaluate old ways of doing things. They are opening doors to possibilities we could not have

seen before. They are freeing us from limitations. And yet, everyone of these ideas was met with substantial resistance from thoughtful people.

Let me ask you again. What is it that keeps us from accepting new ideas?

I know the answer to that question. And once you know the answer, you will be more open to innovation. More capable of leading change. You will be ready to discover the future.

You see, it all has to do with paradigms.

#### SCIENTIFIC LABORATORY GENESIS TO THOMAS KUHN THE DEFINITION OF PARADIGMS

Paradigm. That's an unusual word. You don't hear it everyday. I stumbled onto it almost twenty years ago during my studies of scientific discovery. It was a word Thomas Kuhn used to describe a key concept in his book "The Structure of Scientific Revolutions". If you looked paradigm up in the Webster's dictionary, you'd find it means a pattern or a model.

Let me offer you another definition. Paradigms are sets of rules and regulations that do two things. First, they establish boundaries. In a sense, that's what a pattern does, it gives us the edges, the borders. Second, these rules and regulations then go on to tell you how to be successful by solving problems within these boundaries.

In his book, Thomas Kuhn was exploring how scientists changed their paradigms—physics, or chemistry or biology—and what happened when they did. What he found helps explain why we so often fail to anticipate significant new developments. What he found can help you and me deal with change more effectively.

So, what did he discover? Kuhn discovered that paradigms act as filters that screen data coming into the scientist's mind. Data that agrees with the scientist's paradigm has an easy pathway to recognition.

In fact, scientists see that kind of data amazingly well with great clarity and understanding. And that's good. But Kuhn also discovered a startling negative effect. With some of the data, scientists had substantial difficulty.

Why? Because that data did not match the expectations created by their paradigms. And, in fact, the more unexpected the data was, the more trouble the scientists had

perceiving it. In some cases, they simply ignored the unexpected data. Sometimes, they distorted that data until it fit their paradigm rather than acknowledge that it was an exception to the rules.

And in extreme cases, Kuhn discovered that scientists literally—physiologically—were incapable of perceiving the unexpected data.

For all intents and purposes, that data was invisible.

To put it into more general terms, paradigms filter incoming experience. We are viewing the world through our paradigms all the time. We constantly select from the world that data that best fits our rules and regulations 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. I call this phenomenon the Paradigm Effect. And I have seen repeatedly that what Kuhn describes for scientists is true for anyone who has strongly held rules and regulations in their lives. And who doesn't?

In my work with companies around the world, I have seen this paradigm effect blind business people to new opportunities, cause sales people to overlook new markets, obscure effective strategies from management. And it can blind each and every one of us to creative solutions to difficult problems.

Whether its the Army, or the environmental movement. The American Medical Association or the League of Women Voters. Whether it's Citibank or IBM. The coach's way to hit the ball or mom's way to clean the kitchen. We deal with paradigms all the time. And I believe that it is our rules and regulations that keep us from successfully anticipating the future. Because we try to discover the future by looking for it through our old paradigms.

And so, in the 1960's we looked forward and concluded: cheap gas forever; four children make an ideal family; cable television will never catch on; Japanese products will always be junk. And, boy, were we wrong. And we were wrong because our paradigms had the power to keep us from seeing what was really happening,

Now, you may think that this is just an interesting abstraction. So I would like to give you concrete examples that demonstrate how paradigms influence the way you and I see and understand the world.

**THE PARADIGMS EFFECT PARADIGM EXAMPLE #1 CARD DECK PARADIGM**

I'd like to start with an example similar to one that

Thomas Kuhn's cites in his book. I'm going to use elements most of you know quite well: Cards from a card deck. What I'm going to do is I'm going to show you eight cards very rapidly. I want you to identify them silently to yourself as I go through them. I'll give you a couple of seconds between each card. Ready? Here we go.

First run through:

Two of Clubs  
Queen of Spades (Red)  
Five of Diamonds  
Eight of Clubs  
Nine of Hearts (Black)  
Jack of Diamonds  
King of Clubs  
Six of Spades (Red)

Good. Now, let's go through it a second time for those of you who may have missed some. This time I'm going to give you twice as much time as I gave you the first time. Ready? Go.

(Second run through, same sequence)

All right. We're going to go through it one more time just to check things out. This time, I'm going to give four times as much time as the last time. Ready? Here we go.

(Third run through, same sequence)

Ok, that's it. How many of you noticed something strange about these cards? For example, the second card was a red spade. Or that the fifth card was a black heart. Or that the last card was another red spade.

I know most of you missed these exceptions on the first run through. And I know most of you missed them on the second run through too. But I would also bet that almost all of you identified the legitimate cards when they came up. You see, you were misled by your rules and regulations about the way a deck of cards is supposed to look—your card deck paradigm.



And that is what was blocking your vision of the exceptional cards. Remember what I said about paradigms? How they filter data? Well, you were trying to see the cards the right way. Right means according to your card deck paradigm. Black spades, black clubs, red hearts, red diamonds.

And so you saw the legitimate cards very easily, very quickly. In fact, I know the majority of you saw those cards on the first run through and that was quicker than a thirtieth of a second. But your paradigm of card decks also made it very difficult to see the cards that didn't fit the rules.

And so instead of seeing them as they were, you distorted the data to try to make it fit your paradigm. That's the Paradigm Effect in action. And every time you run into something that's beyond the boundaries of your paradigm, you will have difficulty seeing it. You just won't get it.

Now, this is a funny deck of cards. So you might want to write off this entire experience as interesting but irrelevant to real life. So, let's talk about paradigms and real life.

#### TWIN CITIES MARATHON, MINNESOTA

##### Paradigm Example #2

##### Running Sequence—Tarajumarans Indians

For instance, millions of Americans have now adopted the fitness paradigm. They have brand new rules and regulations about exercise. But how many of them, how many of you, would be willing to go for a seventy mile run? Yes, I said run. Now, in western culture, the words 'seventy miles' and 'run' just don't go together. 'Seventy miles' and 'drive', yes—'run', no. But in northern Mexico, seventy mile runs are common among the Tarajumarans Indians. They do it as part of a religious festival. Now, why is it so easy for them, yet so impossible for us?

Because it's one of the Tarajumarans paradigms. They run everywhere. For fun. Would you believe, our ultimate race, the 26 mile marathon, is child's play for the Tarajumarans.

Now, you might want to argue that it's some kind of genetic differences, but I am willing to bet if any one of you had been raised in one of their villages, you'd run just like they do. Because you would have learned their running paradigm.

EDEN PRAIRIE, MINNESOTA

Hennepin County Vocational Technical Center

Paradigm Example #3

Energy Efficient Car

I've brought you to this vocational technical center in Eden Prairie, Minnesota to show you another paradigm. This one has to do with automobiles. In 1976, a group of students in the advanced class taught by Ernie Parker decided to build an energy efficient car.

Let me give you the numbers on the car. It weighed 2000 pounds. It went 0 to 60 in less than ten seconds. It got 77 miles per gallon on a 16 horsepower engine.

Now, anybody who knows anything about cars knows that that's impossible. You can't take that heavy a car to those speeds with only a 16 horsepower engine. And yet, these students did exactly that.

How? By using a different paradigm. You see, these students weren't in the advanced auto mechanics class. They were right here in the advanced fluid power technology class. And they knew using their paradigm that they could capture and reuse energy ordinary cars waste.

Let me show you how. It's actually a very simple design. When this car slows down, it doesn't use standard brakes which just create heat and friction. Instead, the back wheels turn a hydraulic pump, and it pumps hydraulic fluid into this storage chamber and builds up pressure. Now, building up that pressure is resistance, and that slows the car down.

When this car is at a stop sign, it doesn't idle its engine. Instead, it runs the engine 80%, open throttle, and that engine turns the hydraulic pump which pumps more fluid and pressure into that storage chamber.

Result: When this car begins to accelerate after the stop light has changed, the acceleration comes not from the little engine, but all that energy that's been stored in the cylinder.

In fact, let me demonstrate. I can accelerate without even starting the engine. So, the little gasoline engine merely holds the car at speed, and it can do that getting more

than 70 miles per gallon. That's pretty clever.

Now, the paradigm question is this: If the students who designed this car had been in auto mechanics, could they have ever conceived it? I think the answer is no. Because the auto mechanics paradigm does not provide for waste energy storage.

Now, I'm not suggesting this car is perfect. It has lots of bugs. But it does demonstrate how powerful paradigms can be. What may be impossible with one paradigm may be easy to do with another paradigm.

#### PARADIGM. EXAMPLE #4 BICYCLE SEAT DESIGN

Let me show you another paradigm change in technology. This one is small, but interesting. Especially to me.

What is this?

Look at it this way. Look at it this way. Look at it this way.

Yes, it's a bicycle seat. And, obviously it breaks the bicycle seat paradigm. It was invented by a sculptor and a futurist. I was the futurist. Jeffrey Birch was the sculptor. I came up with the idea. Together, we developed it. We call it the Easy Seat.

Now, it's no big deal. It's not going to save the world or anything like that. Though it does save some pain in a few particularly sensitive areas.

When you look at it, it makes a kind of sense, doesn't it? And yet, from the invention of the bicycle, another shape has totally dominated the market. It looks like this, and it's called a bicycle saddle.

And I believe that it is the word 'saddle' that has kept bike makers from exploring shapes like the Easy Seat. You see, this is a logical design of a horse saddle for a bicycle. And once they got the 'saddle' paradigm, the bike makers honed it and refined it—and forgot to ask the basic question: What is the most comfortable way to sit on a bicycle?

And that's where I had an advantage. I wasn't part of the bicycle industry. I didn't know any better. I wasn't saddled with their paradigm. And so, I invented an unusual looking—but comfortable bike seat.

By the way, you can imagine what avid bikers think about the Easy Seat. It doesn't fit the rules. So, they don't like it... yet. 74

XEROX CORPORATION ROCHESTER, NEW YORK

Paradigm Example #5 Electrostatic Photography

There is a story told in business circles worth repeating here.

In the late 1930's, an inventor was trying to interest corporations in his new idea. He experienced rejection after rejection because no one was taking his invention seriously. He brought it to the research department of a major photographic company. He felt sure they would be interested because his invention was a new kind of photography.

Here is the actual kit he used to demonstrate the process.

While a senior researcher looked on, he began by sensitizing a specially coated metal plate. Then, he took a transparency, and placed the metal plate on top of it, and exposed both to a very bright light. Then, he poured a fine black powder over the plate, and tapped the excess away.

What was left on the plate was a faint reminder of the image that had been on the slide. He had, in fact, created a kind of photograph of that image.

Now, we don't know what the researcher said about all this. He may have found it amusing and laughed. He may have said it was too complicated or too crude. Or, he may have been upset at all the black powder all over his desk. But we do know one thing for sure. He wasn't interested in that silly invention, so he showed the inventor to the door.

But, the inventor, Chester Carlson, had the last laugh. Here's a copy of his original patent. His discovery turned out to be one of the most profitable innovations in the history of industry.

You see, what Chester Carlson invented was electrostatic photography. The 'Xerox Process'. Imagine any office today without a copier.

But that photographic researcher was blinded to the potential of this new invention because it didn't fit his rules and regulations of how photography should be. He was unable to see beyond his paradigm. As a result, his company missed one of the

biggest business opportunities of the twentieth century.

Let me show you another example of the power and influence of paradigms. Join me now as I'm giving a lecture to a group of corporate managers.

**CORPORATE MANAGEMENT LECTURE JAPANESE MANAGEMENT ZERO DEFECT PRODUCTIONS**

I'm going to show you three words. All right. And I'm going to ask you to think back to the early 60's and ask yourself what kinds of judgmental statements, judgmental feelings would I have had about these three words back in the early 60's.

The three words are "Made In Japan".

Ok, now in 1960, what are the words that would have come to mind when you saw those products, please?

(1st Man) "Junk."

(Joel Barker) "Junk. All right, what else?"

(2nd Man) "Cheap."

(Joel Barker) "Cheap. OK, what else?"

(3rd Man) "Poor Quality."

(Joel Barker) "Toor Quality. That's a good one. Poor Quality. What else?"

(1st Woman) "Copies."

(Joel Barker) "Copies. Oh, they're stealing again. What else?"

(2nd Woman) "Low tech."

(Joel Barker) "All right. OK Good. Toys. Low tech. Toys. Anything else come to mind?"

(4th Man) "Imitation."

(Joel Barker) "Imitation. OK, that's enough. Now, let's ask about today."

What kinds of judgmental words come to mind when you run into these three words 'Made in Japan'?

(5th Man) "Excellent quality."

(Joel Barker) "Excellent quality. OK. What else?"

(6th Man) "High tech."

(Joel Barker) "High tech" Ha ha. That's good. What else?"

(7th Man) "Expensive."

(Joel Barker) "Expensive. Went from cheap to expensive, hum. OK, another one."

(8th Man) "Leadership."

(Joel Barker) "OK, another one."

(3rd Woman) "Balance of payments."

(Joel Barker) "Another one."

(9th Man) "Innovation."

(Joel Barker) "Innovation. What a nice compliment. Anything else?"

All right, actually that's enough when you look at it. What's most interesting about this is do you notice the contrasts? In many cases you have given me opposites. What they were doing in the early 60's they have totally reversed in the 80's.

And the key point here is this. What this represents, I believe, is a change of paradigms. What they did, and actually started in the 50's when Ed Deming, an American, went to Japan, is they adopted a new series of rules and regulations what we call Zero Defect Production, or now we're calling it Japanese Management, or Participatory Management. And what they did is they got people involved in perfecting things.

See, I believe the Japanese have created an epidemic of quality worldwide. And it's a disease, which if you don't get it, you may not survive.

People tell me "Paradigms. That's a cute idea, but who really cares?" Tell me about it.

#### INTRODUCTION TO GOING BACK TO ZERO RULE

There is a crucial and profound truth hiding behind all the paradigm examples I've shown you. I call it the 'Going Back To Zero Rule'. And if you remember nothing else, remember this. When a paradigm shifts, everyone goes back to zero.

It doesn't matter how big your marketshare is, or how strong your reputation. Or how good you are at the old paradigm. With the new one, you go back to zero. Your past success guarantees nothing. Now, you may think I'm exaggerating. So let me illustrate.

What nation dominated the world of watchmaking in 1969? Of course, Switzerland. Renowned for more than a hundred years for their watchmaking excellence. In 1968, they had 65% of the world marketshare and, according to expert estimations, more than 80% of the profits. That's market domination.

Yet, ten years later, their marketshare had plummeted below 10% and in the ensuing three years, they had to release 50,000 of their 65,000 watch workers.

Today, what nation dominates world watchmaking? Japan. In 1968 they had virtually no marketshare. How could the Swiss, who commanded the watchmaking industry for the entire 20th century, who were known for excellence and innovation in their products, be so rapidly destroyed?

Well, the answer is painfully simple. They were put back to zero by a paradigm shift. Many of you are wearing that paradigm shift on your wrist right now. The quartz movement watch. Think about it. Totally electronic. A thousand times more accurate than the mechanical watches it replaced. Battery powered. Amazingly versatile. It deserves to be the new paradigm of timekeeping. It's such a brilliant idea.

Wouldn't you like to know who invented this marvelous watch? Some of you know the answer. But those of you who don't will be surprised. The quartz watch was invented by the Swiss themselves. Right here in Neuchatel at their research laboratories.

Yet, when the researchers presented this idea to the Swiss watch manufacturers in 1967, it was rejected. After all, it didn't have any bearings. It didn't have any gears. It didn't even have a mainspring. It couldn't possibly be the future of watches.

So confident were the manufacturers in that conclusion that they didn't even protect the idea. And so, later that year their researchers displayed the watch to the world at the annual watch congress. Texas Instruments of America and Seiko of Japan walked past, took one look, and the rest is history. Now, why didn't the Swiss appreciate this wonderful invention that their own people had created?

It's the power of paradigms again. They were blinded by the success of their old paradigm and all their investments in it. And, when confronted with a profoundly new and different way to continue their success into the future, they rejected it. Because it didn't fit the rules they were already so good at.

Please keep in mind that this is a story not just about the Swiss. It's a story about any organization, any nation who 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 goes back to zero. Your past guarantees nothing in the future if the rules change. Not even the best watchmakers in the world could stop time.

In fact, if you're not careful, your successful past will block your vision to the future. And that is why you must develop an openness to new ideas, a willingness to explore different ways of doing things. Because only through that kind of tolerance can you keep open your doors to the future.

#### **KEY OBSERVATIONS ABOUT PARADIGMS PARADIGM PARALYSIS, PARADIGM FLEXIBILITY, PARADIGM PIONEERS**

I could go on and on with examples. I have more than three hundred and fifty in my files. The key point here is paradigms dramatically affect our judgements and our decision making by influencing our perceptions. And it is clear to me that if we want to make good judgements about the future, to anticipate the future successfully, we must be able to recognize our present paradigms, and then be ready to go beyond them.

You see, a paradigm is a two edged sword. When you swing it one way, it cuts the information that agrees with it into very fine, precise detail. But when you swing it the other way, it will cut you away from data that runs counter to the paradigm. You see best what you're supposed to see, just like the Swiss. And you see poorly, or not at all, that data that doesn't fit the paradigm.

Let me now share with you the key observations about paradigms:

Point Number 1. Paradigms are common. We have them in almost all aspects of our life, whether it's professional or personal, spiritual or social.

Point number 2. Paradigms are useful. Now, you may have thought I don't like paradigms because all the things I've said about them. But, that's not the case. In fact, they show us what's important and what's not. They help us find important problems and then they go on to give us rules for helping to solve those problems. They focus our attention. And that's good.

But, and this is Point number 3, and its 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 out of hand. Now, that can lead to a nasty



disorder.

I call that disorder “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. That’s exactly what happened to the Swiss watch manufacturers in 1969.

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

Point number 4. The people who create new paradigms are usually outsiders. They are not part of the established paradigm community. Now, they can be young, they can be old. Age seems to be irrelevant. But what is clear is they are not invested in the old paradigm, so they have nothing to lose by creating the new.

Now this means something very special for you. Because if you want to find the new paradigms that are developing in your field, you must look beyond the center to the fringes. Because almost always, the new rules are written at the edge. That’s where Xerox started. That’s where the Women’s Movement started. All of them at the edge.

Point number 5. Those practitioners of the old paradigm who choose to change to the new paradigm early in its development, I call them paradigm pioneers, have to be very courageous. Because, you see, the evidence provided by the new paradigm does not prove that they should be doing this.

Now, let me quote from Thomas Kuhn, because he writes about this situation the very best:

“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. He must, that is, have faith that the new paradigm will succeed with the many large problems that confront it, knowing only that the older paradigm has failed in a few. A decision of that kind can only be made on faith.”

The mark of a true paradigm pioneer is great courage and trust in their judgement.

Now, for the last point, and the most important. You can choose to change your rules and regulations. Human beings are not genetically coded to just one way of looking at the world. You can choose to shrug off one paradigm and adopt a new paradigm. You can choose to see the world anew. That’s why I’m such an optimist about the future.

Now, to challenge you to flex your paradigms, I would like to give you the paradigm shift question. Whenever I'm with an organization or company, I always ask this question of them.

"What today is impossible to do in your business, but if it could be done would fundamentally change what you do?"

Think about that. Hard. Ask that question. Play with it. But ask it on a regular basis. Everywhere in your organization. Because the answers to that question will take you to the boundaries of your paradigm. And once you are there, you will be ready to see the next paradigms coming.

Remember, what is impossible today may be the norm tomorrow. And your challenge is either to cause that to happen or be ready to pioneer.

There's a story I'd like to tell you now.

#### THE PIG STORY

Example of Paradigm Paralysis

There once was a young man with a very fast car who loved to drive on country roads. He thought of himself as a great driver.

He could handle anything.

One day he was out driving his favorite road and coming into his favorite curve when around the curve came a car careening out of control. And just before it got to him it pulled into its lane. As it passed, a woman yelled out "PIG". Well, he responded in a flash and shot back "COW".

He thought to himself, how dare she call me a name? I was in my lane. She was the one who was all over the place. But he felt rather smug because he got her before she got away.

And so, he put the accelerator to the floor, whipped around the curve, and ran into the pig.

PARADIGM FLEXIBILITY

Now, that's a paradigm story. You see, the young man was responding with old rules. You call me a name, I'll call you a name. Yet, when you think about it, she was really trying to warn him.

I believe the next ten years are going to be filled with people coming around blind curves yelling things at you. And if you have paradigm flexibility, what you will be hearing will be opportunities. But if you have paradigm paralysis, what you'll be hearing will sound like threats.

The choice will be entirely yours.

Scene Seventeen: Concluding Remarks Opportunity and Flexibility

We've been talking about the anticipation of the future, so you may wonder what we're doing in front of this house from the late 19th century.

I've chosen to conclude my remarks here because sometimes people get overwhelmed by the future. They look forward and they say, "How can we cope with all of this change?"

The answer to that question, I think, can be found by looking back to our great grandparents. In many ways, they dealt with changes at least as profound as what we're involved in right now.

You must remember, that in 1890, radio would still have been considered magic. I mean, inaudible voices traveling through the air without wires. The radio wasn't demonstrated until 1901. Between 1890 and 1910:

- Henry Ford build his first automobile;
- The movie camera was invented;
- The Wright brothers proved the experts wrong and created a new paradigm of heavier than air flight;
- Electric lights had only begun to replace kerosene lamps and gas illumination;
- The electron was discovered;
- The cause of malaria was identified; and
- A man named Albert Einstein proved that  $E = mc^2$ , and the atomic age was conceived.

The paradigms of our grandparents were forever altered during this time. And you know what? In spite of all that change, they did just fine. We wouldn't be here if they hadn't.

So, even though the future sometimes seems too large, too awesome, too powerful to deal with, it's not. We as human beings have demonstrated repeatedly the capacity to create and deal with paradigm changes.

You see, there will always be another solution to the problem. There will always be another door to go through to get to the future.

And, just like it was for our grandparents, I am positive that on the other side of that door lies more than enough opportunity to keep those of us who are willing to be flexible, happy and busy for a lifetime.

The End (Tail Credits)

## SECTION 6: MASTER VISUALS

The master visuals in this section are for you to use to prepare slides, transparencies or other visual aids. The master visuals appear in the same numerical order as they are referenced throughout the exercises in Sections 2 & 3.

Within Sections 2 & 3, the master visuals appear in blue type in the left margin, to help you easily locate the appropriate exercise. The master visuals found in this section may be copied for your use only in seminars, meetings or presentations in which the film/video program, *Discovering the Future: The Business of Paradigms* is also used.

FOR PREVIEW ONLY  
FOR PREVIEW ONLY

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**Master Visual 1**

OTHER WORDS FOR PARADIGM	
Theory	Etiquette
Model	Tradition
Belief Systems	Customs
Protocols	Inhibitions
Conventions	Superstitions
Patterns	Rituals
Methodologies	Doctrine
Values	Prejudice
Routines	Compulsions
Conventional Wisdom	Addictions
Common Sense	Orthodoxy
Habit	Dogma

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**Master Visual 2**

OLD PARADIGMS	NEW PARADIGMS
Divine right of kings	The earth is flat
Night vapors cause illness	Women have no right to vote
Time is absolute	All the lights in the night sky are single stars
Airline deregulation	New superconducting materials
Fiber optics for communication lines	Zero population growth
Capitalism in communistic countries	Europe under one economic organization

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**Master Visual 3**

<b>AN ORGANIZATION IS A FOREST OF PARADIGMS</b>	
Research & Development	Human Resource Development
Distribution	Manufacturing
Sales	Administration
Dress Code	

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**Master Visual 4**

We shall not cease from exploration And the end of all our exploring Will be to arrive where we started and know the place for the first time. —*T.S.Eliot*

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**Master Visual 5**

“What is impossible to do right now, but, if you could do it, would fundamentally change your business?” —*Joel Barker*

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**Master Visual 6**

You can and should shape your own future; because, if you don't, somebody else surely will! —*Joel Barker*

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**Master Visual 7**

IMAGINE THE POSSIBILITIES	
Bio computers	Human Limb Regeneration
Nonlethal defensive deterrence	Flight-to-space in "air" craft
Deflation	Hungary as world software leader
Dirigibles as third world transport standard	Brain-to-computer one way communication
Corporations as the models for education paradigm	Superconducting materials

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**Master Visual 8**

"In the long run, the race belongs not merely to the swift, but to the farseeing, to those who anticipate change." —*Lykes Lines*

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**Master Visual 9**

EXAMPLES OF PARADIGM PARALYSIS	
Mainframe computer makers with PC's	Railroad with trucking
Telegraph to telephone	Bias belted tires to radial tires

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**Master Visual 10**

REJECTION EXCUSES	
Anxiety —I'm afraid I can't do it	Loss of power
Anger over having your expertise made irrelevant	Doubts about the long term success of the new way to do things
Jealousy because someone is better at the new way than I am	



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**Master Visual 11**

“When a paradigm shifts, everyone goes back to zero” —*Joel Barker*

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**Master Visual 12**

PARADIGM SHIFTS, 1985-2000	
Space Industrialization	The Electronic Cottage
Solar Energy	Information Access
Wellness	Robotics
Bio-manufacturing	Banking/finance
Universal Communication	Education
Electronic Shopping	U.S. Farming no longer food focused

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**Master Visual 13**

“It is important not to mistake the edge of the rut for the horizon.” —*Anonymous*

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**Master Visual 14**

SUGGESTIONS FOR DEALING WITH CHANGE	
Make sure you have a clear understanding of your own paradigms.	Ask yourself, “Who in another field would be interested in my unsolved problems?” and then go talk to them
Whenever a change is suggested, work through both the negative and the positive aspects of the change.	Actively seek your own paradigm shifts by going outside your field regularly,

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**Master Visual 15**

“No corporation today gets hit by the future between the eyes; They get it in the temple.” —*Dick Davis*

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**Master Visual 16**

R & D PARADIGM RULES	
Ph.D's are what we hire	Technicians can't have good ideas
We must make presentations at Conferences at least once every year	We work in powders
A chemist is better than a biologist	The quickest way to a top administrative post is a great patent

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**Master Visual 17**

“It is really amazing by what margins competent but conservative scientists and engineers can miss the mark when they start with the preconceived idea that what they are investigating is impossible.” —*Arthur C. Clarke*

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**Master Visual 18**

“The real voyage of discovery consists not in seeking new lands but in seeing with new eyes” —*Proust*

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