

Date: Tue, 18 Dec 2007  
From: Ned Ruete <nruete@sbcglobal.net>  
To: Sandor Schuman <:sschuman@albany.edu>  
Subject: RE: [GF] Seeking Info. On BPR and Process

Here are two articles:

*Managing Reengineering Polarities: People and Technology, Process and System, and Answers to the Most Frequently Asked Questions about Business Process Reengineering, or, Everything You Always Wanted to Know about BPR but were Afraid You Wouldn't Like the Answer*

Each is in its original form, not updated. When BPR became a bad word, I stopped writing about it.

They are presented in chronological order. The FGIPC paper was written after *Reengineering the Corporation* came out but before *Reengineering Management*. Some of the ideas about the system pushing back and adding command and control to control the change instead of letting the new way replace command and control being too costly to maintain are not yet developed. These papers are basically optimistic - the pessimism sets in later.

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## **Managing Reengineering Polarities:**

### **People and Technology, Process and System**

Keywords:

Business process reengineering, polarity management, paradox, systems thinking, personal mastery

Abstract:

Integrating people, process, and technology for successful reengineering requires the ability to deal with paradox. In particular, there is a need to focus on both people and technology in finding the sources of improvement, and to focus on both business processes and the larger business system in making change efforts. At the USCG R&D Center, we have started using a relatively new approach to dealing with paradox called polarity management. In this paper we look at the fundamental nature of the BPR movement, the paradoxes that are the causes of some BPR failures, and the use of polarity management to deal with these paradoxes.

This paper was presented at the 1996 Department of Defense Software Technology Conference in Salt Lake City, UT.

## 1.0 INTRODUCTION

Many claims have been made for business process reengineering (BPR). It is supposed to be the panacea that will magically save our organizations, our economy, our society. It is going to let government work better and cost less. It will produce 90% reductions in costs and resources and 500% increases in efficiency.

But while one part of the industry is singing the praises of BPR, another is composing its funeral dirge. Because of some major and well-publicized failures, many believe it is well on its way to becoming last year's fad. Some organizations that bet the farm on BPR initiatives have been big losers. In an industry that is quick to throw in its fortunes with the latest flavor of the month and equally quick to abandon it when the promise is not quickly and easily fulfilled, BPR could become the latest casualty.

At the U.S. Coast Guard Research and Development Center, the Information Systems Technology and Development Project provides information systems analysis and design services to project sponsors throughout the Coast Guard. As a prelude, we offer BPR consulting services based on two assumptions:

If an information system doesn't improve the way you do work, you can't afford it, and

Introducing information systems will change your processes. It is better to design the process you want and then automate to achieve it than to automate first and wait to find out what you get for a process.

In these efforts, we have seen the full range of outcomes. Some organizations create process designs that will save up to 75% of operating costs. Other organizations steadfastly refuse to make organizational or process or structure changes and will never realize any more than the minor gains available from process automation.

We have discovered that successful reengineering is the result of integrating people, process, and technology. However, this requires the ability to deal with paradox, which is not the strong suit of most organizations. In fact, those organizations which most need reengineering are generally the ones least able to deal constructively with paradox.

In particular, there is a need when reengineering to focus on both people and technology in finding the sources of improvement, and to focus on both business processes and the larger business system in making change efforts. At the USCG R&D Center, we have recently started using a relatively new technique for dealing with paradox known as polarity management. In this paper we look at the fundamental nature of the BPR movement, the paradoxes that are the causes of some BPR failures, and the use of polarity management to deal with these paradoxes.

## 2.0 Business Process Reengineering

There is a lot of confusion about BPR. Everyone claims they know what BPR is, but very few agree. Everyone says they have ten years experience doing it, even though no one ever heard of it five years ago.

### 2.1 WHAT IS BPR?

BPR is not a method: it is a way of life. It is one in a series of movements that call for a fundamental shift in how we perceive people and how we use the full potential of our human resources to reach the full potential of our organizations. The key to reengineering is to reconceive and redefine what it means and what is required for people to add value.

Business process reengineering is defined by Hammer and Champy as:

The fundamental rethinking and radical redesign of an entire business system -- the business processes, jobs, organizational structures, management systems, values, and beliefs -- to achieve dramatic improvements in critical measures of performance.<sup>1</sup>

This definition has two parts. It has a goal: dramatic improvements in critical measures of performance. It also has a warning: in order to achieve dramatic improvement, we have to be ready to do fundamental rethinking and radical redesign of an entire business system.

This definition also tells us what an “entire business system” consists of and how deep the changes must be to have BPR. Many people stop at changing the business processes and jobs. Some make some superficial changes to the organizational structures. These two or three items give you some process redesign, but not BPR. BPR requires the next three changes as well: changing the management systems, values, and beliefs.

### 2.2 The Paradoxes of BPR

BPR is full of contrasting elements that must all receive attention to achieve success. Two of the most important ones are:

The balancing of people with technology in finding reengineering solutions, which includes using a process that is both formal and open-ended, and

The balancing of job and process changes with changes to the business system within which the processes operate and the values and beliefs, the paradigms, which created those systems.

In this section we will discuss these two paradoxes.

## 2.2.1 People, Technology, and BPR Methods

Reengineering has to be about people. Up to 75% of the cost of “hard” goods such as cars and appliances is in human knowledge work, and in computer chips it’s 99% or more. To survive, an organization must ensure that all that expensive human knowledge work adds value. Tom Peters, who has spent years attempting to isolate the critical factors that allow some companies to prosper while others fail, has come to the disturbing conclusion that there is no formula for success.<sup>2</sup> The organizations that hold their own and do well in today’s constant white water<sup>3</sup> are those that have organizations and people who actually relish the challenge of constantly changing business conditions. The people who make up the organization must individually and corporately adopt a new mindset, a new collection of attitudes about work and managing work that allows them to adapt quickly to change.

At the same time, BPR calls for using technology to leverage our people resources. Today’s organizations are increasingly becoming information organizations. They rely on information systems in every department, every job, every operation. If the organization is going to thrive on chaos, the information systems must be able to support a new way of working and of learning.<sup>4</sup> Parts of your design process have to address rethinking how people work, and parts of it have to look at providing not just new information systems but a whole new way of designing, developing, and using information systems. Emphasis on each yields rewards; overemphasis of either at the expense of the other yields disaster.

Contained within the people/technology paradox is the BPR methods paradox. We saw from the definition of BPR that it does not include any fixed method. It requires the free and open-ended questioning of everything everybody does. But the use of technology comes with tools and methods for analysis and development. The challenge of the people/technology paradox is to find a way of developing the models and specifications for the technology to support reengineering without getting so involved with the tools and methods that we lose sight of the fundamental rethinking and radical redesign of the entire business system.

## 2.2.2 Process and System

The hallmark of BPR is the focus on work processes as the point at which the leverage of technology can be applied. Processes are how we get things done. Along with tools and organization, they form the technical work system. For many years, there had been two standard approaches to improving organizational performance. One approach, favored by managers and management consultants, was to reorganize. But changing who it is that people report to or which groups report to a common boss won’t speed up the work. You have to change the work.

The other approach, favored by technical people and information system vendors, was to provide faster tools. But you can’t just speed up the current work: 50% to 80% of all office tasks are non-value-added<sup>5</sup> and need to be eliminated. You have to radically alter the process to eliminate work.

The breakthrough of Hammer and Champy was to recognize that, for those organizations that were really achieving dramatic performance improvements, both of

these approaches were subservient to changing the processes themselves to improve workflow, reduce non-value-added tasks, improve customer service, reduce lead times, or do whatever else was needed to improve the performance measure important to the organization. What many successful organizations have done is to

Realize that many of their processes grew up from trial and error, with pieces and parts being added as new conditions and cases were found;

Take a hard look at those processes in light of new tools and new management thinking that was available to improve them; and

Reengineer (or some would say “engineer”) those processes to remove layers of reporting, months of review, walls of bureaucracy, non-value-added steps, and between 50 and 90% of the cost.

Hammer and Champy collected some of the basic ways in which these organizations were rethinking their processes and some of the steps they went through in making changes to them and labeled the whole thing BPR.

At the same time, they recognized that a key to all of this was the new management thinking. You can’t just point to the tasks that don’t add value, the redundant work and the reports that no one reads, and say, “Let’s eliminate them.” A problem we have often found when doing process reengineering is that every report, document, and procedure is a consequence of how the client is organized to perform and manage the work. The command and control hierarchy prevalent in the Coast Guard and other government organizations subsists on a myriad of paper reports and bureaucratic procedures. You can’t eliminate very much of the non-value-added knowledge work unless you modify the idea of control from the top.

So while process must be paid attention to, so must the management systems within which the processes operate. Deming exhorted us to “Export anything to a friendly country except American management.”<sup>6</sup> Champy makes the case in his book *Reengineering Management*<sup>7</sup> that most reengineering failures are the failure of managers to reengineer the way they manage. In fact, Champy’s basic message was that if an organization could adopt the right management attitudes, systems, and culture, the people carrying out the work would probably reengineer the processes themselves. The challenge of the process/system paradox is to work the process question to dramatically streamline the work AND at the same time be willing to challenge and change the structures, values, beliefs, and culture that created the old processes so that the real process reengineering gains can be achieved.

### **3.0 Polarity Management**

Normal management practice is to think of every problem as having an “either/or” answer: pick one and stick with it. Polarity management<sup>8</sup> is a problem solving technique that is of use in managing paradox because it points out the possibility of a “both/and” approach, and the necessity of continuously asking, “Are we focusing on the right thing for this moment?”

### 3.1 Polarities are Fundamentally Different

Polarity management maintains that the secret to dealing with paradox is to acknowledge that there is a class of problems that cannot be "solved" permanently, because they require shifting back and forth between two opposing but interdependent states. Just as we cannot always breathe in or always breathe out, we cannot always focus on people or always focus on technology: we cannot always focus on process redesign, or always focus on systems thinking. Putting the focus on either pole has advantages and disadvantages: each pole of the paradox has an upside and a downside.

A polarity that needs to be managed is fundamentally different from other kinds of problems we are used to dealing with. A polarity is not an either/or problem: a problem where a choice must be made between one alternative or another. It is also not a mystery problem, where the correct answer or course of action must be found, nor is it a continuum problem, where the right balance of factors is looked for. This last is very important, because polarities at first seem like continua problems.

The way to tell a polarity is in two tests. For there to be a polarity, the following two conditions must exist:

Is the difficulty ongoing? and

Are there two poles which are mutually exclusive but interdependent?

In an either/or problem, you can't have your cake and eat it too. The two (or more) choices do not depend on each other, they exclude each other, and once the choice is made, the problem goes away -- at least for a while. Similarly, the mystery problem has only one right answer, and when found, the mystery is solved. Continua problems can be ongoing -- we are always trying to get more of the fuel economy advantages of smaller cars while retaining as much of the safety and comfort of larger cars as we can. But they are not polarities because the two poles are not interdependent: the car doesn't have to be bigger in order to be smaller. And the problem does not really go on indefinitely: once a given car design is selected, the problem of finding a place on the continuum is solved until we start designing the next car.

Polarity problems are fundamentally different because the problems are never solved, not even temporarily. The reason for this is that the two poles, while unable to be worked at the same time, are interdependent. We will have difficulty making people more productive without technology, but the technology does little good without people to run it. The organization's structures and values and beliefs need processes to implement them, but those processes cannot exceed the limits placed by the organization. Each pole of a polarity cannot exist without the other.

An example of a classic polarity is the team/individual polarity. Most really significant things cannot be done by a single person, but the teams that accomplish things are made up of individuals. For the corporate body to work, we have to spend some time on the healthy working of the team and some time on the healthy working of the individual. They are interdependent: they can never live apart. The work is ongoing: we can never just ignore one or the other. And the poles are mutually exclusive: we have to focus on teams or individuals one at a time: we cannot focus on both at the same time.

### 3.2 Polarity Maps

The first step in managing a polarity is to identify a paradox, such as the two we have identified for BPR. The second step is to create the polarity map. It is the mechanism by which you show people that both sides of the question have strengths that are needed and both sides have pitfalls that must be minimized.

Figure 1 presents the polarity map for breathing. The two poles are shown at either end of a horizontal line through the middle of the map, separating the upside from the downside. A vertical line separates the two poles. In each quadrant, the positive or negative characteristics of that pole are listed. In this case, the upside of inhaling, or the “L+”, is the intake of oxygen. The downside, or “L-”, is the buildup of carbon dioxide. Conversely, reducing carbon dioxide, R+, and oxygen deficit, R-, are the upside and downside of exhaling.

<b>L+</b> OXYGEN INTAKE	<b>R+</b> REDUCE CARBON DIOXIDE
<b>INHALE</b>	<b>EXHALE</b>
<b>L-</b> CARBON DIOXIDE BUILDUP	<b>R-</b> OXYGEN DEFICIT

Figure 1. Breathing Polarity Map

#### 3.2.1 Flow in a Polarity

What usually happens in a polarity is that the organization starts in the upside of one pole, but then recognizes the downside, moves to the other pole, and experiences the upside of that pole for a while before sensing the slide to the downside and moving back to the start. In a well-managed polarity, this flow is smooth and the transitions are made so that the organization spends most of its time in the upsides, as shown in Figure 2. The key principle is that proper movement between the two poles allows experiencing mostly the upside of both poles. This flow is natural and intuitive and usually no one pays attention to it.

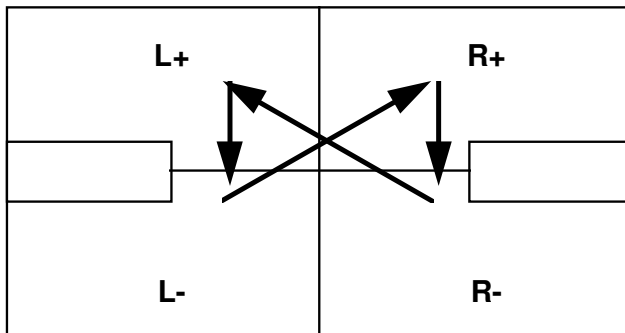


Figure 2. Well-managed Polarity Map

But then a poorly-managed polarity comes along as shown in Figure 3. Focus on a problem leads to either/or thinking and results in the organization spending most of its time stuck on one pole. Staying too long in one pole results in experiencing only the downside of that pole. And staying longer results in beginning to experience the downside of the opposite pole as well. If we try to inhale continuously, we soon build up too much carbon dioxide: the downside of inhaling. And if we still continue to breathe in, eventually we lose our capacity to take in any more air and we also have oxygen deficit: the downside of the exhaling pole, the pole we are staying away from. This phenomenon is the result of the interdependence of the poles.

When the situation becomes desperate, the organization starts flinging itself from one pole to the other but always too late: that is to say, they are stuck continuously in the downside of one pole or the other, as shown in Figure 3. This thrashing back and forth from one position to another without ever getting the benefits expected from either is an indication that there is a poorly managed polarity in action and that the organization should probably start with drawing a polarity map.

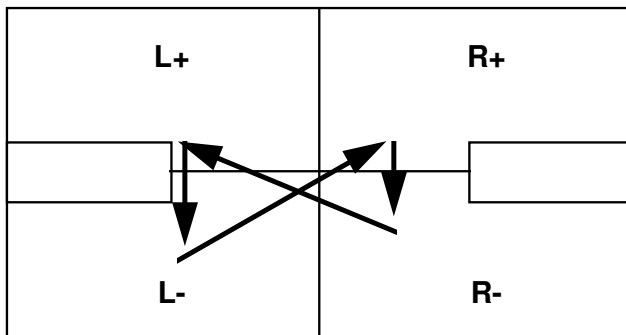


Figure 3. Mismatched Polarity Map

### 3.2.2 Drawing Polarity Maps

The drawing of a polarity map is an art. The process of drawing the map is probably more important than the map itself. Usually polarity management is a group problem: different parts of the group are advocating different poles of the polarity. Drawing the map is the most important part of the process of getting both camps to see the need to manage the polarity, to not get entrenched on one pole or the other.

There are essentially three scenarios in which a polarity map is drawn. The first is when a group seems to be at an impasse, and either a member of the group, a facilitator, or some other neutral party recognizes that a polarity may be at the heart of the problem. At this point, no one really knows what the polarity is. The approach is to list the things each side wants and the things each side is afraid of. These become the upsides and downsides of the poles. What one side gives becomes L+ and R-, and what the other side offers becomes R+ and L-. Then the principles of polarities and polarity management are explained. Finally, the two groups work to put labels on the poles of the polarity. There are many variations on this basic theme, including the use of breakout groups, structured discussions, and formal and informal brainstorming sessions. Johnson and others provide complete discussions of these techniques.

### 3.2.3 Crusaders and Standard Bearers

Besides the neutral party, there are two other kinds of people who can draw the polarity maps, and they provide the other two scenarios. These situations involve someone who has identified a polarity and is encountering resistance in managing that polarity. The first kind of person is the crusader: someone who sees the need to move to the opposite pole from where the organization seems to be stuck. The key for the crusader is to go against the normal flow. As we saw in Figure 2 and Figure 3, the normal flow is from L+ to L- to R+ to R-. The effective crusader will reverse this flow in the following way:

Start in the upside where the organization seems to be stuck. Seek information from those resisting change on what the upside of this pole is. Acknowledge the advantages of the upside of this pole. Write this in the map as L+.

Move opposite the flow to the downside of the pole you want to move to -- to R-. Seek information from those resisting change on what they perceive to be the downside of the new pole. Acknowledge these problems. Write them in the map.

Continue to move opposite the flow by moving to the upside of the proposed pole. Explain the potential benefits of being in this pole. Write this in the map as R+.

Finally complete the polarity map by offering views of what can go wrong under the status quo, the downside of the current pole. Write this in the map as L-.

In each of the last two quadrants, effectiveness of the whole process can be improved if you can get the resisters to offer the items to put on the polarity map.

The other person who may be using a polarity map is the standard bearer: the person who is worried about a headlong and one-way rush to the new pole of the polarity. Here again, the polarity map is built opposite to the normal flow, but starting with acknowledging the advantages of the pole the organization seeks to move to (R+) and the downsides of the current pole (L-), then moving to the advantages of the current pole (L+) and the disadvantages of the new pole (R-).

## 4.0 Reengineering Polarities

We are now armed with the tools to look at some potential ways of managing the polarities involved in business process reengineering. We have discussed two of the paradoxes that we have seen in our BPR work, and we have the tools of polarity management. Polarity management is a powerful tool in understanding and managing the integration of people, process, and technology in reengineering efforts.

### 4.1 Reengineering Polarity Maps

We will take a look at polarity maps for each of the paradoxes we have discovered for BPR to see what is contained in the upsides and downsides of each pole. The polarity maps in this paper were built from our experiences with these polarities. Do not try and

use these maps at home. Remember the key is to draw your own polarity maps with your own groups. The process of drawing them is at least as important as the map itself.

### 4.1.1 People and Technology

Figure 4 is the polarity map for the “people/technology” polarity. It provides the upside and downside of the people pole and the technology pole.

<p><b>L+</b>          Emphasis on people effectiveness          Emphasis on work system          Reduce non-value-added work          Question everything</p>	<p><b>R+</b>          Leverage effort of people          Systems thinking          Break paper-based mentality          - Span of control          - Layers of management          Formal methods/deliverables</p>
<p><b>PEOPLE</b>  <b>L-</b>          Do things same old way          Revert to non-systems thinking          Lose leverage of people          10% to 15% gains</p>	<p><b>TECHNOLOGY</b>  <b>R-</b>          Emphasis on tools          Get stuck in methodology          Emphasis on efficiency          Speed up non-value-added work          10% to 15% gains</p>

Figure 4. People/Technology Polarity Map

In L+, placing the emphasis on the people and their role in the work system provides several advantages. It places the emphasis on people effectiveness. In most organizations it is people who produce the outcomes. While tools and processes may support people in producing output, it is fundamentally people effectiveness that will determine organizational effectiveness. Looking at people also tends to bring an emphasis on the total work system: people are the most complex element of the work system and their performance is interdependent with all other parts of the system. Finally, a people focus includes looking at people productivity, which is where we started the discussion of BPR: our goal is to reduce non-value-added work.

In L- we see the drawbacks of too much people focus. First of all, if we only look at people processes, we ignore the new ways of working together that technology supplies. We end up doing things the same old way. We may lose our systems-thinking mindset, because we become “people persons.” We lose the ability to leverage our personnel assets through better tools. The result: 10 to 15% gains in productivity if we’re lucky and work really hard.

Many of the R+ and R- items are just the inverse of the L- and L+ quadrants. In R+, placing the emphasis on the tools that people use has several advantages. First, we can leverage people with better tools. We can think about the entire work system and how it grew from the technology of the last century, and start to break the bonds of the old paper-based mentality about limitations on span of control and the layers of management that limit implied. Before the information-based organization, most of the layers of management were amplifiers and filters. Now that we can handle larger

volumes of data and make it available to more people, pushing authority down and out has become possible, and along with that the flattening of the organization.

In R- we see the drawbacks from too much technology focus. Once we place the emphasis on tools, we stop thinking about changing the process and start thinking about making it more efficient. And we get so bogged down on developing the models needed to do systems that we don't get "out of the box" and question everything. Even business people on the design team would rather have technology bear the brunt of increased productivity than have to face redesigning their processes. The result is the speed-up of the same old non-value added work: 10 to 15% gains in productivity if we're lucky and work really hard.

### 4.1.2 Processes and Systems

Figure 5 is the polarity map for the "process/system" polarity. It provides the upside and downside of the processes pole and the systems pole.

In L+, placing the emphasis on the processes and their role in the work system provides several advantages. It results in the rationalizing of processes. Hammer and Champy tell us some of the ways processes might be rationalized. Several jobs may be combined into one. Steps are performed in a natural order. Variances are handled close to where they occur. Processes have multiple versions: a tool shed doesn't need the same level of zoning approval as a megabuck shopping mall. Case managers, work teams, multi-disciplinary teams, and autonomous groups all help to move work to where it makes sense and reduce reconciliation and oversight.

In L- we see the drawbacks of too much process focus. First of all, if we only look at processes, we ignore the fact that the culture doesn't support the new process. We end up doing things the same old way. No real learning takes place.

<p><b>L+</b> Processes are rationalized Several jobs are combined into one Steps performed in natural order Processes have multiple versions Work is performed where it makes sense Reconciliation is minimized Case manager is single point of contact*</p>	<p><b>R+</b> System Supports Changes Workers make decisions Checks and controls are reduced Hybrid central/decentral prevalent*</p>
<b>PROCESS</b>	<b>SYSTEM</b>
<p><b>L-</b> Culture doesn't support process No real learning Flavor-of-the-month fad</p>	<p><b>R-</b> No concrete change seen No leverage point for technology Flavor-of-the-month fad</p>

\*Source: Hammer and Champy, Reengineering the Corporation

Figure 5. Process/System Polarity Map

Force field analysis tells us that the state of an organization is the result of an equilibrium of forces in opposition. Some forces are trying to move the organization forward, called supporting forces, and some are trying to hold it back, called restraining forces. In 99 cases out of 100, if you increase or add a supporting force, the restraining forces will increase on their own to hold the organization in the same place but under greater tension.

This is what happens if we focus exclusively on processes. If we add the new innovative processes without removing the command-and-control thinking, the bureaucratic mindset will install more control bottlenecks to monitor and regulate the new processes. The result is wasted resources for the reengineering effort, increased tension in the system, and the rejection of the BPR as another flavor-of-the-month fad. If the wasted resources and increased tension are severe enough, it can cause failure of the organization.

Many of the R+ and R- items are just the inverse of the L- and L+ quadrants. In R+, placing the emphasis on the overall work system that the processes exist within has the advantage that we end up with a system that supports the changes. Again, Hammer and Champy tell us what this looks like in successful organizations. Workers make decisions. Checks and controls are reduced. Hybrid centralized/decentralized organizations and systems are prevalent.\* We can think about the entire work system and how it grew from the technology of the last century, and start to break the bonds of the old paper-based mentality about limitations on span of control and layers of management.

In R- we see the drawbacks from too much system focus. Once we place the emphasis on the organization, tools, and culture, we stop thinking about changing the process. There is no leverage point at which we can apply the technology. For all the wonderful talk about a new era and a new attitude, things are done the same old way. The result is no real change, wasted resources for the reengineering effort, increased tension in the system, and the rejection of the BPR as another flavor-of-the-month fad. If the wasted resources and increased tension are severe enough, it can cause failure of the organization.

## 4.2 Managing the Polarities

The polarity map only tells you why you must focus on both poles, not how to focus on each. The power of the both/and thinking of polarity management is that it allows you to expand your understanding of the problems. This allows the expenditure of resources on dealing with the disciplines necessary to each of the poles without ignoring the other. In particular, it allows looking at the “soft” factors of change management and sociotechnical design<sup>9</sup> and organizational culture without “wimping out” on the more rigorous disciplines of system and organizational design.

When it is time to be on one pole or the other, you now have either/or, mystery, and/or continuum problems to solve within that pole, or there may be more polarities

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\* Centralization/decentralization is another polarity Johnson says must be managed: the fact that it is managed in reengineered organizations is another indication that they’re doing something right.

nested within the one pole. In particular, there are some nested polarities that need to be recognized to help us deal with each of our primary polarities.

### **4.2.1 Individual Responsibility and Systems Thinking**

Let's look at the last first. Making significant process change requires making changes to the overall management system and culture. By now we know enough about polarity management to suspect that the answer is not to throw out all hierarchy and install complete responsibility-based work systems. We can almost start from the hypothesis that this is another polarity to manage. Further evidence is found in the fact that responsibility-based crusaders run into so much difficulty with command-and-control standard bearers: if there were not a solid up side to command and control, the standard bearers would have let go long ago.

There is a polarity that management needs to become comfortable with if it is going to make the kind of significant change to the management culture that will allow process reengineering. Figure 6 is the polarity map for the individual responsibility/systems thinking polarity.

Individual responsibility is the focus on people making things happen within, without, and in spite of the organization they find themselves in. Systems thinking is the idea that if people don't succeed, it's the fault of the system we put them in: the path to greater success is not exhortation but fixing the system.

Within this polarity, most managers put their focus on individual responsibility. It seems a paradox in itself that those most opposed to the responsibility-based organization are stuck in the individual-responsibility pole. But a belief in individual responsibility is not a belief in giving individuals responsibility -- or, more properly, authority -- but a belief that individuals are solely responsible for their actions: a total rejection of the idea that the systems the individuals function within have any responsibility for how they behave or respond or feel or believe.

Once you have that belief, what follows very quickly on its heels is that the only way to control the behavior of those individuals is with procedures, controls, and monitoring systems: the bureaucracy that is at the center of the bloated management, crushing control systems, and strangling red tape that makes organizations cost much and do little. And as long as management believes exclusively in individual responsibility, we cannot eliminate one bit of that red tape, because every piece of it is an important part of the system of checks and balances that is mandated by that belief. And if we add empowering, responsibility-based, reengineered, team-oriented processes without addressing this restraining force, we end up adding more red tape to control the new processes: no motion, just greater system tension.

<b>L+</b> People work to make a difference Tap own initiative and creativity No waiting More organizational support	<b>R+</b> Emphasis on work system Org. can respond and improve Org. gets needed feedback More individual support
<b>INDIVID. RESP.</b> <b>L-</b> Dysfunctional reward systems Bad match of people to job "Sink or swim" -- many sink Org does not respond and improve More control systems More individual resistance	<b>SYSTEMS THINKING</b> <b>R-</b> Waiting for organization to improve People do not tap own initiative and creativity People do not take responsibility Greater inertia More organizational resistance

Adapted from Johnson, Polarity Management

Figure 6. Individual Responsibility/Systems Thinking Polarity Map

Another part of the downside of the individual responsibility pole is that top management never makes the tough management decisions. The organization is left without direction on the tough resource management issues: structures or architectures for information resources management, human resources management, even financial management are left to technical experts who do not have the business vision to make good choices or the broad power to make them stick. Top management believes it's only role is to create and monitor control systems to make sure everyone else is working hard.

But it is self-evident that we cannot go to total systems thinking. Ed Deming for example wanted to totally do away with performance appraisals, employee-of-the-month awards, and disciplinary actions. That kind of radicalism will get you thrown out of any boardroom or command headquarters. What is needed is to take the crusader approach to working the polarity flow. We have to show the upsides and downsides of both orientations, so that we can let enough systems thinking into the management culture to allow the processes to be reengineered.

Peter Drucker gave perhaps the best explanation of what has to replace current management practices when he wrote, "Organizations must be built on *responsibility from within*, rather than on power or command and control"<sup>10</sup> (his emphasis). Drucker's responsibility-based organization seeks other ways of determining what work to do than waiting for The Answer to come down from On High. People, given the opportunity, the incentive, the vision, and the information they need, will make good decisions. At the same time, he refers to hierarchy as a necessary skeletal structure onto which are built the muscles and nerves of the responsibility based, information based organization.

Parallel to and indivisible from Drucker's responsibility-based organization is what Peter Senge<sup>11</sup> calls the learning organization, or what Pedler, Burgoyne, and Boydell<sup>12</sup> call the learning company. By building a structure for everyone in the company and the company as a whole to have constant, relevant learning, the learning company provides the basis for more responsibility from within. Senge lists the key disciplines of the learning organization as:

Mental Models -- learning to recognize that what we see is only our mind's models of reality, and realizing that responding to the present or being ready for the future often requires changing those mental models.

Building Shared Vision -- vision from on high will not create a responsibility-based organization. If people are to take responsibility for achieving a vision, they must take part in creating it.

Team Learning -- just as individual learning takes practice, so does team learning. The discipline of team learning examines questions such as "How can the IQ of a team be lower than the lowest IQ of any individual on the team?" and "How can everyone in an organization know something and the organization not know it?"

Personal Mastery -- building the ability of the people in the organization to learn in order to increase the learning ability of the whole. Personal mastery is not learning job skills and work processes: it is the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, of seeing reality objectively.

Systems thinking -- contemplating the whole of the system and understanding how each part influences the rest, including how our actions influence the system.

This last is a slightly different view of systems thinking. This definition is broader and more general than that implied by the polarity map. But one implication of this general definition of systems thinking is the specific result that the success of people is determined by the system they are in. Note also, however, that this more general definition also implies the individual responsibility pole that so many crusading "systems thinkers" have left out: people have an impact on the system they are in.

Responsibility-based learning organizations learn better and more quickly, and oh-by-the-way with much less bureaucratic overhead. They perform better and cost less. So, while there is no one plan or organization that is needed for BPR, if you want to dramatically improve performance and drastically reduce costs, you will probably be going for some form of responsibility-based learning organization.

## **4.2.2 Strategic Personality and Personal Mastery**

The ultimate desired outcome of BPR is to make the people more effective: to reduce the non-value-added processes and to increase the production of desired organizational outcome per unit of individual knowledge work. Lets assume we have the proper measure of attention on the processes the individual performs, the impact of the system on the individual's performance, the organizational structure s/he works within, and the tools we provide to help make the work more efficient. Now we turn our attention to helping the individual worker.

Here again there is a polarity that we can manage to help us. I briefly mentioned personal mastery in the last section. Here's a different way of looking at personal mastery: it is managing the polarity of the opposing poles of the psyche. Figure 7 is the personal mastery polarity map. Strategic personality is the pole we are currently stuck in: it is the part of the human psyche that worries about security in the present and the future

and does something about it. It tends to reside in and share many features with the left brain. Money is a creation of the strategic personality: it is a way of storing up the return for our efforts so that when we get old, we don't have to keep making knives to barter for food or raising chickens to barter for clothes.

<p><b>L+</b>  Strategic planning  Sound financial management  Rational understanding  Linear procedures  Outcome oriented</p>	<p><b>R+</b>  Creativity/flexibility/responsiveness  Dealing with complexity  Systems thinking  Risk taking/learning from fast failure  Helping/teamwork</p>
<p><b>LEFT BRAIN</b></p>	<p><b>RIGHT BRAIN</b></p>
<p><b>L-</b>  Incomplete explanations  Looking out for #1  Rampant consumerism  Unethical behavior/crime -- "Just so we don't get caught"  Addictive behavior</p>	<p><b>R-</b>  Scattered activities  Frivolous thinking  Unnecessary risk taking  Addictive behavior</p>

Figure 7. Personal Mastery Polarity Map

The problem is the strategic personality has distinct limits. It has no creativity or flexibility, the two most rare and valuable commodities in today's business environment. It is also lousy at dealing with complexity: it tends to be rational and linear, and enormous detail complexity always renders a rational explanation inherently incomplete.

Henry Ford once bemoaned, "Why do I persist in getting a whole person when all I need is a pair of hands?" In the reengineered, responsibility-based, learning organization, the principle of personal mastery says not only do you need the whole person, but the whole person that most of us bring to the organization is not enough. We have to improve upon that person. We have to develop the opposite pole of the psyche to the strategic personality, the pole that is the seat of creativity and flexibility and complexity management. Some people call it the right brain. Peter Senge calls it the preconscious or subconscious. Deepak Chopra<sup>13</sup> calls it the wizard within, or the spirit. Thomas Moore<sup>14</sup> and David Whyte<sup>15</sup> call it the soul. Eastern meditative traditions call it "beginner's mind." Susan Taylor<sup>16</sup> calls it "God within us."

Each of these names tells us something about this missing part. We've all seen the left brain/right brain car commercials and food commercials: we "know" that the left brain is the seat of reason and the right brain the seat of emotion. But the right brain is more than emotion: it is the seat of judgement about quality, balance, artistic value, justice, and ethics. It is when we try to reduce these judgement topics to a list of yes/no rules that we get into trouble.

And that is because of what we learn from the use of "conscious/subconscious" to describe the split. Senge brings to mind the fact that our conscious brain, our left brain, is not fast enough to deal with all the complex details of negotiating our car through dense traffic or painting a picture or playing an instrument: or even such "simple" acts as typing a paper or putting our hand on top of our head. Judgement lives in the subconscious.

Finally, the words used by Moore, Chopra, Whyte, and Taylor tell us just how complex mastery of this part of our psyche can be. We can't just talk about it or think about it, we must visualize it, experience it, practice it, live it. It is important to make the complex simple and the simple complex. Creativity is not something that only a few people have: it is in all of us, and must simply be unlocked. But understanding how to unlock it -- how to unblock it, really -- is complex and mysterious, bordering on the mystical. Some of the most consistently successful methods are found in the old stories and myths and in the arcane practices of ancient religions.

We have come full circle. Most if not all of the other poles we have looked at have required some mastery of systems thinking. Now we see that systems thinking is not possible without personal mastery. The strategic personality is just not capable of mastering the complexity it requires: we must also develop the soul. For too long we have left this part of our psyche in the sanctuary on Sunday morning or in the temple on Friday night. If we are to successfully reengineer, we have to bring it back to work with us.

## 5.0 Epilogue

Ken Eason<sup>17</sup> has said that the information revolution differs from the agricultural and industrial revolutions because the course of the revolution is being determined by millions of design decisions being made by tens of thousands of designers. A very real danger comes from the fact that each of these design decisions is being made to optimize local technical results, with no mind to the society that is being created by the cumulative weight of the individual decisions. We need to adopt the battle cry of the environmental movement: think globally, act locally.

If we make our local reengineering design decisions along the lines of the principles presented here, what will be the global effect? First of all, we will reduce non-value-added work. Some would say that that is just eliminating jobs, and that's a bad thing. But in a world of scarce and vanishing resources, where there is so much to be done and so few people to do it, how can it be a good thing to waste people's work and the overhead resources they expend doing that work on activities that don't even add value to their organization, much less to the world as a whole?

What if we find there is not enough work to go around? What if producing all the wealth, all the goods and "necessary" services the world needs, only takes a part of the world's people? Then maybe we will be able to apply the "excess" people to doing some of the things that are currently getting neglected: advancing the arts, giving individual nurturing to our children, reviving the storytelling tradition that sustained and structured our societies for scores of centuries but that has been virtually lost in the last 150 years, planting trees, counting birds, washing oil off of rocks, caring for the soul of the world.

The biggest obstacles to that are 1) the strategic personality that wants to pull "stuff" to itself and not share and 2) a culture that says that if you weren't part of creating the wealth you can't partake in it. But reengineering needs a healthy dose of personal mastery. That is our last best hope for displacing the strategic personality from the chokehold it has on our society. The people who work in the reengineered company can find reward in the work they do, not just in the money they earn. They have the

opportunity to meet more needs than the basics of food, clothing, and material comfort, the focus of today's organizations. They will stop measuring their sense of belonging in terms of their belongings.

Finally, because an organization that runs on shared vision cares about what its people care about, the reengineered business will start to address societal concerns directly. As people begin to clarify and deepen their personal vision, concerns in their life begin to crop up in their business thinking. Working in responsibility-based companies they can bring these concerns into the organization because they help shape what the organization stands for. By applying the disciplines of systems thinking, team learning, and mental models to their concerns they can find real, substantial solutions. Because business organizations are where most of us work most of the time and the skills of the reengineered organization are the skills needed to address social problems, a large body of reengineered companies can become a powerful force for addressing economic, social, and environmental issues in a way that government and individuals cannot. And that is how BPR is going to save our organizations, our economy, and our society.

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