

IMAGE

AN ACTION RESEARCH JOURNAL ON PERSONAL AND ORGANISATIONAL TRANSFORMATION

THE INSTITUTE OF CULTURAL AFFAIRS and LENS INTERNATIONAL

IMAGE

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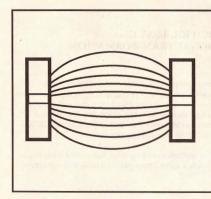
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"MENTAL MODELS AND BEHAVIOR"

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JOURNAL OVERVIEW



Mental Models Context

"The human mind is the last great unexplored frontier - the last unexploited resource - in business. And the potential gains we might realize from understanding it and exploiting its potential could outdistance all that we have accomplished so far.

Several hundred years of progress in the Western business world have brought us to the realization that we can organize, plan, and manage human and capital resources fairly efficiently. We have learned how to orchestrate the factors of marketing, production, and delivery of profitability and growth.

What we haven't yet learned is how to take advantage of what goes on between the ears of the average worker.

We have always known, at least semiconsciously, that most working people could contribute immeasurably more to their organizations than they are ever invited to contribute. Largely because of the unexamined assumptions that underlie much of our management practice, very few organizations ever really extend the invitation. And yet the need and the opportunity have never been greater.

We are now at a watershed in management practice. We have arrived at the point of diminishing returns in the impact of "scientific management." The Frederick Taylor analytical approach of the early 20th century and the Harvard Business School philosophy of rational management which is spawned have worked very well indeed. But the time is fast approaching when we shall need a new paradigm for human organizations that do work. We are going to need some new tricks if we are to keep our organizations healthy, successful, and competitive."

> Preface to The Creative Corporation, by Karl Albrecht with Steven Albrecht

Mental Models are the patterns of thought, deep within our psyche, that influence much of our behavior. When these images are unquestioned or unknown to us, they can block the process of change. When these images are collective in nature, as in an organisation, they can thwart the effective adoption of new directions. Prevailing mental images, when they are widely held in a society, can literally blind people to actions that are detrimental to that society.

Mental Models and its relation to behavior is at the heart of transformation. It is the basis of the title of this Journal. The ICA's pioneering work in "Imaginal Education", or the methods of altering people's self-images, has been an undergirding dynamic in nearly all of its transformation processes and programmes. The basic understanding states that behavior flows from self-images, and to alter behavior one must understand, uncover and replace these operating images with new ones.

It could be said that the culture of an organisation or society is the resulting environment of Mental Models. To bring about change in the culture, one must be able to bring hidden assumptions to the surface, examine them, and then, if valid, keep them actively before the members of that organisation. If invalid, they can be replaced with new images that communicate the new reality.

Today, this understanding is being promoted widely through such media as videos and books: The Business of Paradigms' by Joel Barker or The Global Brain' by Peter Russell are two fine examples. Peter Senge in his book, <u>The Fifth Discipline. The Art</u> and Practice of the Learning Organisation, effectively describes how the discipline of Mental Models is critical to the development of a learning organisation. He highlights a technique, called 'Left-Hand Column', to bring hidden assumptions to the surface. It is a technique in which one writes down what is actually said on the right side of a paper, as in a script, and what is thought, but not said on the left side of the page.

In his book, <u>Firing on All Cylinders</u>, Jim Clemmer puts the issue very powerfully. "You cannot transform your culture into a team-based, continually improving, customer-focused organisation if most of the people who are going to make it happen don't see, understand and embrace this picture." He then lays out the key ingredients to an education and awareness of Quality/Service process.

The changing of old images into new, more helpful or powerful ones can be characterised as a process of 'unlearning'. Ancient Vedic wisdom talks about the presence of 'samskaras', channels of thought processes, that are the accumulated residual impressions of our overt thoughts, words and deeds. Sri Aurobindo points out the value of teaching practices of Yoga which help the will to act unhampered by the samskaras, or old associations. This discipline needs to become part of the 'Personal Mastery' repertoire of an organisation. It can be the basis for the emergence of a 'business yogi' concept for the Learning Organisation.

Although the concept of Mental Models is not difficult to understand, the actual process of doing it is very difficult. In our own attempt to develop a module on this topic we found out that you could communicate the concepts and techniques very easily, but the lasting effect was minimal. We found people enjoyed the exercises of, for example, 'Metaphor Creation', or 'Six Hats Discussion' and the videos mentioned above, but behavior remained basically unchanged when people returned to the work environment. Without the establishment and <u>practice</u> of *samskara* -altering techniques this, as well as any other programme of behavioral change will be limited in its effectiveness.

This Issue

The symbol for this issue is a graphic representation of the field of energy that is present in an organisation that has both a strong set of values and a clear purpose. The values act like a gyroscope that keeps an organisation on course. They form the 'core' of the Current Reality, which is represented by the left-hand column in the diagram. The purpose acts like a compass, giving the organisation a futuric reference point. It is the 'core' of the Shared Vision, represented by the right-hand column. Together they create a 'mental model' field for the culture of the organisation.

Choosing articles for this issue was the hardest of any we have published. There are so many good publications on this topic that we could have done two or three completely different themes. We chose articles that show how Mental Models affect behavior. This topic is perhaps the one most helpful in understanding how Mental Models relate to the transformation process.

This issue begins with an article by Margaret Wheatley, from her book <u>Leadership and the New</u> <u>Science</u>. Rarely has a book excited me more than this one. She enables the reader to grasp the new paradigm of science in terms that relate to everyday experience within an organisation. Her chapter on Invisible Fields that Shape Behavior helps one to understand how vision and values at the centre of the corporate culture create 'fields' of meaning for an organisation.

Another perspective on 'fields' is the concept of 'Drala', a Tibetan word, that is the subject of

Chogyam Trungpa's chapter, "How to Invoke Magic", from <u>Shambala. The Sacred Path of the</u> <u>Warrior</u>. He examines how to develop a sense of sacredness within your environment and within yourself.

A recent book that integrates eastern and western thought and the power of Mental Models is Deepak Chopra's <u>Unconditional Life: Discovering</u> <u>the Power to Fulfill Your Dreams</u>. The Thread of Yoga shows that when we get in touch with our. deeper selves, our capacity to develop Mental Models can enable us to deal with pain and suffering, even death-threatening cancers.

Managing an organisation today requires the skill of handling paradox. 'Dancing' with events in the system is an art. Developing a mentality (Mental Model) that is "friendly to paradox" is essential. The **Grand Paradox of Management** is a chapter from Peter Vaill's book, <u>Managing as a Performing Art</u>.

A 'classic' book, <u>The Ghost in the Machine</u>, by Arthur Koestler, puts to rest behavioral science's view of explaining human actions from a stimulusresponse understanding. In the chapter, "The Glory of Man", he connects the way in which insight, humor and emotional release are related. The three phrases he uses to describe the connection are given as the title, Aha..Haha..Ah.

This leads us directly into the next article, Conveyance Through **The Narrative Universe**, by Homayun Taba. Dr. Taba understands the power of stories in our lives. Every culture has the ability to communicate truths about life through the use of homilies and myths. They give us a wholenew way to process information about life.

We conclude with a practical guide to scenario building as a Mental Model method. Peter Schwartz guides us in **The Art of the Long View**. It is an excerpt from the October, 1992 issue of <u>World</u> <u>Executive Digest</u>, and is from his book of the same name.

> Jack Gilles Editor

"To my mind there must be, at the bottom of it all, not an equation, but an utterly simple idea. And to me that idea, when we finally discover it, will be so compelling, so inevitable, that we will say to one another, 'Oh, how beautiful. How could it have been otherwise?'"

-- John Archibald Wheeler

FIELDS THAT SHAPE BEHAVIOR -

"Although we know a great deal about the way fields affect the world as we perceive it, the truth is no one really knows what a field is. The closest we can come to describing what they are is to say that they are spatial structures in the fabric of space itself."

Michael Talbot

In Utah, the sky is everywhere - blue, open, insistent on attention. It soars over mountains and sweeps into long valleys, showing off its crystal clarity. At night, it is even more an exhibitionist. A friend, after a long flight from Hartford, sat rocking on our lawn swing far past midnight, tired, yawning, but unable to move. The stars would not let her go. For me, moving here - and living with these stars and sky - has been an experience in space. I have felt myself expanding into this vastness, felt my boundaries open, my vision lift, my internal defenses dissolve. With so much space, there is no place to go but out.

Space is the basic ingredient of the universe; there is more of it than anything else. Even at the microscopic level of atoms, where we would expect things to be small and compact, there is mostly space. Within atoms, subatomic particles are separated by vast distances, so much so that an atom is 99.999 percent empty. Everything we touch, including our bodies, is composed of these empty atoms. We are far more porous than our dense bodies indicate. In fact, we are as void, proportionately, as intergalactic space.

In Newton's universe, the emptiness of space created a sense of unspeakable loneliness. Matter, small and isolated, moved bravely through the void, intent on its solo track, meeting rarely, traveling always across wide gulfs that stretched on into infinity. This lonely universe has, for a long time, affected our self-expression in all ways, from existentialist philosophies where we have felt the need to create the meaning of our lives in isolation from any greater source, to the heroic individuals of American history, lonely champions (both Western and corporate) who succeeded in spite of great odds. It was difficult to effect change in such an open, lonely world. It required generating energy of sufficient strength to surge through space, enduring long enough to reach another object and cause it to respond. Newton's world of cause and effect, of force acting upon force, required such efforts - great expenditures of personal energy to get someone else moving, vast regions of space to traverse to get something done. Not only did it feel lonely, it was exhausting.

Something strange has happened to space in the quantum world. No longer is there a lonely void. Space everywhere is now thought to be filled with fields, invisible, non-material structures that are the basic substance of the universe. We cannot see these field, but we do observe their effects. They have become a useful construct for explaining action-at-adistance, for helping us understand why change occurs without the direct exertion of material "shoving" across space.

Field Theory

In scientific thought, field theory developed in several areas years before quantum physics as an attempt to explain action-at-a-distance. (The word *field* was taken from the name given to the background on heraldic shields.) Newton introduced the first field, gravitation. In his model, gravity originated from a center of force, such as the earth, and spread out from there into space. Imaginary lines of force filled space, attracting objects toward the earth. In Newton's model of gravitational pull, a force emanated from one source, acting on another.

Einstein developed a different view of the gravitational field. In relativity theory, gravity acts to structure space. The reason objects are drawn to earth is because space-time curves in response to matter. Rather than a force, gravity is understood as a medium, an invisible geometry of space.

Space everywhere is now thought to be filled with fields, invisible, non-material structures that are the basic substance of the universe.

In our day-to-day lives, we have direct experience with fields besides gravity. Just place iron filings near a magnet. The specific patterns that form around the magnet are due to the invisible magnetic field. We also experience the effects of fields every time we turn on a light or plug in an appliance. Our modern electrical generating stations spin huge magnets, creating magnetic fields that then create electrical fields, which send out currents of electrons.

Fields are conceived of in many different ways, depending on the theory. The gravitational field is conceived as a curved structure in space-time; electromagnetic fields create disturbances that manifest themselves as electromagnetic radiations; quantum fields, perhaps a different field for each particle, produce particles when two fields intersect. But in each of these theories, fields are unseen structures, occupying space and becoming known to us through their effects.

Early advances in field theory came about because nineteenth-century scientists such as

Margaret J. Wheatley

Michael Faraday and James Maxwell chose to concentrate not on specific particles, but on space. Intuitively, they sensed that space was not empty but instead was, in a modern physicist's phrase, "a cornucopia of invisible but powerfully effective structure". Faraday and Maxwell made a conscious shift in vision, as we do when we look from close to distant objects; and in that shift, they led the way into a universe of busy, bustling space. It was an important shift in focus - to look behind the small, discrete, visible structures to an invisible world filled with mediums of connections.

Frank Wilczek and Betsy Devine, he a physicist, she an engineer turned writer, created an effective image for thinking about these invisible fields that exert visible influence. If we were to observe fish. unaware of the medium of water in which they swim, we would probably look for explanations of their movements in terms of one fish influencing another. If one fish swam by, and we observed the second fish swerving a little, we might think that the first was exerting a force on the second. But if we observed all the fish deflecting in a regular pattern, we might begin to suspect that some other medium was influencing their movements. We could test for this medium, even if it were still invisible to us, by creating disturbances in it and noting the reactions of the fish. The space that is everywhere, from atoms to the sky, is more like this ocean, filled with fields that exert influence and bring matter into form.

The quantum world is teasing and enticing in many ways. Fields fit right in. They are, as biologist Rupert Sheldrake describes them, "invisible, intangible, inaudible, tasteless and odorless." They are often unapproachable through our five senses; yet in quantum theory, they are as real as particles. They are, says writer Gary Zukav, the substance of the universe. The things we see or observe in experiments, the physical manifestations of matter as particles, are a secondary effect of fields. Particles may come into existence, often temporarily and briefly, when two fields intersect. At the point of intersection, where their energies meet, particles appear. The fact that particles appear and disappear like quick-change artists is a result of continual interactions between different fields. Although we have thought of particles as the basic building blocks of matter, in fact they are oftentimes transitory, just brief moments of meeting recorded as observable matter. This leads to a puzzling situation. Physical reality is not only material. Fields are considered real, but they are non-material.

The Universal Ocean

This paradox pushes us into important new territory, shoving us farther away from our "thing"

thinking or away from a universe of parts linked tenuously by energetic forces. Fields encourage us to think of a universe that more closely resembles an ocean, filled with interpenetrating influences and invisible structures that connect. This is a much richer portrait of the universe; in the field world, there are potentials for action everywhere, anywhere two fields meet. "The Newtonian picture of a world populated by many, many particles, each with an independent existence, has been replaced by the field picture of a world permeated with a few active media. We live amid many interpenetrating fields each filling space. The laws of motion, in field language, are rules for flows in this ocean. And the rules of transformation are, in this picture, telling us what ... reactions occur among the components of the universal ocean." Wilczek and Devine.

Sheldrake has created an intriguing concept of fields in biology. He has postulated the existence of morphogenic fields that govern the behavior of species. This type of field possesses very little energy, but it is able to take energy from another source and shape it. The field acts as a geometrical influence, shaping behavior. Morphogenic fields are built up through the accumulated behaviors of species' members. After part of the species has learned a behavior, such as bicycle riding, others will find it easier to learn that skill. The form resides in the morphogenic field, and when individual energy combines with it, it patterns behavior without the need for laborious learning of the skill. These fields, says Bohm, provide "a quality of form that can be taken up by the energy of the receiver."

Field images, when applied to organizations and employees, become quite provocative. We can imagine organizational space in terms of fields, with employees as waves of energy, spreading out in regions of the organization, growing in potential. How do we tap into that energy? How do we turn the employees' energy into behavior for the organization, into something observable and probable? The answer, in a field-filled world, is that employees meet up with other fields. Whether it's a field of energy, or a quality of form, they will have to interact with it to have their behavior made manifest. Space is not empty. Unseen energies influence how we manifest. The question becomes: What are the fields in organizations?

Before I propose an answer, let me note that we already have been developing a new awareness of organizational space. I listened recently to a senior insurance company executive describe his newly reorganized company. With advanced levels of electronic interconnectivity, he said, "space will be filled with our invisible, electronic networks, reaching everywhere on the globe." The computer world

has also created new images with *Cyberspace*, a term used to describe air filled with information that we retrieve electronically. Electronically-generated information, invisible but essential, floating along the airwaves, retrievable from who-knows-where, is making space more of an active player in our organizations. But it is time to think about the field qualities of organizational space as well.

As a generation of managers, we have been focused on many of the ethereal qualities of organizations - culture, values, vision, ethics. Each of these words describes a *quality* of organizational life that we can observe in our experience, yet find elusive to pin down in specifics. Recently, while doing work on computer service for a retail chain, I asked employees to visit several stores. After spending

time in many stores, we all compared notes. To a person, we agreed that we could "feel" good customer service just by walking into the store. We tried to get more specific by looking at visual

looking at visual cues, merchandise layouts, facial expressions - but none of that could explain the sure sense we had when we walked into the store that we would be treated well. Something else was going on. Something else was in the air. We could feel it, we just couldn't describe *why* we felt it.

to the organization.

It seems to me that field theory provides a useful explanation to this and many other organizational mysteries. At one level, thinking about organizational fields is metaphoric, an interesting concept to play with. But the longer I have thought about it, the more I am willing to believe that there are literal fields in organizations. I can imagine an invisible customer service field filling the spaces of those stores we visited, helping to structure employees' activities, and generating service behaviors whenever the energy of an employee intersected with that field. Of course, the field didn't just drift into the store: the cosmos didn't create a customer service field. In each of those stores there was a manager who, together with employees, took time to fill the store space with clear messages about how he or she wanted customers to be served. Clarity about service filled every nook and cranny. With such a powerful structuring field, certain types of individual behaviors and events were guaranteed.

Fields Within Organizations

This is not a fantasy image. Field theory can educate us in several ways about how to manage the more amorphous sides of organizations. For example, vision - the need for organizational clarity about purpose and direction - is a wonderful candidate for field theory. In linear fashion, we have most often conceived of vision as thinking into the future. creating a destination for the organization. We have believed that the clearer the image of the destination, the more force the future would exert on the present, pulling us into that desired future state. It's a very strong Newtonian image, much like the old view of gravity. But what if we changed the science and looked at vision as a field? What if we saw a field of vision that needed to permeate organizational space, rather than

viewing vision as a linear destination? If vision is a field, think about what we

could do differently to create one. We would do our

best to get it permeating through the entire organization so that we could take advantage of its formative properties. All employees, in any part of the company, who bumped up against that field would be influenced by it. Their behavior could be shaped as a result of "field meetings," where their energy would link with the field's form to create behavior congruent with the organization's goals. In the absence of that field, in areas of the organization that hadn't been reached, we could hold no expectation of desired behaviors. If the field hadn't extended into that space, there would be nothing there to help behaviors materialize, no invisible geometry working on our behalf.

Several years ago, a garbage can metaphor was introduced into our thinking about organizations. It created a provocative view of organizational "space" as a continual mixture of people, solutions, choices, and problems flowing around, and every so often coinciding and creating a decision at that juncture. "An organization is a collection of choices looking for problems, issues and feelings looking for decision situations in which they might be aired, solutions looking for issues to which they might be the answer, and decision makers looking for work.

This is a potent view of a Newtonian organization, with discrete pieces wandering about, colliding or avoiding collision, veering off in unexpected directions - organizational anarchy relieved by occasional moments of accidental coherence. This metaphor has lasted for many years because it matches many of our experiences of messy and irrational organizational forces. The task of creating order in garbage cans, of imposing structure and clarity, is overwhelming.

But with a quantum world view, there are new possibilities for order. Organizational space can be filled with the invisible geometry of fields. Fields, being everywhere at once, can connect discrete and distant actions. Fields, because they can influence behavior, can cohere and organize separate events.

In many ways, we already know what powerful organizers fields can be. We have moved deeper into a field view of reality by our recent focus on culture, vision and values as the means for managing organizations. We know that this works, even when we don't know how to do it well. Robert Haas, CEO of Levi Strauss & Co., calls this phenomenon "conceptual controls . . . It's the ideas of a business that are controlling, not some manager with authority." If we think of fields, I believe we have a better metaphor for understanding why concepts control as well as they do. But it changes the nature of our attention.

Broadcasting Ideas

In a field view of organizations, clarity about values or vision is important, but it's only half the task. Creating the field through the dissemination of those ideas is essential. The field must reach all corners of the organization, involve everyone, and be available everywhere. Vision statements move off the walls and into the corridors, seeking out every employee, every recess of the organization. In the past, we may have thought of ourselves as skilled crafters of organizations, assembling the pieces of an organization, exerting our energy on the painstaking creation of links between all those parts. Now, we need to imagine ourselves as broadcasters, tall radio beacons of information, pulsing out messages everywhere. We need all of us out there, stating, clarifying, discussing, modeling, filling all of space with the messages we care about. If we do that, fields develop - and with them, their wondrous capacity to bring energy into form.

Field creation is not just a task for senior managers. Every employee has energy to contribute; in a field-filled space, there are no unimportant players. Sheldrake's morphogenic fields grow and develop form because of what is occurring at the level of the individual who is acquiring new skills and knowledge. These fields change their content and shape because of individual activity. This is similar to the insights of organizational consultant Peter Senge, who believes that an organization's vision grows as a by-product of individual visions, a by-product of ongoing conversations. In the natural world, fields once formed may continue to propagate, continuing to exist even when their progenitors have disappeared. This is a comforting and cautioning trait that must influence our thinking about organizational fields. For once we create them, once we invest resources in putting them out there, they will sustain themselves, perhaps exerting more control than we had planned.

We need, therefore, to be very serious about this work of field creation, because fields give form to our words. If we have not bothered to create a field of vision that is coherent and sincere, people will encounter other fields, the ones we have created unintentionally or casually. It is important to remember that space is never empty. If we don't fill it with coherent messages, if we say one thing but do another, then we create dissonance in the very space of the organization. As employees bump up against contradicting fields, their behavior mirrors those contradictions. We end up with what is common to many organizations, a jumble of behaviors and people going off in different directions, with no clear or identifiable pattern. Without a coherent, omnipresent field, we cannot expect coherent organizational behavior. What we lose when we fail to create consistent messages, when we fail to "walk our talk." is not just personal integrity. We lose the partnership of a field-rich space that can help bring form and order to the organization.

There is an irony here. Those who try to convince us to manage from values or vision, rather than from traditional authority, usually scare us. Their organizations seem devoid of the management controls that ensure order. Values, vision, ethics these are too soft, many feel, too translucent to serve as management tools. How can they create the kind of order we crave in the face of chaos? Newton's world justified those fears because it was a world of pieces spinning off in all directions. But if we look past Newton, if we change our field of vision, we see a world of greater, more subtle forms of order.

What if we slip out quietly along the curvature of space, out into its far reaches? What if, once there, we adjust our eyes magically to the invisible world? There we will see a plenitude of structure - potential structure, emerging structure - and we will stop doubting. We once were made to feel secure by things visible, by structures we could see. Now it is time to embrace the invisible. In a world where matter can be immaterial, where the substance of everything is something we can't see, why not ally ourselves with fields? For such a little act of faith, space awaits, filled with possibilities.

From Leadership and the New Science, by Margaret J. Wheatley. San Francisco: Berrett-Koehler Publishers, 1992.

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What we lose when we fail to create consistent

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HOW TO INVOKE MAGIC - Chogyam Trungpa

How To Invoke Magic

The phenomenal world that all human beings experience is fickle and flexible and also merciless. You often wonder whether you can ride on that fickle and merciless situation or whether it is going to ride on you. To use an analogy, either you are riding on a donkey or the donkey is riding on you. Ordinarily, in your experience of the world it is questionable who is riding on whom. The more you struggle to gain the upper hand, the more speed and aggression you manufacture to overcome your obstacles, the more you become subject to the phenomenal world. The real challenge is to transcend that duality altogether. It is possible to contact energy that is beyond dualism, beyond aggression energy that is neither for you nor against you. That the is the energy of drala.

Drala is not a god or spirit, but fundamentally it is connecting the wisdom of your own being with the power of things as they are. If you are able to connect those two things, out of that, you can discover magic in everything. But there is still a question as to what it is that allows you to make that connection. The drala principle is likened to the sun. Although the sun is always in the sky, what is it that causes you to look up and see that it is there? Although magic is always available, what allows you to discover it? The basic definition of drala is "energy beyond aggression." The only way to contact that energy is to experience a gentle state of being in yourself. So the discovery of drala is not coincidental. To connect with the fundamental magic of reality, there has to be gentleness and openness in you already. Otherwise, there is no way to recognize the energy of nonaggression, the energy of drala, in the world. So the individual training and discipline of the Shambhala warrior are the necessary foundation for experiencing drala.

The setting-sun world, based on fear of oneself and fear of death, has no connection to drala principle. The cowardice and aggression of the settingsun outlook actually dispel any magical possibilities, any possibilities of experiencing the genuine and brilliant qualities of reality. The opposite of settingsun outlook and the way to invoke drala is to manifest the vision of the Great Eastern Sun. Great Eastern Sun vision, which we discussed in earlier chapters, is the expression of true human goodness, based not on arrogance or aggression, but on gentleness and openness. It is the way of the warrior.

Manifesting Bravery

The essence of this way or path is transcending cowardice and manifesting bravery. That is the best and only way to invoke drala: by creating an atmosphere of bravery. We have already talked in earlier chapters about the qualities of bravery. The fundamental aspect of bravery is being without deception. Deception in this case is self-deception, doubting yourself so that you are cut off from the vision of the Great Eastern Sun. The dralas can only descend onto your existence when you have properly prepared the ground. If there is the slightest deception, you will dispel drala. From that point of view, deception is the magic of the setting sun.

Usually if we say someone is brave, we mean that he is not afraid of any enemy or he is willing to die for a cause or he is never intimidated. The Shambhala understanding of bravery is quite different. Here bravery is the courage to be - to live in the world without any deception and with tremendous kindness and caring for others. You might wonder how this can bring magic into your life. The ordinary idea of magic is that you can conquer the elements, so that you can turn earth into fire or fire into water or ignore the law of gravity and fly. But true magic is the magic of reality, as it is: the earth of earth, the water of water - communicating with the elements so that, in some sense, they become one with you. When you develop bravery, you make a connection with the elemental quality of existence. Bravery begins to heighten your existence, that is, to bring out the brilliant and genuine qualities of your environment and of your own being. So you begin to contact the magic of reality - which is already there in some sense. You actually can attract the power and strength and the primordial wisdom that arise from the cosmic mirror.

At that point, you being to see how you can influence your environment so that the drala principle is reflected in every activity of your life. You see that you can actually organize your life in such a way that you magnetize magic, or drala, to manifest brilliance and elegance in your world. The way to do this is divided into three parts, which are called the three ways to invoke drala.

Invoking External Drala

The first is invoking *external drala*, which is invoking magic in your physical environment. This may be as small and limited as a one-room apartment or as large as a mansion or a hotel. How you organize and care for that space is very important. If it is chaotic and messy, then no drala will enter into that environment. On the other hand, we are not talking about taking a course in interior decoration and spending a great deal of money on furniture and rugs to create a "model environment." For the warrior, invoking external drala is creating harmony in your environment in order to encourage awareness and attention to detail. In that way, your

physical environment promotes your discipline of warriorship. Beyond that, how you organize your physical space should be based on concern for others, sharing your world by creating an accommodating environment. The point is not to make a selfconscious statement about yourself, but to make your world available to others. When that begins to happen, then it is possible that something else will come along as well. That is, when you express gentleness and precision in your environment, then real brilliance and power can descend onto that situation. If you try to manufacture that presence out of your own ego, it will never happen. You cannot own the power and the magic of this world. It is always available, but it does not belong to anvone.

There are many other examples of invoking external drala. I have read, for instance, that some American Indians in the Southwest grow vegetables in the desert sands. The soil, from an objective standpoint, is completely infertile. If you just threw a handful of seeds into that earth, nothing would grow. But the Indians have been cultivating that soil for generations: they have a deep connection to that earth and they care for it. To them it is sacred ground, and because of that their plants grow. That is real magic. The attitude of sacredness towards your environment will bring drala. You may live in a dirt hut with no floor and only one window, but if you regard that space as sacred, if you care for it with your heart and mind, then it will be a palace.

The idea of sacred space is also what gives grandeur to a great cathedral, like Chartres, or to a house of government, like the English Houses of Parliament. Churches are consciously built as sacred places, whereas a house of government may never have been conceived of as "sacred" by its architects. Nevertheless, those places have a presence that is more than the structure of the building or the beauty of the materials used to construct them. They radiate a particular atmosphere that you cannot help but feel.

The Greeks and the Romans laid out their cities with some understanding of external drala. You might say that putting a fountain in the center of a square or at a crossroads is a random choice. But when you come upon that fountain, it does not feel random at all. It is in its own proper place and it seems to enhance the space around it. In modern times, we don't think very highly of the Romans, with all of their debauchery and corrupt rulers. We tend to downplay the wisdom of their culture. Certainly, corruption dispels drala. But there was some power and wisdom in the Roman civilization, which we should not overlook.

In summary, invoking the external drala prin-

ciple is connected with organizing your environment so that it becomes a sacred space. This begins with the organization of your personal, household environment, and beyond that, it can include much larger environments, such as a city or even an entire country.

Invoking Internal Drala

Then there is invoking internal drala, which is how to invoke drala in your body. Basically, the experience of internal drala is that you feel oneness in your body - oneness in the sense that your head, your shoulders, your torso, your arms, your genitals, your knees, your legs, and your toes all hang together as one basically good human body. You feel no guarrel between your head and shoulders, between your toes and legs, and so forth. It doesn't really matter whether your hair is growing grey or you are developing wrinkles on your face or your hands are shaky. There is still a feeling that your body has its own fitness, its own unity. When you look, you hear; when you hear, you smell; when you smell, you taste; when you taste, you feel. All of your sense perceptions work as one unit, as one basic goodness, one expression of basic health.

You invoke internal drala through your relationship to your personal habits, how you handle the details of dressing, eating, drinking, sleeping. We could use clothing as an example. For the warrior, clothing actually provides an armor of discipline, which wards off attacks from the setting-sun world. It is not that you hide behind your clothes because you are afraid to manifest yourself as a good warrior, but rather that, when you wear good, well-fit clothes, your clothing can both ward off casualness and invite tremendous dignity.

Sometimes if your clothes fit you well, you feel that they are too tight. If you dress up, you may feel constricted by wearing a necktie or a suit or a tight fitting skirt or dress. The idea of invoking internal drala is not to give in to the allure of casualness. The occasional irritation coming from your neck, the crotch of your pants, or your waist is usually a good sign. It means that your clothes fit you well, but your neurosis doesn't fit your clothes. The modern approach is often free and casual. That is the attraction of polyester leisure suits. You feel stiff if you are dressed up. You are tempted to take off your tie or your jacket or your shoes. Then you can hang out and put your feet on the table and act freely, hoping that your mind will act freely at the same time. But at that point your mind begins to dribble. It begins to leak, and garbage of all kinds come out of your mind. That version of relaxation does not provide real freedom at all. Therefore, for the warrior, wearing well-fit clothing is regarded as wearing a

suit of armor. How you dress can actually invoke upliftedness and grace.

Internal drala also comes out of making a proper relationship to food, by taking an interest in your diet. This does not necessarily mean that you should shop around for the best gourmet items. But you can take the time to plan good, nutritious meals, and you can enjoy cooking your food, eating it, and then cleaning up and putting the leftovers away. Beyond that, you invoke internal drala by developing greater awareness of how you use your mouth altogether. You put food in your mouth; you drink liquids through your mouth; you smoke cigarettes in your mouth. It is as if the mouth were a big hole or a big garbage pail: you put everything through it. Your mouth is the biggest gate: you talk out of it, you cry out of it, and you kiss out of it. You use your mouth so much that it becomes a sort of cosmic gateway. Imagine that you were being watched by Martians. They would be amazed by how much you use your mouth.

To invoke drala you have to pay attention to how you use your mouth. Maybe you don't need to use it as much as you think. Appreciating your world doesn't mean that you must consume everything you see all the time. When you eat, you can eat slowly and moderately, and you can appreciate what you eat. When you talk, it isn't necessary to continually blurt out everything that is on your mind. You can say what you have to say, gently, and then you can stop. You can let someone else talk, or you can appreciate the silence.

The basic idea of invoking internal drala is that you can synchronize, or harmonize, your body and your connection to the phenomenal world. This synchronization, or connectedness, is something that you can actually see. You can see people's connection to internal drala by the way they behave: the way they pick up their teacups, the way they smoke their cigarettes, or the way they run their hands through their hair. Whatever you do always manifests how you are feeling about yourself and your environment - whether you feel kindness towards yourself or resentment and anger towards yourself; whether you feel good about your environment or whether you feel bad about your environment. That can always be detected by your gait and your gestures - always. It is as if you were married to your phenomenal world. All the little details - the way you turn on the tap before you take a shower, the way you brush your teeth - reflect your connection or disconnection with the world. When that connection is completely synchronized, then you are experiencing internal drala.

Finally, there is what is known as invoking *secret drala*, which is the product of invoking the external

and internal drala principles. Because you have created a sacred environment around you and because you have synchronized your body so beautifully, so immaculately, therefore you provoke tremendous wakefulness, tremendous nowness in your state of mind.

The chapter on "Letting Go" introduced the idea of Windhorse, or riding on the energy of basic goodness in your life. Windhorse is a translation of the Tibetan lungta. Lung means "wind" and ta means "horse." Invoking secret drala is the experience of raising windhorse, raising a wind of delight and power and riding on, or conquering, that energy. Such wind can come with great force, like a typhoon that can blow down trees and buildings and create huge waves in the water. The personal experience of this wind comes as a feeling of being completely and powerfully in the present. The horse aspect is that, in spite of the power of this great wind, you also feel stability. You are never swaved by the confusion of life, never swayed by excitement or depression. You can ride on the energy of your life. So windhorse is not purely movement and speed, but it includes practicality and discrimination, a natural sense of skill. This quality of lungta is like the four legs of a horse, which make it stable and balanced. Of course, in this case you are not riding an ordinary horse; you are riding a windhorse.

By invoking the external and internal drala principles, you raise a wind of energy and delight in your life. You being to feel natural power and upliftedness manifesting in your existence. Then, having raised your windhorse, you can accommodate whatever arises in your state of mind. There is no problem or hesitation of any kind. So the fruition of invoking secret drala is that, having raised windhorse, you experience a state of mind that is free from subconscious gossip, free from hesitation and disbelief. You experience the very moment of your state of mind. It is fresh and youthful and virginal. That very moment is innocent and genuine. It does not contain doubt or disbelief at all. It is gullible, in the positive sense, and it is completely fresh. Secret drala is experiencing that very moment of your state of mind, which is the essence of nowness. You actually experience being able to connect yourself to the inconceivable vision and wisdom of the cosmic mirror on the spot. At the same time, you realize that this experience of nowness can join together the vastness of primordial wisdom with both the wisdom of past traditions and the realities of contemporary life. In that way, you can see how the warrior's world of sacredness can be created altogether.

From Shambhala, The Sacred Path of the Warrior, by ChogyamTrungpa. London: Shambhala Press, 1984.

THE THREAD OF YOGA - Deepak Chopra

Breaking down the mind's illusion sounds desirable as an ideal, but what does it amount to in practice? Many people try to substitute "positive thinking" for the disturbing thoughts they want to eliminate. On the surface this tactic may lead to some signs of improvement. The mind can be forced into identifying only with pleasant or uplifting things. But in time the feared thoughts will surface again (Freud called this "the return of the repressed"), and until then there is the exhausting effort of trying to maintain constant self-control.

Some time ago I was consulted regularly by a woman who was fixated on positive thinking. Shehad been successfully treated for breast cancer two years before but remained extremely worried about a recurrence. Her anxiety was obvious to everyone around her, but it was the last thing she herself wanted to confront. If I even entertained the notion of saying, "You're scared, aren't you?" her fixed smile and upbeat manner made me feel gratuitously cruel. I also felt increasingly nervous just being around her. She seemed like a taut wire on the verge of snapping.

Finally, after not so subtly hinting that she might be creating a false mood, I asked her point-blank to stop being so relentlessly positive. "You mean it's all right for me to have negative thoughts if I want to?" she asked with touching incredulity.

"Yes, when they are natural and unavoidable," I said.

Suddenly she burst out laughing. "Thank goodness," she exclaimed, "I needed permission from someone. I have read so much about the damage you can do to your body with negative thoughts that I spent the whole year after my operation dreading the least sign of one. Then it occurred to me that dread *is* a negative thought. You don't know how confused that made me feel."

I considered this quite an impressive insight on her part. Many people, in their well-intended efforts to accent the positive, do not escape their problems but only increase them. They want to put an end to suffering but mistakenly choose the tactic of denying their true feelings, on the grounds that the feelings are "too negative" to express. I went deeper into this whole issue with my patient. "Paying attention to one's fear and pain is a great source of guilt in most people," I pointed out, "because it seems like selfpity, a trait we think of as wrong. But denying pity to yourself, when you would give it willingly to others, is also wrong. We all have hidden pain inside, and trying to suppress it is not a virtue. It's only an impossibility.

"You may consider it very important to maintain a good attitude, but in itself an attitude is not very reliable. After all, who's keeping whose spirits up? Everything inside you is just you, even though you might split it up into a brave you that is trying to suppress or defeat a fearful you. If one part is addressing the other, saying, 'All right now, don't give in, don't turn hopeless,' isn't that really just a kind of game?"

She admitted that this was probably true, but it was not very reassuring, "I always feared that if I didn't keep up this game, as you call it, my negative thoughts would swallow me up."

"Does opposing your negative thoughts lessen their power?" I rejoined. "Doesn't it just delay the day when they will come out in one way or another? Think about it. You probably put in a lot of time not thinking negatively. It must require constant vigilance and effort on your part. Yet as soon as the pressure is off, don't these denied feelings rebound with doubled intensity? In your position, I couldn't lay my head on the pillow at night without armies of negative thoughts assaulting me."

She agreed that going to sleep had become a torture. "Negative thoughts come on their own, even in the face of our strongest opposition," I said. "It's just something we all have to accept. If we keep playing this game of opposing thoughts that are not acceptable to us, we will always lose. The serious question is, 'Can I give the whole game up?' Very few people consider that alternative."

After a second's reflection, the woman commented, "No matter what you say, I don't think the game will be so easy to quit."

She is right, of course. Our conditioning to keep going in the same direction is very powerful. The ancient Indian sages or rishis, noticed this and concluded that the mind cannot free itself through any mental activity, whether of struggle, vigilance, or repression. Thinking your way out of thought is like trying to get out of quicksand by pulling yourself up by the hair. At bottom, any thought, however positive, is still in the realm of thought. Yoga opens another way, and its secret is just this: there is more to the mind than thinking. Indeed, thinking is another mask of Maya, less solid than things we see and touch but just as untrustworthy.

In an ancient Indian text called the Shiva Sutras, one hundred and twelve ways are given for a person to escape Maya by the only means possible - transcending it to experience the deeper reality of the silent witness. Here are a few of the techniques, delivered by the god Shiva, the traditional teacher of yogis:

When vividly aware through some particular sense, *keep in the awareness*.

When on a bed or a seat, let yourself become *weightless*, beyond mind.

See as if for the first time a beauteous person or an

ordinary object.

At the edge of a deep well, look steadily into its depths until - *the wondrousness*.

Simply be looking into the blue sky beyond clouds, *the eternity*.

Although they stress *seeing* the world in a different way, all of these techniques are actually based upon a shift in awareness, for as we have discussed, awareness is the source of seeing. Seeing a beautiful person "as if for the first time" might happen by chance, out of the corner of your eye, but never as a constant state, not in everyday awareness. I cannot see a certain small, shy, devout Indian woman without seeing my mother, nor can she see me without seeing her son. We are used to each other, accustomed to looking through so many layers of ourselves.

My father looks at her and sees a different person, in fact, several different people superimposed one on another: the sheltered girl with downcast eyes who was at first a stranger, then an object of timid courtship, next the new bride and mother, and ever since the intimate adviser and companion whose words and thoughts have intertwined into his almost like a second self. Each layered image contributes something of its own value when he sees her. The shaping force that has made them almost one is no less powerful because it has worked so slowly and invisibly. A shared reality flows in, over, and between them both.

Their intimacy gives my father and mother a privileged relationship, but at a price. Until the masks are lowered, he will never see my mother except as his wife. Her beauty will remain at a certain distance. In a happy relationship, this price is worth paying, many times over. In the absence of true intimacy, the price becomes too high. A father may say to his son, "I only criticize you because I love you," and in his own eyes that may be true. But the son has to untwist love from criticism as best he can. This is why so many people, after they've grown up, feel a core of suspicion toward being loved.

From childhood onward, we all learned to cope with a complicated situation where the most basic feelings and perceptions were blended with one another much of the time. Life would be simpler if we could see directly into the crystal-clear ideals, the wondrousness and beauty, that the yogi declares to be at the heart of life, meaning our own hearts. But Shiva's teaching barely penetrates the shell of modern skepticism. A skepticoften harbors an idealist within who has suffered the pain of disillusionment one too many times. If idealists are born to be disillusioned, why not be disillusioned to begin with? Again and again, Freud stressed the importance of "the reality principle" as an index of psychological health. The reality principle is the recognition that you are not the world's creator. Your ego stops at a certain boundary, beyond which you have no influence.

A baby is thus considered primitive because he feels that he is at the center of the world, indulging the fantasy that everything is himself. As a child grows up, he is supposed to shed this infantile illusion of boundlessness, "Me" and "not me" congeal into their separate spaces, and hopefully it is not long before "me" learns how to cooperate with "not me." Parents are generally quite anxious to promote this cooperative attitude, even when their child is obviously too young to adopt it. They ignore the child's discomfort out of fear that he is being selfish. It is hard for them to see that their own hidden anxiety is being reflected here - they are afraid themselves to be fully self-accepting. Their own parents signaled that being self-centered was wrong, and this value judgment is being passed along now by seeing most forms of satisfaction as "selfish."

The raw selfishness of a newborn baby is not a model for future behavior, needless to say, but it needs to be tempered naturally into more selfless behavior. If the growing-up process sacrifices a child's very sense of being, then something has been lost that is too precious to lose. Being carries with it a subtle feeling of uniqueness, and out of that feeling comes a sense of union with the world, of being bathed in beauty and love. This is reality, too, but of a higher order.

Many young children report experiences that fit remarkably well with the supreme goals of spirituality. One woman writes of a vivid childhood memory: "At age four I was lying in the grass making pictures with the clouds. At a certain point I realized that they had stopped moving. Everything around me was very still, and I felt merged into the sky. I was everything and everything was me. I don't know how long this lasted, and I've never felt that way since. But it's possible."

Her experience closely mirrors the meditation in the Shiva Sutras that goes, "Look into the blue sky beyond clouds" in order to sense eternity. Many children recall moments just before they fell asleep at night when they had the sensation of lightness or floating - again, this echoes the meditation whose instruction is to be weightless while lying in bed. A spiritual exercise that seems so difficult to an adult, "seeing a beauteous person as if for the first time" is completely effortless for a four-month-old. He greets the sight of his mother, the most beauteous person in his universe, with adoration and delight, day after day. As long as she is in the room, his eyes remain fixed on her, unable to see anything else. To be, for a newborn; is to be in the center of a magical world.

Some children can remember the magic suffusing into much later stages of development. At five and six, the poet William Wordsworth saw the mountains, lakes, and meadows around him "apparelled in celestial light," and had to cling to a tree to remind himself that material things were not visions. Without this effort, he tells us, he would have been swept away into an ideal world of pure light and divine feeling. Seeing through Maya, then, may be, much more natural than we suppose. Who knows how many of us have played in fields of light only to lose the memory of it? What is certain is that our current ideal of a sound psychological upbringing is rooted in the real, not the ideal. Through many repeated lessons a child is taught that the rough bark of a tree is more real than divine feelings; as soon as he is old enough to go to the playground he finds out that sidewalks skin knees and fists hurt when they hit your face.

In meditation, a yogi erases this rough sense of reality and points himself back toward the light, the ideal, the divine. Yoga aims for perfection, which means living from one's creative core twenty-four hours a day, without disguise or evasion, free of any form of unreality. The successful yogi does not simply contact the all-knowing nucleus, he *becomes* it. As beautiful as that sounds, the adult mind instinctively hold aloof. Our experiences of pain and disillusion are extremely convincing, whereas the premises of Yoga seem far removed. "Anything can be accepted as true today," a friend of mine likes to' say, "as long as it isn't the Truth." He has understood the reality principle all too well.

The Flash of Insight

Fortunately, higher reality has a way of breaking out unexpectedly. There are moments when the allknowing nucleus of the self defeats the mind's narrow prejudices. We call these flashes insight, and they give us a good sense, at least in passing, of what it must be like to be enlightened. As the Vedas put it, the enlightened mind is like the sun, compared to which all other minds are like candles. But a candle has value, because once it is lit, the darkness cannot be total. In the flash of insight, a corner of the self is revealed for what is really there. One silently exclaims "Aha!" and a bit of the truth is brought out from under wraps.

Insight is not always deep or lasting - psychiatrists spend huge amounts of time shoring up new insights and making sure that the patient does not lose hold of old ones and regress. Nor does the body always follow the mind's lead into a healthier state. Even so, the moment of insight often manages to shift the entire self, and that is the key to its power.

A social worker in his early forties tells this story: "I was walking down the hall at work, and I was casually sharing some opinions with a friend. I told him that I felt he was taking his cases too personally and might be applying a lot of unnecessary guilt to them. Suddenly he turned on me and snapped, You're imposing your own emotions on me, and I resent it.' Then his voice softened a little and he said, more reasonably, 'It's just something you should work on. I've noticed that you have a habit of imposing your own hostile feelings on other people.'

"I didn't know what to say. I figured he would apologize for attacking me. Instead, he simply walked away. When I got to my office, I sat down at my desk, but it was impossible to work, I was feeling so angry.

"T simmered for a few minutes like a child on the verge of throwing a tantrum. I felt outraged and extremely sorry for myself. Why would a friend betray me like this? To discharge my anger, I started talking out loud to him, imagining that he was in the room. 'You don't seem to care how much you're imposing your hostile feelings on me! You have really hurt me, and I have to tell you that your accusation is totally and completely unfounded.' This ploy made me feel better for a few seconds, but some rational part of me knew that I wasn't merely the victim of a pointlessly cruel remark."

At this point a surprising process of emotional release began. "All at once, I began to split into layers. It was the most extraordinary thing. To describe it completely would take a long time, so many images began to flash by in my mind. I saw my self-pity as a defense against a huge amount of anger, which was out of all proportion to what my friend has said - I wanted to kill him! Then I saw my father as he looked years ago. He was asking me to do chores around the house, something I hated as a boy. Clearly the same overblown resentment was at work.

"That stage lasted no more than a split second. Images were still whizzing by in my mind; it was like watching myself from the viewpoint of a pebble falling down a well."

In rapid succession, he saw that his anger at his father was connected to feeling that he could never win his father's love. Then he saw that he had never been able to take criticism from his brothers or male friends, either. Images of them flashed by, stirring up a whirl of emotions and memories.

"By now only half a minute had passed, but the pebble was still plummeting, faster and faster. Instead of feeling giddy and disoriented, my mind was actually quite clear. I was appreciating every (Continued on page 20)

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THE GRAND PARADOX OF

Comprehension of what is going on in the organisation and control of what is going on there are the unique things that the manager is supposed to bring to the system. Even though the point is rarely stated quite this flatly, these two key functions run through all degree programs in management and all management development programs: the task is to understand the system better and get it to do what you want it to do (that is, control it) more effectively and efficiently. All the content we have been teaching and all the experiences we have been fostering come back to these two objectives: comprehension and control.

There has been more on this rationalistic analysis, design, and control of human systems in the last fifty years in America than possibly anywhere else in possibly all of the rest of human history. So here is a research question for someone to take a crack at: Why in the face of all this do those living in the midst of these systems, including managers, continue to find them mysterious, recalcitrant, intractable, unpredictable, paradoxical, absurd, and - unless it's your own ox getting gored - funny? This is the "grand paradox of management."

Some will complain that I am asking this question at an unfairly high level of abstraction, and that there are countless examples of systems that *do* work and that for the most part don't drive people crazy. Admittedly, at the borders, the objection might continue, the rationalistic model breaks down, and some large-scale errors and disasters can occur. But this does not invalidate the model's basic assumption: More comprehension = more control = more benefit for society.

"There is nothing like a paradox to take the scum off your mind."

Justice Holmes

"Systems things" is about the nearest thing we have in the management field to a direct embrace of and confrontation with paradox. Systems thinking does not flinch from complexity and is willing to be surprised by the "counterintuitive" character of many organisational events and processes. Like lots of theories that purport to apply to human events, though, systems thinking has been much easier to enunciate as theory than it has been to absorb into one's everyday way of experiencing, interpreting, and acting on the world. I am satisfied that systems models of organisational events are far superior to simple "Tinkertoy" models, or linear cause-effect ("domino theory") models as *descriptions*. I am not at all satisfied with systems models as *guides to action in the real time of system events*. Systems models aren't much better defended than any other models against two kinds of chronic and intense potentiality for paradox. One kind is the condition of permanent white water - a metaphor for operating in a turbulent, chaotic environment. Permanent white water defies all models, and, indeed, the more comprehensive we attempt to make our organisational models, the more we can detect phenomena outside the model that are influencing the organisation. The horizon of what we know accelerates away from us.

External Observer

The other kind of chronic and intense paradox that may transcend a systems model is the action taker's own presence in the model. The leader or manager is always part of the system being acted upon; this individual is certainly no more fixed an element than any other and, indeed, may be more variable *just because* of possessing action responsibility. Just how the consciousness of this person is going to "dance" with events in the system cannot be known. It cannot be known by an external known by the person him- or herself. This means that "understanding the system" (comprehension) at any moment and "action in the system" (control) at any moment cannot be known.

As with so many other subjects, common sense is much smarter and more subtle than formal, official theory, even systems theory. Millions of members of modern organisations laugh daily at the latest manifestation of Murphy's Law. Every office you go into has signs about blessing this mess and getting organised ... next week, and having "earned my nervous breakdown." Organisational life is filled with wry and rueful humor. "Where are we on the FUBAR/EGBAR scale?" ask the people in Wilson Learning Corporation, FUBAR meaning "fouled up beyond all recognition" and EGBAR meaning "Everything's gonna be all right!" They have even enshrined the scale on company sweat shirts. Managers and employees in the organisations of the developed world have no illusions about just how crazy and absurd things can get.

Words such as mysterious, recalcitrant, intractable, and absurd are value judgments as well as attempts to describe. Paradoxical is a little more neutral, not quite as loaded with feelings of puzzlement, frustration, and disappointment. Paradoxes are conflicts and collisions among apparent truths. Paradoxes refuse to dissolve or be reconciled by such normal methods as getting more facts or being more careful with logic. Paradoxes - if they are really paradoxes

and not just accidental oversights or verbal trickery -

MANAGEMENT - Peter Vaill

sit there to be contemplated. As noted above, it is easy to find the real paradoxes of organisational life captured in sayings, wall hangings, greeting cards, and bumper stickers...It is not an exaggeration to call the literature on the paradoxes of organisational life gigantic. One can laugh at organisations or one can rail at them - the energy behind either approach is the same: there is wide agreement that man and organisation combined are a recipe for pain.

Friendly to Paradox Mentality

If mainstream management and leadership theory had given more consideration to the mentality that is "friendly to paradox," I think management education and training in both universities and training departments and institutes would look very different. There are suggestions throughout this book of what the difference might look like if we took more seriously the paradoxes felt by action takers in the world of permanent white water. A key piece of the difference lies in understanding the enormously important role of values. But, more especially, the difference lies in understanding that the manager's values, the manager's comprehension, the manager's actions and the nature of the system are four kinds of interdependent phenomena, all affecting each other, and all evolving together. Any approach that treats one or more of these four as fixed or of no importance almost guarantees that the leadermanager will become trapped in intense paradoxes and absurdities and have to endure the painful feelings that accompany them.

A mentality that is "friendly to paradox" - what sort of a mentality would that be? It would be a mentality that is both good at and comfortable with the "muddling through" that Lindbloom spoke of. It would be a mentality that is both centered in itself and accepting, indeed loving, of our benighted immersion in paradoxical organisations. It would be a mentality that was not fighting the responsibility it bore. It would accept itself as a "being-in-the-worldwith-responsibility". It would be a mentality that had a different way of thinking about objectives than the problem-solving mentality.

It would be a mentality that lived the *process* of excellence. It would be a mentality that experienced itself not so much as operating *on* the organisation from a detached, omniscient perspective as growing from within the organisation and influencing it as an expression of that personal growth process. What a stunning reversal of the prevailing ethos of management and leadership: influence and control as an emanation of a growing, dawning comprehension of what is going on and of what is needed. Action taking as learning!

This way of thinking - this mentality - is centered in something. It is centered in a value system or point of view that goes beyond technical learning about what management and leadership are all about. I suppose you could call it a "professional" mentality, but that word has been utterly debased by those whom "professionalism" is the possession of the body of comprehension-and-control techniques that I have been questioning. It is a mistake to think that this body of techniques exists apart from managers and leaders as persons. The world of permanent white water has pretty much undercut this kind of professionalism, and those who espouse and possess only this external suit of clothes are finding it inadequate as either a guide to right action or, more significantly, a foundation of personal being in organisations. They are today's hollow men - and women.

A Working Credo

The mentality that is willing to let one's action be guided by one's own growth as a responsible person has a center that is deeper and more personal. It is a working credo in the literal meaning of that term - a set of personal beliefs about oneself, the world, and one's role and responsibility in it. I call it a *working* credo because both its content and its meaning develop with experience, just as the rest of the personality does. Change will be relatively slow and even painful, however, for we are talking about hard-won wisdom and awareness. Change will be especially painful if the credo does not contain a provision for its own development as a statement of beliefs; indeed, without such a provision, change may not occur at all.

"There is nothing like a paradox to take the scum off your mind," Justice Holmes said. For paradox is in the eye of the beholder. That is not a point one hears very often, but a moment's reflection will, I think, demonstrate its truth. Paradoxes do not exist as contradictory bundles of facts utterly external to ourselves as perceivers. We enter situations and live within them holding theories and assumptions about what the situation is and what our role and responsibility in it are. We perceive in situations what we are prepared to perceive. We react to the interaction of our assumptions and experiences with what are called feelings, many of which can be very intense.

The paradoxes that arise around comprehension and control are the fundamental ones, I think, for leaders and managers. We can't do away with them completely, but perhaps we can "outframe" our thinking about comprehension and control in such a way that some of the more common paradoxes diminish in intensity. I do not think that paradoxes can be done away with entirely, for to be playing a game you have never played before is by definition to be continually confronted with anomalies and surprises.

Probably the most important thing to say is that the best defense against being thrown utterly off stride is to *know* that one is in a situation that will seem to be filled with paradoxes. This means, though, that we have to resist the seductive idea that the concrete world becomes more rational as we invent more and more rational ideas about it. The concrete world is in truth oblivious to our rational ideas about it.

A second notion is to cultivate our ability to think holistically. Deep in our Western managerial psyche is the compulsion to break wholes down into their component parts. Once we have the parts scattered about, they often don't appear to fit together, particularly if the original whole was an organic whole. "Paradoxes" arise when parts are ripped from their organic settings.

The feeling of paradox will frequently turn on a static view of the world. This is a third notion of considerable importance. If we ask instead how a situation is moving and evolving, we may well find natural forces working to resolve the tensions and contradictions that, in stop action, appear paradoxical. The other virtue of this thought is that it may save us from interventions that actually compound the absurdity in a situation rather than relieve it. "To straighten things out" is such a common turn of phrase that we rarely hear it for what it often is - a fantasy of omnipotence.

Can we release some of our cherished fixities in order that we can navigate more easily in the white water? Can we release the fixity of our facts and knowledge, for one thing, and come to see them instead in all their relativity? Can we release the fixity of our role and see ourselves more as an inventor of our job than a performer of a preexisting list of duties? Can we release our structural fixity, drop the assumption of our prerogatives in a hierarchical position, and instead see ourselves as just another player in what is in fact one big network? The urge we feel to rise in a hierarchy is often an urge to retreat from the complexity, contingency, the craziness (paradox) of the "work level." What an irony that paradoxes don't disappear with more and more authority and eminence. If anything, they just become bigger and more tragic. Better to think of oneself as part of a network (team) no matter how close your name is to the top of the page.

In addition to releasing the fixities of our knowledge, our function, and our position, I think there is something in releasing the fixity of ourselves in career. Weick once observed that it is better to think of your career as the predicate of your efforts than to think of it as the subject. He wants us to think of our career as what happens to us through time as a result of our making the most of the opportunities that come to us hour to hour and day to day. Weick was not talking about avoiding paradox, but his observation applies. The more you think that there is someplace in particular to get to (the "career objective"), the more you may not seem to be getting somewhereelse, and, of course, the more paradoxical your career will feel.

Finally, there are the paradoxes of objectives in general. I said earlier that a mentality that is friendly to paradox has a different way of thinking about objectives than a mentality that experiences the world as a menu of problems to be solved. The neatest expression of the difference that I know of is from a speech Fritz Roethlisberger gave forty years ago to a class at the Harvard Business School. Roethlisberger was trying to develop for these young tigers of the postwar era a different way of thinking about "success." Among the several things he said was an observation that he admitted sounds paradoxical. Yet the moment I read it. I knew he had uttered a truth that releases the hypnotic hold on our minds of objectives as places out in the future that we are somehow trying to get to. He simply suggested that instead of thinking of the present as the means and the future as the end, we think of the future as the means and the present as the end. He noted - and I am sure with an elfin twinkle - that the present is all that we have, no matter when it occurs, so can't it really be the only true end that there is? And don't thinking and planning ahead then become something that enriches our awareness of the present, rather than something that ignores the present or takes from it in service of some dream that does not now exist?

Between Weick and Roethlisberger, I think the point is that in the world of permanent white water, it is not wise to plan too intently on getting to any particular place at any particular time in any particular way. Not only is it certain that these plans will not be realised; more importantly, we won't be able to enjoy or have much influence on the ride we are actually having.

These are some ideas, then, that may help us remain friendly to paradox. I do notthink that, in the turbulent modern world, paradoxes can be done away with. In fact, I am certain that their frequency and intensity will only increase. What I think consciousness can do, however, is *reflect* on paradoxical situations rather than only anguish within them or attempt to stamp them out. The reflection I have in mind is not necessarily high-powered cognitive analysis, though. Reflection, it turns out is itself a rather paradoxical process.

AHA...HAHA...AH - Arthur Koestler

The AHA Reaction

From Pythagoras, who combined arithmetic and geometry, to Newton, who combined Galileo's studies of the motion of projectiles with Kepler's equations of planetary orbits, to Einstein, who unified energy and matter in a single sinister equation, the pattern is always the same. The creative act does not create something out of nothing, like the God of the Old Testament; it combines, reshuffles and relates already existing but hitherto separate ideas, facts, frames of perception, associative contexts. This act of cross-fertilisation - or self-fertilisation within a single brain - seems to be the essence of creativity, and to justify the term 'bisociation'.

Similar views have been put forward, among others, by the mathematician Henri Poincare, who in an oft-quoted lecture explained discovery as the happy meeting of 'hooked atoms of thought' in the unconscious mind. According to Sir Frederick Bartlett, 'the most important features of original experimental thinking is the discovery of overlap... where formerly only isolation and difference were recognised'. Jerome Bruner considers all forms of creativity as a result of 'combinatorial activity'. McKellar talks of the 'fusion' of perceptions, Kubie of the 'discovery of unexpected connections between things'; and so on, back to Goethe's 'connect, always connect'.

Take the example of Gutenberg, who invented the printing press (or at least invented it independently from others). His first idéa was to cast lettertypes like signet rings or seals. But how could he assemble thousands of little seals in such a way that they made an even imprint on paper? He struggled with the problem for years, until one day he went to a wine harvest in his native Rhineland, and presumably got drunk. He wrote in a letter: 'I watched the wine flowing, and going back from the effect to the cause, I studied the power of the wine press which nothing can resist. . " At that moment the penny dropped: seals and the wine press combined gave the letter press.

Gestalt psychologists have coined a word for that moment of truth, the flash of illumination, when bits of the puzzle suddenly click into place - they call it the AHA experience. But this is not the only type of reaction which the bisociative click can produce. A quite different kind of response is aroused by telling a story like the following:

A Marquis at the court of Louis XV had unexpectedly returned from a journey and, on entering his wife's boudoir, found her in the arms of a bishop. After a moment's hesitation, the Marquis walked calmly to the window, leaned out and began going through the motions of blessing the people in the street. 'What are you doing?' cried the anguished wife. 'Monseigneur is performing my functions,' replied the nobleman. 'so I am performing his.'

Laughter may be called the HAHA reaction. Let us briefly discuss first the logical, then the emotional, aspect of it.

The HAHA Reaction

The Marquis' behaviour is both unexpected and perfectly logical - but of a logic not usually applied to this type of situation. It is the logic of the division of labour, where the rule of the game is the *quid pro quo*, the give-and-take. But we expected, of course, that his reactions would be governed by a quite different canon, that of sexual morality. It is the interaction between these two mutually exclusive associative contexts which produces the comic effect. It compels us to perceive the situation at the same time in two self-consistent but habitually incompatible frames of reference; it makes us function on two wave-lengths simultaneously. While this unusual condition lasts, the event is not, as is normally the case, perceived in a single frame of reference, but *bisociated* with two.

But this unusual condition does not last for long. The act of discovery leads to a lasting synthesis, a fusion of the two previously unrelated frames of reference; in the comic bisociation we have a collision between incompatible frames which for a brief moment cross each other's path. However, the difference is not absolute. Whether the frames are compatible or not, whether they will collide or merge, depends on subjective factors - for after all, the colliding or merging takes place in the minds of the audience. In Kepler's mind the motions of the moon and the motions of the tides fused - they became branches of the same causative hierarchy. But Galileo treated Kepler's theory literally as a joke - he called it an 'occult fancy'. The history of science abounds with examples of discoveries greeted with howls of laughter because they seemed to be a marriage of incompatibles - until the marriage bore fruit and the alleged incompatibility of the partners turned out to derive from prejudice. The humorist, on the other hand, deliberately chooses discordant codes of behaviour, or universes of discourse, to expose their hidden incongruities in the resulting clash. Comic discovery is paradox stated - scientific discovery is paradox resolved.

Looked at from his own point of view, the Marquis' gesture was a truly original inspiration. If he had followed the conventional rules of the game, he would have had to beat up or kill the Bishop. But at the court of Louis XV assassinating a Monseigneur would have been considered, if not exactly a crime, still in very bad taste; it could not be done. To solve the problem, that is, to save his face and at the same time humiliate his opponent - a second frame of reference, governed by different rules of the game, had to be brought into the situation and combined, bisociated, with the first. All original comic invention is a creative act, a malicious discovery.

Laughter and Emotion

The emphasis is on malicious, and this brings us from the *logic* of humour to the *emotional factor* in the HAHA reaction. When the expert story-teller tells an anecdote, he creates a certain tension which mounts as the narrative progresses. But it never reaches its expected climax. The punch-line acts like a guillotine which cuts across the logical development of the situation; it debunks our dramatic expectations, the tension becomes redundant and is exploded in laughter. To put it differently, laughter disposes of emotional tension which has become pointless, is denied by reason, and has to be somehow worked off along physiological channels of least resistance.

If you look at the brutal merriment of the people in a tavern scene by Hogarth or Rawlinson, you realise at once that they are working off their surplus of adrenalin by contractions of the face muscles, slapping of thighs and explosive exhalations of breath from the half-closed glottis. The emotions worked off in laughter are aggression, sexual gloating, conscious or unconscious sadism - all operating through the sympathico-adrenal system. However, when you look at a clever New Yorker cartoon, Homeric laughter yields to an amused and rarefied smile; the ample flow of adrenalin has been distilled into a grain of Attic salt. Take, for instance, that classic definition: 'What is a sadist? A person who is kind to a masochist . . . ' The word 'witticism' is derived from 'wit' in its original sense of ingenuity: the two domains are continuous, without a sharp dividing line. As we move from the coarse towards the subtler forms of humour, the joke shades into epigram and riddle, the comic simile into the hidden analogy; and the emotions involved show a similar transition. The emotive voltage discharged in coarse laughter is aggression robbed of its purpose; the tension discharged in the AHA reaction is derived from an intellectual challenge. It snaps at the moment when the penny drops - when we have solved the riddle hidden in the New Yorker cartoon, in a brain-teaser or in a scientific problem.

Let me repeat, the two domains of humour and discovery form a continuum. As we travel across it, from left to centre, so to speak, the emotional climate gradually changes from the malice of the jester to the detached objectivity of the sage. And if we now continue the journey in the same direction, we find equally gradual transitions into the third domain of creativity, that of the artist. The artist, too, hints rather than states, and poses riddles; and so we get a symmetrically reversed transition towards the other end of the spectrum, from highly intellectualised art forms towards the more sensual and emotive, ending in the thought-free beatitude of the mystic.

The AH Reaction

But how does one define the emotional climate of art? How does one classify the emotions which give rise to the experience of beauty? If you leaf through textbooks of experimental psychology, you won't find much of it. When Behaviourists use the word 'emotion', they nearly always refer to hunger, sex, rage and fear, and the related effects of the release of adrenalin. They have no explanations to offer for the curious reaction one experiences when listening to Mozart, or looking at the ocean, or reading for the first time John Donne's Holy Sonnets. Nor will you find in the textbooks a description of the physiological processes accompanying the reaction: moistening of the eyes, catching one's breath, followed by a kind of rapt tranquillity, the draining of all tensions. Let us call this the AH reaction - and thus complete the trinity.

HAHA! ..AHA.. AH ...

Laughter and weeping, the Greek masks of comedy and tragedy, mark the extremes of a continuous spectrum; both are overflow reflexes, but in every other respect are physiological opposites. Laughter is mediated by the sympathico-adrenal branch of the autonomic nervous system, weeping by the para-sympathetic branch, the first tends to galvanise the body into action, the second tends toward passivity and catharsis. Watch yourself breathing when you laugh: long deep intakes of air, followed by bursts of exhalatory puffs - ha, ha, ha! In weeping, you do the opposite: short, gasping inspirations - sobs - followed by long, sighing expirations a-a-h, aah . . .

In keeping with this, the emotions which overflow in the AH reaction are the direct opposites of those exploded in laughter. The latter belong to the adrenergic, aggressive-defensive type of emotions. In our theory, these are manifestations of the *selfassertive* tendency. Their opposites I shall call the *self-transcending* emotions, derived from the *integrative* tendency. They are epitomised in what Freud called the oceanic feeling; that expansion of awareness which one experiences on occasion in an empty cathedral when eternity is looking through the window of time, and in which the self seems to dissolve like a grain of salt in a lot of water.

THE NARRATIVE UNIVERSE - H. Taba

My grandfather once narrated a story to me. It was about a young boy who suddenly became ill and very depressed. The boy's father was very concerned but could not find out the reason, so he finally decided to take the route to school with him. As they approached a potter's shop the child's anxiety grew. His father in a gentle voice asked about his state. "Every time I pass this shop, I see all those pots stacked one on top of the other," the boy responded, "and I wonder what will happen if the one at the bottom cracks." The father understood at once. Stepping into the shop, he paid for a whole column of pots and kicked the one at the bottom. The whole lot came crashing down. Turning to the boy he said, "this is what will happen." And the boy was cured. This simple story reveals the essence of a significant point in mental models: how much of our conscious life is spent on 'held paradigms' that are untested.

Just like human beings, stories reveal many faces at different times. I find the stories I heard and read in childhood coming back to me upon reflection at this point of my life, in a new light and with different nuances.

The Narrative Universe is replete with stories, tales, fables, sagas, parables and myths. These, through their peculiar appeal touch our minds and hearts in a different way and as 'vehicles of insight' transport us to untouched shores. It is not surprising to find that traditions across the world employ these as effective mediums to convey depth understanding.

I recall a story about Guru Nanak, the founder of the Sikh religion. After a tiring journey to Mecca, he finally fell asleep near the House of God. He was awakened by a sudden push, "Don't you know this is a sacred place and you have stretched yourself out so disgracefully with your feet pointing towards the House of God?" Nanak in a gentle voice said to the offended pilgrim, "Sir, I am a stranger here, forgive me for not knowing this. However, I request you to lift my legs and place them in a direction where you feel God does not dwell." Stories like this where intentionally naive remarks are made, or questions asked, are often intended to cut through the 'apparent reality' and get to that which lies within.

Zen stories are yet another rich ground for examining paradigms. We are told of a master who asked his disciple to clean out the garden. The disciple swept the ground thoroughly and collected every single leaf, leaving the area spotless. Proudly he demonstrated his work to the master, who watched silently, then moved to a tree, shook it and let a few leaves drop. Giving a sigh of satisfaction the master said, "It is now truly clean." Living by Zen acknowledges that reality contains its own elements of "mess"; a slight imperfection. These stories are meant to prepare, stimulate and excite the students to begin to take a fresh look at the world around them, and to leave behind entrenchments that come out of tightly held incongruent models.

In Aesop's Fables, the Buddhist Jataka Tales, Panchatantra Stories and the Arabian Nights many have found not only a rich source of inspiration but also insightful description of certain mental models often through animals who begin to speak or make a point. In the narrative universe, not unlike in animation films, anything is possible.

The narrative universe invites a whole different way of perceiving and processing information. The linearity of logical thought, of cause and effect thinking often freezes our mental fluidity. On the other hand, stories, often through imagination, humor, paradox or other seemingly 'irrational' devices provide a creative tension and act as a whack on the side of the head, in a way 'blowing' our minds and opening new doors of perception. Mulla Nasruddin is the prime mental model changer, shifter and shatterer. He challenges anyone who comes in contact with him. Once some youth came together and decided to settle this Mulla once and for all. So they planned to carry an egg each to the Turkish bath and when the Mulla appeared each one made a funny noise, put his hand on his rear end and produced an egg. "Can you do this, Mulla?" they asked, fairly certain that this time they had gotten him. The Mulla paused, scratched his head and came right back with, "Surely among so many hens there has to be at least one cock!"

The function or the role of perception-changer has often been assigned to clowns, court jesters or fools who are indeed truly wise (in India we have Birbal among others). These fools, as in Shakespeare's plays, are highly 'transparent' to given realities and owing to the immunity provided to them, are able to courageously reveal the facets or sides other than ones held by the courtiers.

The seat of any narrative is in the right hemisphere of the brain - where intuitive leaps, metaphoric perspectives are familiar landscape. In stories, such as <u>Alice in Wonderland</u> and <u>Gulliver's</u> <u>Travels</u>, fantasy and obvious change in the physical size of a person, throws the familiar mental models out of whack and allows seeing to take place from a new height or from a lower standpoint, thus providing rich clues from a totally different angle that leads to a change in perspective.

In fact, in <u>Re-Visioning Psychology</u>, James Hillman says that the 'place' to which a myth or story takes us is not to the centre of meaning where things are supposed to feel certain; rather, we are led to the edge, "where the true depths are." We are different, he tells us, at the end of the story, "because the soul has gone through a process during the 19 telling, independent of its syntax and full understanding of its word."

Stories are vehicles by which values, moral views, behavior models are transmitted. Often the 'moral' of the story is an invitation to step out of a specific mental model. This is sometimes immediately apparent, at other times merely hinted at, disguised, and often hidden. Jesus, when questioned by his disciples about his propensity for speaking to the multitude in parables, claimed that by doing so he had thrown a veil over the inner import, making it difficult to comprehend by all except those who really cared to understand.

At the end of every good story there is an openended question. Does this story speak to us? Challenge any of our paradigms? Question any of our mental models? Shake our cause-and-effect thinking?

Mulla Nasruddin was walking along an alleyway when a man fell from a roof and landed on Mulla's neck. The man who fell was unhurt, the Mulla was taken to the hospital. Some disciples went to visit him. "What wisdom do you see in this happening, Mulla?" they inquired. His response was, "Avoid any belief in the inevitability of cause and effect! He falls off the roof - but my neck is broken. Shun reliance upon theoretical questions such as: 'If a man falls off a roof, will his neck be broken?'''

A good narrative often has a point of view that is uniquely human and transcultural. The 'once-upona-timeness' allows it to retain its potency - a fact borne out by the contemporary appeal and current resurgence in the art of professional storytelling.

Stories, myths and parables - all serve as vehicles of conveyance through the narrative universe. As that master story-teller Chuang-Tzu declared: "The fish trap exists because of the fish, once you have gotten the fish, you can forget the trap. The rabbitsnare exists because of the rabbit; once you've gotten the rabbit, you can forget the snare. Words exist because of meaning; once you've gotten the meaning, you can forget the words. Where can I find a man who has forgotten words so I can have a word with him?"

Reality Is Hard To Face

A dead man suddenly came to life and began to pound on the lid of the coffin. The lid was raised and the man sat up. "What are you doing?" He asked the assembled crowd. "You are dead. We are going to bury you," said the crowd. "I am not dead," he cried out. His words were met with silent disbelief. Finally one of the mourners said, "Friend, the doctor and the priest have certified that you are dead. So dead you are." And he was duly buried!!!

Moral - No one likes to face reality. When reality clashes with a rigidly held belief, reality is generally the loser.

"The Thread of Yoga" (Continued from page 13)

new angle and seeing it truthfully. Strangely, whenever my feelings started to run away with me, a detached, calm, inquisitive voice in my head kept repeating, 'Well, is it true? Do I impose my feelings on others?' Wherever this voice was coming from, it wasn't going to be dismissed with half-truths."

During this entire process, this man had lost consciousness of things around him. He was concentrating with intense focus, as most of us cannot, on the dynamics of moving out repressed feelings. In a few more seconds, the sensation of being a rock plummeting down a well ended.

"The thing is, I didn't feel myself hit bottom. I passed through all these layers, expecting to wind up God knows where. Instead, all that happened was that I came to again and noticed that I was sitting at my desk. I took a deep breath - apparently I had been holding it the whole time - and went back to work, feeling calmer though still wounded. It was only an hour later that the insight came. I was sitting at lunch with a few co-workers, people whom I know inside and out and who frankly have ceased to interest me for years. Suddenly, they seemed appealing, even fascinating.

"They looked at me with affection in their eyes, they laughed when I said something funny, and I laughed with them. It was the most peculiar thing, until I realized, with a flash of recognition, what had happened: I wasn't imposing my feelings on them anymore. It hadn't occurred to me that these people had nothing new to offer because I wasn't giving them a chance. As soon as I back off, they opened up, like shy flowers. The change in my awareness had released something new in them. To see them open up like that was very intimate, and at the same time it came as a great relief."

THE ART OF THE LONG VIEW - P. Schwartz_

Every year, every decade, we are surprised by social or technological upheavals that appear suddenly, surprisingly. How can people plan for the future when they do not know what tomorrow will bring? To act with confidence, one must be willing to look ahead and consider uncertainties.

Scenarios are tools for helping us take a long view in a world of great uncertainty. They are stories about the way the world might turn out tomorrow. They are not predictions. Unlike traditional business forecasting or market research, scenarios present alternative images.

The purpose of scenarios is to help you change your view of reality. The end result is not an accurate picture of tomorrow, but better decisions about the future.

The Large Shadow of a Small Decision

For decisions to take on meaning it helps for them to become tangible. Until I worked for Royal Dutch/Shell, I never realized how big the consequences of a single decision could be.

Everything at Shell seemed created by a race of giants. One day I was invited out to a drilling platform on the North Sea. After two hours of skimming over the choppy North Sea in a helicopter, we saw the platform. It was the size of a small city. As we looked out we saw four other similar platforms across the sea. "How far away do you think those are?" our guide asked us. I guessed a mile. "The closest one." he said. "is ten miles away."

Several hundred people live on an offshore platform. There are dormitories, racquetball courts, and hospital wards. To ferry people back and forth, there are more helicopter flights every day over the North Sea than flights in and out of London's Heathrow Airport. A single platform takes years to build, years to plan, and years before that to confirm the discovery of oil or gas. Yet every one of these sites - which cost billions of dollars - can be made absolutely worthless by a collapse in the price of oil.

SCENARIOS

What they are:

Scenarios are planning tools that help managers take a long view in a world of great uncertainty. Unlike forecasting or market research, they present different "stories" about the future; they do not merely extrapolate present trends.

How they help:

Scenarios help managers make better decisions by changing their view of reality and helping them question their assumptions about the future. This puts tremendous pressure on the decisions made by a group of six to eight people who comprise the Managing Directors of the Royal Dutch/Shell group of companies. These men use scenarios as a tool to articulate exactly what those decisions should be - and then make them.

In 1968, Pierre Wack and other planners at Royal Dutch/Shell Were looking for events that might affect the price of oil, which had been more or less steady since World War II. The United States was beginning to exhaust its oil reserves, and the emerging Organization of Petroleum Exporting Countries (OPEC) was showing signs of flexing its political muscle.

Pierre realized the Arabs could demand much higher prices for their oil. There was every reason that they would. The only uncertainty was when. They wrote up two sets of scenarios - each a complete set of stories about the future, with tables of projected price figures. One story represented the conventional wisdom at Royal Dutch/Shell: somehow, the oil price would stay stable. In order for that to happen, a miracle would have to occur; new oil fields, for instance, would appear in non-Arab countries. The second scenario looked at a more plausible future - an oil crisis sparked by OPEC. Pierre helped Shell's managers imagine the decisions they might have to make as a result.

And he was just in time. In October, 1973, there was an oil price shock. Of the major oil companies, only Shell was prepared for the change. The company's executives responded quickly. Shell's fortune rose. From one of the weakest of the global oil companies, it became one of the two largest and, arguably, the most profitable.

The Smith & Hawken Story

Starting a small business, particularly an innovative one, involves most of the same critical long-term questions as starting a new venture in a large company.

Fledgling mail-order garden tool company Smith and Hawken began in 1977 with a real need: better garden tools. Poorly made American tools tended to break easily, but consumers were demanding higherquality goods and services. The firm was started to import high-quality garden tools from Britain.

The new customers were baby boomers - Americans who had come of age in the late 1960's and the early 1970's. As members of the same group, founders Paul Hawken, Dave Smith and I felt we had an intuitive feel for their needs and desires. But there were many things we couldn't know for sure.

Scenarios often fall into three groups: more of the same, but better; worse; and different but better.

There were three very different possible images of the American economy in the 1980s. One was a world of high economic growth and increasing wealth in which materialism was a driving force. Social problems would emerge, but government and businesses would be able to hire experts with the right technologies to solve them. We called this the "official future."

In the depression scenario, growth would be very low or negative. Environmental crises would loom. Oil prices would rise endlessly and natural resources would become scarce. Thus, we used the depression scenario as a tool for thinking about surviving in hard times. The third scenario was built around the idea of fundamental social change. In this scenario, quality of life - living more simply, pursuing inner growth, and striving for some kind of planetary consciousness - not quantity of goods would be emphasized.

In the first scenario, life in the city would become increasingly difficult and many people would buy suburban or small-town property - places where people have gardens. This suggested a substantial increase in status gardening - having a beautiful garden to go with a beautiful home.

In the depression scenario, many potential customers would garden to produce high yields in their backyards. People would still buy expensive, if durable, tools in hard times. If you are trying to bring a crop in, you don't want to buy a new shovel every time the old one breaks, so we thought the imported garden tool business was robust enough to survive even in a depression.

In the social transformation scenario, a large number of people would be fairly well off. In this more contemplative world, many people would grow their own produce because of concern about pesticides, and they would use organic methods. Again, good tools would be in order.

The new business would prosper the most, we felt, in the "official future" scenario. But in all three scenarios it was likely to survive. Smith & Hawken would be a business that contributed something useful and valuable to the world as well as generated profits.

Because we were contemplating an import business, the strength of the dollar was directly linked to our profit margins. We looked at our scenarios again. An extremely weak dollar was unlikely.

The next key question concerned the approach for selling the tools. In all three scenarios, mail order would do well. In the prosperous world, people would be busy and mail order would be a quick and easy way to shop. In the depression scenario, capital- and inventory-intensive retail operations would have a hard time surviving. In the social transformation model, mail order makes more sense for the global community.

The lifestyles we imagined of growth and wealth were similar to the "yuppie" lifestyle of the 1980s, but this era was also a time of large-scale homelessness, a deteriorating natural environment, and widespread social problems. Reality turned out to be a combination of all three scenarios. Smith & Hawken sold little to "depression America," but did well in the other two cultures.

Tuning Your Attention

Scenarios work because people recognize the truth in a description of future events. Observations from the real world must be built into the story. The only way they can emerge there is for the storyteller to sample evidence from the world before spinning the tale.

This involves research. Investigation is not just a useful tool for gathering facts. It hones your ability to perceive. Like a hunter, alerted to the presence of prey by the snap of a broken twig, you learn to pick out a key piece of vital information.

I have no elaborate filing system or database to keep track of all the material I gather. I used to maintain such a system, and found I never used it. Instead, I concentrate on educating myself; on passing information through my mind so it affects my outlook; on tuning my attention as if it were an instrument.

These are the topics to which I pay constant attention:

Science and technology. This force literally shapes the future. Thus, keeping track of new developments in physics, biotechnology, computer science, and other key areas is a special duty.

Perception-shaping events. Changing public beliefs can pivot the direction of history more swiftly and irrevocably than money or military power. While I don't regard television network news as a great source of information, I tune in to TV regularly as a source about what people believe is happening.

Music. If television suggests what people are perceiving, music shows what they are feeling.

Fringes. New knowledge develops at the social and intellectual fringes, where thinkers are freer to let their imaginations roam.

Composing Scenario Plots

In scenarios for a company, you should design an alternative that frightens managers enough to think. Your goal is to select "plots" that lead to different choices. There, are three main plots that show up consistently and that should be considered: Winners and losers. This plot starts with the perception that the world is essentially limited, that resources are scarce, and that if one side gets richer, the other side must get poorer. Only one executive can become CEO, so his rivals must leave the company. Only one corporation can dominate the market; there can be only one IBM in computers, or one Hertz in rental cars. In a winners and losers situation, the sides often compromise in a balance of power. This leads to a gradual buildup of tension, suspicion, and uneasy alliances. Apple, the "Lone Ranger," fought the system by turning the computer industry into another game.

Challenge and response. One Japanese definition of optimism is "having enough challenges to give life meaning." That mentality is arguably Japan's greatest asset in the modern world. In 1973, the United States and Japan were both hit with a quadrupling of oil prices. The United States responded with a winners and losers scenario in which it was, it felt, the winner. Yet within a year, the United states was importing half its oil. Japan, however, rebuilt its capital structure to become the most energy-efficient economy in the world. Today, the average Japanese automobile gets 35 miles per gallon. If the U.S. car fleet averaged 35 miles per gallon, the United States would need to import no oil.

Evolution. Evolutionary changes are hard to discern because they move so slowly. Once spotted, however, they're easy to manage. In the early 1980s, new types of microchips, sensors, and control devices made possible robots with astounding new capabilities. Promoters expected to sell \$2 billion worth of robots in a few years. Instead, they lost a lot of money. Before the new machines could catch on, customers first had to discover how to use robots. In the process, they learned that robots did not perform as well as they had hoped. This sent robot designers back to the labs.

Excerpted from "The Art of the Long View," by Peter Schwartz. New York: Doubleday, 1991. Printed in World Executive's Digest - October 1992.

Steps to Developing Scenarios

In scenario thinking, the basic steps are the same for a small business, a large corporation, or an individual.

• Identify the focal issue or decision. Begin with a specific decision or issue, then build out toward the environment. What are the decisions that have to be made that will have a long-term influence on the fortunes of the company?

 Identify the key forces in the environment. What facts about customers, suppliers, competitors, etc., will influence success or failure? What will decision makers want to know when making key choices?

• Identify the driving forces. List the trends in the macro environment that influence the key factors. Imagine yourself in the future saying, "If only I had known that" What guidance do such comments provide? This step requires the most research.

• Rank by importance and uncertainty. Consider first the degree of importance for the success of the focal issue or decision; second, the degree of uncertainty surrounding those factors and trends. Identify the two or three factors or trends that are most important and most uncertain.

• Select scenario logics. Only a few scenarios can be developed in detail, or the process dissipates. Play with a set of issues until you have reshaped them in such a way that a logic emerges and story can be told.

Once the fundamental axes of crucial uncertainties have been identified, it is useful to present them as a spectrum (along one axis), a matrix (with two axes), or a volume (with three axes) in which different scenarios can be identified.

• Flesh out the scenarios. Each key factor and trend should be given some attention in each scenario. Then weave the pieces together in the form of a narrative.

 Rehearse the implications. Return to the focal issue or decision. How does the decision look in each scenario? If a decision looks good in only one scenario, then it's a high-risk gamble.
How could that strategy be adapted to make it more robust if the desired scenario shows signs of not happening?

• Select leading indicators and signposts. If the scenarios have been built according to the previous steps, the logical coherence *built in* will allow logical implications of leading indicators to be *drawn out*.