

IMAGE

AN ACTION RESEARCH JOURNAL
ON
PERSONAL AND ORGANISATIONAL TRANSFORMATION

THE INSTITUTE OF CULTURAL AFFAIRS and LENS INTERNATIONAL

IMAGE

AN ACTION RESEARCH JOURNAL ON PERSONAL AND ORGANISATIONAL TRANSFORMATION

The **Action Research Journal** is written to communicate designs, formats and ideas of transformational processes which promote the human factor in private and public sectors. It is published by the Corporate Services Division of The Institute of Cultural Affairs: India for distribution through the Asia Network of ICA and affiliated organisations. These include ICA: India (Bombay, Panvel and Pune), LENS Services Pvt. Ltd. (New Delhi), LENS International Malaysia Sdn. Bhd., ICA: Australia, ICA: Philippines, ICA: Taiwan, ICA: Hong Kong and LENS International Japan.

The **Action Research Journal** draws on a variety of sources including other ICA world-wide offices and affiliated professional consulting organisations to provide a spectrum of practical tools and constructs that facilitate individual and organisational transformation. We welcome comments and articles from our readers.

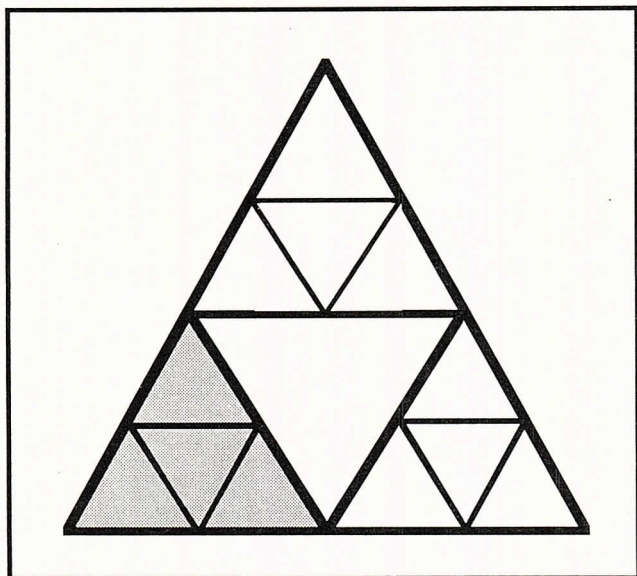
ISSUE TWENTY MARCH 1994

"ENTERPRISE EMPOWERMENT"

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JOURNAL OVERVIEW



The task of transformation is to enable the spirit of change to permeate the entire organisation. Because transforming anything involves a shift in the paradigm of the understanding of how an organisation functions, it is important to comprehend the dynamics of both organisations and spirit.

Spirit can be understood to connote the quality of the environment within an organisation. It is not a thing so much as a feel. But, the presence, or absence of it is easy to see. Perhaps we are measuring the health and vitality of the organisation when we take stock of its spirit. It depends on many factors, but perhaps the greatest is that of a profound sense of mission or purpose.

In another sense, spirit measures the degree of consciousness of the organisation. When consciousness undergoes a foundational change, transformation occurs through the change in spirit. In a whole systems perspective it means that consciousness affects the entire organisation. Therefore, to talk of organisational transformation is to talk of the spirit change in all of its dimensions.

This leads us to the second understanding, namely how an organisation operates, the dynamics of an organisation. Every organisation has three foundational dynamics. The most basic is the dimension that defines its enterprise. The enterprise is the product or service that the organisation delivers to society. The second dynamic consists of how the enterprise most effectively organises itself to deliver the product or service, for instance, how to increase speed or flexibility. The third dynamic is the culture which directs and gives significance and uniqueness to the organisation.

This issue of the Image Journal focuses on the interplay of spirit with the enterprise. It is an attempt

to shed some light and insight to how spirit infuses and transforms our understanding of quality, innovation and service. These three define the arenas that every organisation must care for if it is to survive.

Volumes have been written and countless books and articles published on quality. It is the most defining word in business today. Nobody doubts its primacy of importance in determining viability in the marketplace. But not much is written about the role of spirit in quality. Perhaps this is because quality deals with such a tangible result it is difficult to see the spirit dimension at work. We tend to focus our attention on processes, procedures, skills and systems. These can be quantified, measured, taught and applied. But spirit cannot. Spirit transcends our efforts and takes us into different realms.

This is not to say that quality systems, training and techniques are unimportant; they are just not enough. In fact, the real danger is to believe that spirit can be ignored or be given secondary consideration. I believe this is at the heart of why quality is still an illusive result for so many organisations. Many organisations invest vast amounts of effort and money in quality programmes only to find the effort short of the desired results.

Quality, in its essence, is a product of the human spirit. It is an incarnation of personal effort. Quality systems, training and techniques can give assistance and form to that spirit, but they cannot substitute for it.

But quality alone is not enough. Innovation is the life blood for organisations. To invent the new product or improve the existing service is what keeps organisations alive. I spent fifteen years of my life as a research scientist for a major multinational company. It was my job to create new chemical products for my company. I can testify to the benefits of well-financed and directed research. There is no substitute for a sound technical capacity for inventing new materials. But I became clear that none of these guaranteed success. I was fortunate to have invented several products that became commercially successful. Many of my co-workers toiled for years without seeing any commercial products come from their efforts. But the question of innovation is not to be measured in new products or improvements alone. Something far more important is needed.

Spirit is key to innovation. At one level it is the spirit of inquiry. It is the ability and desire to question how something can be different. Innovation moves beyond the lab and into every realm of the organisation. The Japanese call it *kaizen*, the relentless improvement of everything. At another level, it is the ability to allow the "mistake" to lead you to the new. Many so-called breakthroughs were the results

of mistakes wherein someone saw a new possibility. Often these are missed because of our phobia of making mistakes. We don't like messes, we like to keep things in control. But messes and mistakes are the breeding ground for breakthroughs.

At its deepest level, innovation is about sheer creativity. Creativity is a definitude of humanness. To be human is to be creative. Deep within the human mind is the capacity to create. Indeed, the human journey can be mapped in terms of creativity and invention. This consciousness can be developed principally through accessing that part of our brain that wonders. This is the spirit realm and many have explored the path. But organisations are, for the most part, ill-equipped to enhance the exploration. They prefer to tread the path of training and skill. Meditation is for gurus, not for the worker or manager. Unless we understand how the spirit of creativity is nurtured we will miss the essence of innovation.

Finally, there is service. Service is the attitude, or way in which we deliver our goods or services. This is perhaps the one area where spirit is recognised. We even talk about the "spirit of service". But what is it really? Again, much has been written on service. Organisations must master all that produces exceptional service. This involves systems, strategy and empowered frontline people. But most of all it involves love, and love is spirit in action. Love does not find an easy home in most organisations. The word is not particularly welcome where winning, profits and efficiency rule. But the transformation of our organisations into those that consistently give outstanding service both internally and externally is through the unleashing of the spirit of love.

This Issue

The symbol for this issue of the Image Journal is the Transformation Task triangle described in issue eighteen. The shaded portion is the Enterprise transformation, consisting of quality, innovation and service. In the lead article, **Human-centered Enterprise**, I describe how these three areas of transformation are the critical factors in empowerment processes. Each of them requires an understanding of a different journey of consciousness leading towards empowerment.

Empowerment and Quality describes the different processes that any quality improvement programme needs to include. It is a small section taken from Richard Greene's book, Global Quality, ASQC Quality Press, Milwaukee, Wisconsin. Richard is a former member of the ICA and draws from his many years of experience in Japan and America studying quality systems and their implementation.

V. S. Mahesh, presently a professor at University of Buckingham in England and formerly an executive in HRD at the Taj Hotel group and Wipro Ltd., outlines the journey a company takes in its quest to become a customer-driven organisation. We have titled his paper **Four Phases of Service**. Mahesh is currently teaching in an advanced degree programme for Service Management. He also has been a regular presenter in The Transformational Leadership Lab.

Innovation is a vital part of enterprise empowerment. Harrison Owen is a consultant who has studied and experimented with empowerment processes for many years. He has developed a process called Open Space Technology that facilitates innovation through group empowerment. In his book, Riding the Tiger, he describes the need to understand chaos as the critical factor today in change. We have taken a part of one chapter dealing with **The Gift of Chaos - Innovation** for this issue.

John Epps, of Lens International, Malaysia, submitted an article that further explores the new scientific field of chaos and fractals. **Chaos and Change** describes how this new science is guiding the emergence of new management practices.

Creativity is one of the dimensions of empowerment associated with innovation. Dr. Richard Johnston, M. D. has explored this field in his book Creative Imperative. In his book he develops a theory of how the creative process works as a journey. This excerpt, **Creative Causality - Aliveness**, is from his introductory chapter in which he describes how the foundational quality of creativity is the feeling of being alive.

Finally, we are publishing an excerpted article from the Harvard Business Review, January-February 1994, that is titled "Why My Former Employees Still Work for Me", by Ricardo Semler. We feel this case study fully exemplifies the results when empowerment is taken seriously.

Although these articles are just a part of the larger question of empowerment, we hope they will stimulate and guide the reader to a better understanding of the journey our organisations need to take in transformation.

Jack Gilles
Editor

"Without work, all life goes rotten, but when work is soul-less, life stifles and dies."

-Albert Camus

HUMAN-CENTERED ENTERPRISE - J Gilles

An organisation's enterprise is the specific output that defines its existence. It represents the interface between the organisation and the society at large, in terms of its purpose. There are, of course, other interfaces; government, civic, community, stakeholders, suppliers and environmental; but these are indirect, or secondary to its identity. For every organisation the enterprise dynamic involves the mobilisation of **resources**; raw materials, human resources and capital (financial and intellectual), then **processing** those into a product or service which is ultimately **distributed** in some way to society.

In the past, these three foundational dynamics were honed to a fine degree through scientific management. Planning, procedures and monitoring were subject to rigorous discipline in order to ensure consistent and timely outputs. The scientific discipline was likewise applied to the development of the human resources. HRD has become a major position in most companies and behavioral sciences have often been applied in an attempt to mold and guide the work force, both line and staff. It should work, but it doesn't. Somehow the attempt to make human beings a resource of an organisation has fostered the impression that the organisation is in some way an entity that is separate from its employees and that human beings are only one of several critical resources for its success. It fails because the paradigm doesn't fit the reality. Organisations are not machines or inert entities. They are a living system. People are not a resource, they are the center of an organisation's life.

With this understanding or paradigm, the organisation becomes an **expression** of its people. Each and every result is, in a way, a commitment of the collective will. The problem lies in that we have made that will the exclusive domain of senior management, and often the domain of the CEO or Managing Director. When people are cut off from the fruits of their work, a fundamental and sometimes fatal flaw exists.

This does not mean that there is no hierarchy. In every living system there is a natural hierarchy. But this natural hierarchy does not mean that information and decisions are concentrated at the top. In a living system the entire system is an intelligence and requires the freedom to interact with the whole in terms of information and decisions. This natural process was described in some detail in the Image Journal #14. The point is that until we begin to operate with this new paradigm in its totality we will continue to find our attempts to do human resource development truncated.

This machine-like image is principally a product of western scientific thought and management. It continues to be the central paradigm of western

education system for managers and workers. In the east, the understanding is quite different. In Japan, for instance, a more organic understanding is present, although not to the extent that I have indicated is required. Dr. Ronnie Lessem has done a fine job of describing these differences in his book Global Management Principles.

Human-centered Enterprise

The transformation of an organisation's enterprise from one that is either traditionally oriented in its HRD or one that is more focused on systems requires an understanding of the human factor dimensions involved in delivering its products and/or services. The three areas of focus are **quality**, **innovation** and **service**. These three are the arenas in which excellence is achieved or lost.

When viewing the organisation as a living system, these three correspond to the three dynamics operating in a coherent manner to assure development. A brief contextual review is in order.

A company has six regions, or domains that define it. These six operate in three polarities that together give the feedback to the system on how it is doing. One pair is Marketing (M) - Sales (S). This creative tension will illuminate the organisation's performance. Marketing represents the perception of the field of opportunity and sales represents the results. These sources of information must be independent if the performance is to be assessed correctly and is an indirect measure of its degree of responsive service.

The second pair is Treasury (T)-Product Development (PD). This polarity provides the insight into the organisation's potential. Treasury, principally measured as a financial resource, combined with the capacity to develop products/services defines the field in which innovation can operate.

The third polarity is Product Processing (PP) - Organisation & Manning (O&M). This pair allows the assessment of the organisation's commitment. Quality now becomes a measure of the organisation's commitment. That is, the making of a product by its people in a quality manner is its commitment to that product.

These three polarities also operate in the human brain and are activated through three independent disciplines. The PP - O&M polarity is centered in the left brain. It requires a physical and intellectual discipline which is reflected in our capacity and commitment to our work. The T - PD polarity is centered in the right brain. It requires a discipline that allows us to access the power of imagination. We develop the capacity to wonder and reflect on it. Meditation is one means of sharpening that disci-

pline. The third polarity, S - M connects our brain through the limbic system and central nervous system. It is the center of our emotive nature and allows us to relate to our actions. It is "in what spirit" things are done. It requires a moral discipline through which we get in touch with our hearts.

If we now take these same disciplines and apply them to the collective system that an organisation represents, we will have the means to actively develop the capacity of that organisation to actualise its implicit capacities. That is, it will have the internal capacity to move and communicate effectively with the external results of producing and delivering a product or service.

Western scientific management has concentrated on the external manifestations of quality, innovation and service, but not its internal, or human dimension. This internal dimension is both the individual's capacities and the collective capacities to look inward to the individual and collective consciousness. This internalisation of consciousness is at the frontier of business today. It can be seen in the calls for empowerment and the experiments with team work. But it is not understood with the depth that is needed. We have barely scratched the surface of the collective consciousness and, with rare exception, we have not developed the means for individual self-exploration in an organisation setting. We have only the well-described path of internal development that has been mapped by mystics and spiritual giants of the past.

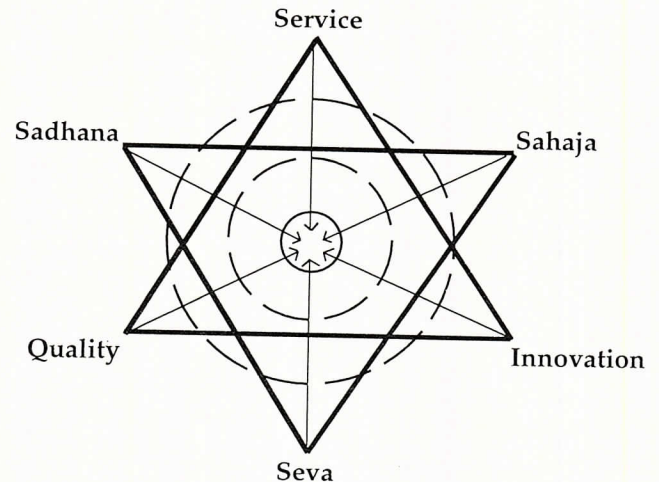
What follows is an attempt to begin this mapping through the pathways of quality, innovation and service. It is in no way complete, but it may point to the areas in which fruitful exploration and experimentation can take place. What it does imply is that those who direct and lead our organisations are going to have to become adept and familiar with the path. They will need to guide and direct this endeavor, trusting their intuition and the universality of human consciousness.

The Journey Model

The journey of an organisation to profound dimensions of quality, innovation and service is a journey of consciousness. It is a growth process guided and developed through the three disciplines; physical/intellectual, spiritual and moral. As these disciplines move towards a center, they become more and more powerful. In order to be sustained they require a culture, or context that nurtures and supports the consciousness. This is the underlying basis for the development of a learning organisation. In the final analysis, a learning organisation is one in which consciousness is encouraged and developed to

a high degree. Our collective experiences are re-fluxed in such a way that we learn and apply our learnings to the emerging situation.

The following diagram shows these three dynamics in a journey relationship. Each circle represents a level of consciousness that results in a different degree of quality, innovation and service.



Quality: Moving Toward Sahaja. V. S. Mahesh, in his book, Thresholds of Motivation, describes how quality is directly related to the levels of consciousness towards self-actualisation. As a person lowers the threshold limits of his lower motivational needs (Maslow), he/she moves from the realm or domain of consciousness where his needs are no longer met from external factors (recognition by others), to that of intrinsic satisfaction (recognition by one's own standards). The physical and intellectual discipline required at the lower level is that of the student who is following the recognised way of doing something. He is striving to achieve an order of excellence or quality that meets the standards. In Indian sanskrit this level is called *aupadesika*. A similar concept is found in Chinese. *Neng*, or "technically correct", is this lower level.

Most organisations are pleased to get to this level of quality. ISO 9000, benchmarking and other recognised standards are the means most organisations use to achieve quality. This is the **proactive** organisation. Because recognition by others is so important, companies are willing to spend so much effort in developing recognition schemes to motivate workers. And it works, to a degree; but "world class quality" will require something more.

The second level is that of the master craftsman. Here the discipline has resulted in the person moving beyond standards to higher levels of performance because he/she has mastered the area of

proficiency. One's own standards are the guide, developed over years of disciplined development. Here the sanskrit term is *aharaya* and the Chinese term is *miao*.

Few organisations achieve this level. For one reason it is difficult to move beyond a culture built on traditional motivational understandings. It would require a leadership who themselves were, to a significant degree, operating at this higher level. Most of us are just too attached to the rewards a company gives for excellent performance. To operate some other way would seem to violate the practices of business today. But unless we can build cultures and develop leaders who can, we will not consistently foster this level of quality. I believe that this corresponds to the description given by Harrison Owen in his book, Riding the Tiger, as the **interactive** organisation.

Every once in awhile we enter a zone of performance in which we seem to be operating at a level of sheer perfection, what some have described as a "flow state". This corresponds to Owen's idea of the **inspired** organisation. Joseph Campbell speaks of it as your "bliss state". Clearly it is an unusual occurrence and one couldn't expect organisations to perform consistently at this level. But it does happen. Bill Russell, the great Boston Celtic basketball player, describes this state having occurred only a few times in his entire career. The game would rise to such a level of intensity that he sensed he was operating at a level where he would know every pass and shot before it would take place. His hands seemed to be guided by a power beyond him. He was "in the zone", as they say today. Mahesh refers to this as *sahaja*, where the result is such that no credit is due to you; it is divinely inspired. The doer, the doing and the deed are one. The Chinese term is *shen*, or divine.

Innovation: Moving Towards Sadhana. This journey is not as clear to me as the quality journey. Innovation and creativity are mysterious and irrational. They don't emerge from our linguistic, logical and communicative side of the brain. Innovation or creativity is a knowing category more than a doing category. Of course, acting on an idea is part of the discipline, but the key part I am interested in is the consciousness that produces the idea, the interaction with the mystery of the mind.

At the initial level are right brain disciplines of lateral thinking, a term coined by Edward de Bono. This capacity allows one to explore non-linear and relational dimensions that lead into new realms. The next level is the flash of insight, that concept of "out of the blue" that opens us up to the Aha's(!) of life. The highest level would be those rare instances when we feel we "see through", a radical transparency occurs and we see and comprehend more than we

can understand. This stage of enlightenment has been called *sadhana*, a sanskrit word that describes a state of enlightenment.

I don't pretend to understand this journey nor how the disciplines of meditation and spirituality produce it. But, the development of people in organisations to become "knowledge workers" is part of that journey. Active meditation is being practiced in several organisations. Clearly the more people have access to information the more relationships they can operate with. The more people are wired together in an organisation, the better chance they have of getting the collective mind to work for everyone. And the more one can foster creative differences, experimentation and synergistic interdisciplinary working teams, the better the chances for this journey to take place.

Service: Moving Towards Seva. *Seva* is sanskrit for a state of being where the action done is performed without expectation of return. It is pure love in action. It is a being category involving the intensification of knowing and doing. I feel organisations struggle the most with service because we understand organisations principally on a transactional basis. "A fair day's pay for a fair day's work", "meeting customer demands or expectations" and "fulfilling our obligations" are terms deep in an organisation's consciousness.

The journey begins when an organisation moves beyond normal transactions and gives exceptional service or goes out of its way to make a customer satisfied. We have all experienced both giving and receiving such service with the result of a deep feeling of gratitude for the humanness shown.

A higher level is reached when we begin to erase the boundaries that separate us and see everyone as part of a larger process. The term customer doesn't seem to apply as strongly here, perhaps partnership is more appropriate. Jack Welch, the CEO of GE speaks of his goal for a "boundaryless" organisation. Process reengineering is moving our organisations towards this consciousness. Again, the problem arises when our operating cultures are not designed around this consciousness. That is why so many attempts at reengineering fail.

Service in its highest state, *seva*, is extremely rare, but I feel we have all experienced it in our lives. It is the basis of family and parenting. If we can truly construct our organisations as a family and at the same time, see ourselves as profoundly committed to a transcendent mission, we can create the climate in which acts of genuine love can take place. Here the value-centered organisation operates. The development of universal norms of ethical humanness will, with practice and discipline, produce organisations in which the good that benefits all can happen.

EMPOWERMENT AND QUALITY - R. Greene

Quality programs always involve employee empowerment, under one name or another. Just as management roles enabling work forces remain inarticulate, exactly how, how much, and what work forces are to be empowered in is left vague. The result is the deployment of general analysis tools to address quality, cost, and delivery problems; and, continuous whole work force improvement in quality terms. These results are impressive in and of themselves. However, there comes a time, usually after the fifth or sixth year of a total quality program, where results decline. The same work force mobilization produces less and less outcome. At this point, a model of empowerment can help. It can guide the selection of further tools for dissemination to the work force; it can guide quality improvement efforts toward tackling the system factors, shared across many work groups and departments in companies, that are crucial to serving customers but not in any one person's department or area of responsibility. Even prizewinning quality companies lack empowerment models.

Why does empowerment remain modelless when all other quality methods operate on explicit models? In a word, power is the answer. Empowerment means unleashing the work force, granting workers the right to apply their own brainpower to serving customers. Management's role becomes truly more secondary, though not at all negligible. It is critical that management reward systems be changed to reward managers whose employees produce stellar results, instead of rewarding managers who produce stellar results themselves. This is not a matter of semantics, it is a matter of measuring the outcomes of hundreds of quality teams throughout a section of a company.

An explicit model of what empowerment and the process of empowerment mean is the key to overcoming the fifth and sixth year plateau in results from usual quality program employee empowerment tactics.

Learning Empowerment and Quality

A lot of talk about work force empowerment goes on in quality programs. Ask anyone in any company's quality program for their model of what empowerment is. You won't find one. All over the world companies dedicated to quality are getting work groups to model business processes, build process capability in them, and measure that capability. Yet the process of work force empowerment is left modelless by those same companies.

In part, this is because of the many obvious impediments to worker empowerment, accumulated from prequality days, that no one needs to think very

hard to find ways to empower people. This is certainly true in the early stages of any quality program. There comes a time, however, around the fifth or sixth year, when the easy items on that accumulated list of impediments have all been handled and only really tough items remain. These tough items require a model of an empowerment process that the corporation can manage and implement. A number of models have already been researched. The Swedes have researched worker competencies - work competencies, learning competencies, and influence competencies - and a progression among them from work through learning to influence. Community development people have studied awakening of communities and individuals in terms of an intrusion, breaking old images, a guide or mentor's assistance, and formation of a new community of action. Mythologists have studied the psychodynamics of dream sequences of empowerment - fairy tales with breaking a prohibition, exile from home, encountering the terrors that turn out to be friends, earning a magic talisman, and encountering the monster. Out of all this material, I have built my own model based on the quality programs I have been involved with over the last 15 years:

1. Interventions - Something intervenes in a person's life to challenge the image of self and others or the routine of ordinary work and life. This involves something that challenges a person, overpowering usual points of view, and asking for response beyond usual habit.

2. Awakening to possibility - This is having the question of changing one's self or prospects suddenly a live question again after a period of quiescence and unself-conscious living. This involves knowledge that one has the permission to learn about life, beyond what one is born into or what one is good at.

3. Confirming action - Here a person takes action not possible in the past, crossing boundaries that were not crossed in the past. From this develops positive feedback and, eventually, mastery of new contexts.

4. Viewpoint enlargement - From the action in the previous step comes an enlarged view of self and world. This involves realizing that people can build new stories for their lives and change direction, fundamentally. New self-knowledge arises from this, plus the knowledge that at any point in life a different life story can unfold.

5. Bridge community - The enlarged viewpoint of the previous step leads a person to associate with different people, having new interests, involved in new activities. This bridge community sustains the new self-image the person has just started developing. Here people discover that mind is transactional

- distributed so that other people play key roles in one's thought.

6. Formalizing gains - The person begins to use the bridge community to obtain formal training, job positions, status, responsible roles where the formal structures of society bolster and accept the new self-image and forms of action the person has just learned. This causes the person to develop a new style, consistent with the new self-image and skills evolving in the person.

7. Formal bridge community - This is the transformation from a dependence on a happenstance bridge community to deliberate choice of and influence on a bridge community, selected to enhance the new self-image and activities of the new person one is becoming. Here a person learns he or she can live simultaneously in different communities having different status, influence, and role in each, thereby expanding style and knowledge of life.

Some people probably are thinking that this empowerment dimension is off base, unnecessary. However, Florida Power and Light's CEO wrote two letters to their entire work force, shortly after they had won the Deming Prize, admitting that much of the work force experienced the quality program as a totalitarian imposition, not an empowering release toward customer service. In those letters he retracted much of Florida Power and Light's quality bureaucracy. The lesson of Florida Power and Light is that you must have a way of tracking subjectively felt empowerment of the work force to have early warning of a cynical bureaucratic quality program emerging from your well-intentioned quality efforts.

Two things happen in the fifth and sixth years of quality campaigns: One is the easy empowerment items disappear, leaving only tough issues behind. The second is local improvement proposals begin mentioning, all over the company, systemic variables and issues that need addressing for local work to improve. Many companies and quality programs wimp out at this point. If each work group is responsible for modeling its work process and a process of empowering itself as a group, and if process capability for both is measured and developed, this fifth and sixth year impasse can be overcome.

Principle: Hold work forces to two kinds of process improvement - business process improvement and empowerment process improvement.

Some illusions people have about participation and empowerment hinder the empowerment of work forces in quality programs. These include:

- The illusion that each person in a meeting has that an empowered meeting would give that

person more influence than any of the other people in the meeting. That is, if there are 20 people in a meeting, each of them expects to have more than one twentieth the total talk time and influence.

- The illusion that people with very different skills are participating equally in a meeting when in fact any particular meeting process emphasizes certain skills types and minimizes influence of other types of skill.

- The illusion that participation and openness are suitable decision processes for all issues.

- The illusion that empowerment means tolerating bad ideas for the sake of people trying out new roles or the converse that empowerment means locking groups into current skill inequalities among members for the sake of getting best immediate results without a view to a long-term group capability.

Taken altogether, these say that people have entirely unrealistic images of being empowered, based on failure to acknowledge the amount of everyday cognition that we all spend trying to be better and more influential than those around us. Empowerment can feel like paralysis - when groups admit accurately the amount of other people's creativity we owe due attention to. By exposing us more accurately to other people's potential contribution and ideas, empowerment makes us lose our everyday narcissistic self-importance; hence, it makes us feel less powerful individually. This paradox is a critical stumbling block for achieving work force quality through work force empowerment.

Principle: Make the superior impact that empowered group have, short and long term, highly visible throughout the corporation to counteract the individual feeling that people in empowered work forces get that empowerment has reduced their personal influence.

"From the roots the sap rises up into the artist, flows through him and his eyes. He is the trunk of the tree. Seized and moved by the force of the current, he directs his vision into his work. Visible on all sides, the crown of the tree unfolds in space and time. And so with the work."

- Paul Klee

FOUR PHASES OF SERVICE - V. S. Mahesh

Having worked for a decade in TELCO, essentially a manufacturing company, another decade in the Taj Group of Hotels, essentially a service company, and for the past couple of years in Wipro Corporation, which combines manufacturing, service and information technology in its wide portfolio of interests, I have learnt that the term, customer orientation can and does have very diverse interpretations. These interpretations normally arise from the different perspectives that the different industry segments have become synonymous with. At the same time, today's customer of goods, services and information does not share the same, suboptimal perspective. His view is an all-inclusive one that demands a holistic approach on the part of the supplier, one that synergistically combines and retains the virtues of each of the perspectives.

Developing a Working Model

I shall endeavour to present a way, and a model, that organizations of today can use in their journey to become, first a customer oriented organization, secondly a customer driven organization, and lastly, a boundary-less organization that includes in its fold, vendors, employees, customers and shareholders, besides all its social and ecological stakeholders.

Let us start with the time when Deming first made his impact in the aftermath of the second World War. Not surprisingly, his impact was felt the most in the war-ravaged economy of Japan, and not in his own native country, the USA. While many of Deming's teachings are applicable in all modern day

organizations, be it focussed in manufacturing, service, or information, the context of his first impact was one of mass manufacturing. Statistical Quality Control ensured that the end customer bought a product that was qualitatively guaranteed by the manufacturer. At the same time, Deming emphasized that quality was best produced by people who were excitedly and voluntarily involved in their work. Concepts such as Quality Circles, participative work practices on the shop floor and suggestion schemes were an inherent part of the processes Deming emphasized in the creation of quality products.

The Phase I Organization's Limited Focus

If an organisation's customer is merely looking for a manufactured product that is reliable and whose tangibles such as its appearance, design and finish meet competitive standards, such an organization will do well to ruthlessly implement Deming's original blue print. This has to be complemented by reliable market research that will help identify what products will sell in the market place, at what price and with what market growth. Let me figuratively represent this simplistic view of markets, products, customers and quality processes as shown in the figure below. Products such as staplers, pins and soaps still demand that an organization is well managed on these aspects only. This was merely Phase I in the evolutionary process that the supplier-customer relationship was to go through.

| CUSTOMER DRIVEN ORGANISATION | | | | |
|------------------------------|--|--------------------------------------|--|---|
| | DESCRIPTION OF END PRODUCT | CUSTOMER NEEDS ASSESSMENT PROCESS | QUALITY ASSURANCE MECHANISMS | CUSTOMER ASSESSED QUALITY PARAMETERS |
| PHASE I | MASS MANUFACTURED PRODUCT | MARKET RESEARCH ON CUSTOMER NEEDS | SQC, QCs, SUGGESTION SCHEMES | TANGIBLES AND PRODUCT RELIABILITY |
| PHASE II | DITTO, BUT ADAPTED TO INDIVIDUAL NEEDS AND OPTIONS | INPUT FROM INDIVIDUAL CUSTOMERS | COMPUTERISED PRODUCTION PLANNING & CONTROL AND FLEXIBLE MANUFACTURING SYSTEMS | RESPONSIVENESS TO CUSTOMER NEEDS |
| PHASE III | CUSTOMER SENSITIVE SERVICE BUNDLED WITH PRODUCT | CUSTOMER DIALOGUE | EMPOWERED FRONT-LINE STAFF | EMPATHY OF FRONT-LINE STAFF |
| PHASE IV | CUSTOMER EMPOWERMENT | CUSTOMER ENGAGEMENT | BOUNDARYLESS, PROCESS-ORIENTED, SPEEDY ORGANISM | ASSURANCE (FAIRNESS, TRUST AND LONG TERM RELATIONSHIP) |

Individual Customer's needs Drive Phase II Organization

By the sixties, however, the customer decided to change the rules of the game. He began to demand that even mass manufactured products incorporated his individual options, likes and dislikes. No longer could a Ford say that the customer would buy black cars because Ford wished it that way. One could demand, and get, cars representing the entire range of the rainbow, with permutations and combinations of the same within the same car, like a dark blue car with light blue upholstery. The same kind of options extended to various parts of the car too. The organizations that survived this changed customer behavior were those that supplemented their Phase I strengths with computerized Production Planning systems, a fast and accurate method of responding to individual customer needs, flexible manufacturing systems and an equally flexible, self organized work teams. It is not at all surprising that Management schools changed their recruitment strategy to prioritize intake of those who had engineering backgrounds.

At this point, it is worth emphasizing that success in each phase of progression was critically dependent on ensuring that the conditions of the earlier phases were also satisfied as a base for progression into the next phase. For example, QCs and other participative methods of employee involvement continue to be as important in Phase II as the new factors of computerized PPC and FMS.

Getting Stuck In Phase II Is Common

Unfortunately, for most organizations and management schools, the customer did not stop there. He was to move on to two more phases in rapid succession. That organizations are failing in the marketplace due to their being stuck in this Phase II should become obvious as we go along. Even reaching up to this phase has been a major problem for many organizations, as evidenced by the recent success of Roy Harman's best selling books, Reinventing the Factory and its successor, Reinventing the Factory II. Organizations must get the act right at this phase before they embark on meeting the customer's needs in the later phases. To find out if an organization needs to focus on this phase and improve itself, a helpful check list has been given by Soundview Executive Book Summaries summarizing the second of Harman's books. I reproduce the checklist of warning signs below:

1. Manufacturing lead time that is longer than competitors.
2. A layout that groups similar machines, instead of clustering them in factories-within-a-factory.
3. A large fleet of lift trucks that gives materials and

parts a tour of the plant before they get to their destination.

4. High costs for machine changeovers, necessitating unduly long production runs.
5. A history of requiring additional storage space.
6. Poor communication between manufacturing employees and their (internal and external) customers and suppliers.
7. Design engineers and process engineers who work in isolation from each other.
8. A tendency to haggle over price with several vendors and then buy from the lowest bidder.

The Saturn Experiment Shows The Way Out of Phase II

A marvellous example of a company that successfully emerged through Phase II in one of its plants is General Motors. While some disquieting data on the negatives of their experience has begun to emerge now, it is nevertheless worth every organization's time to study what GM did differently in its 2,450 acre plant situated 45 miles south of Nashville, TN, where they launched their very successful car, the Saturn. To reemphasize the point that continued focus on Phase I factors is important in Phase II, besides greater automation, flexible manufacturing systems and computerized system for production planning and control, let me quote Beverly Geber from her cover story, Saturn's Grand Experiment in the June 1992 issue of Training:

"Saturn officials love to point out that the company has done what it has by making an enormous investment - both financially and philosophically - in people."

Stating that Saturn employees can expect to spend 5% of their time annually in training, Geber says, "Saturn's faith in training is so resolute that it tied training to the company's 'risk and reward' compensation system. Each employee must commit to receiving at least 92 hours of training every year - about 5% of total working hours. That represents the "risk" portion of employees' salaries. In other words, the company guarantees 95% of their base wages and does not pay the remaining 5% unless everybody meets that training goal. The first quarter goal for 1992 was 155,687 hours. Saturn employees logged more than 300,000!"

Phase III is Bundling Service To A Product

In Phase III, the customer began to demand that his product be bundled with customer sensitive service. In my recent book published by Tata McGraw Hill, Thresholds of Motivation, I have dealt at length with this phase, which is focused on Empowerment of Front-line staff whose empathetic understanding of customer needs is backed by the

requisite skills training and organizational authority to act as the customers' agents. This is figuratively presented in the all-important Phase III.

The last decade has witnessed a growing interest in, and awareness of the intricacies and difficulties in managing this phase. Success in this phase has been critically dependent on getting the Human Resources Management systems and procedures right. The initial success of Jan Carlsson in SAS, followed by that of British Airways through their "Putting people first" programme led to the articulation of the basic principles of Service Industry management by Rom Zemke and Carl Albrecht in the mid-80s. Simultaneously, the Texas A&M University's team of Parasuraman, Zeithmal and Berry initiated and led a decade long research on the subject and came up with a startlingly clear thesis on what was needed to ensure customer satisfaction through service.

Correlation With Texas A&M Research Findings

First, it is relevant, and important that we establish the correlation between the model being developed in this paper with the research findings of the Texas A&M team. Describing the current status of their research in the Spring 1991 issue of the Sloan Management Review, the Texas team said that they were "struck by the basic nature of customers' expectations. Simply put, customers want service companies to do what they are supposed to do. They expect fundamentals, not fanciness; performance, not empty promises. Insurance customers want companies to provide expertise and pay up when there is a claim. Hotel customers want a clean and secure room and a smile from the staff. Repair customers want competent technicians to fix the product properly the first time."

The research team found that Customer service expectations can be categorized into five overall dimensions: reliability, tangibles, responsiveness, assurance and empathy. They defined these five terms as:

Reliability: The ability to perform the promised service dependably and accurately.

Tangibles: The appearance of physical facilities, equipment, personnel and communications materials.

Responsiveness: The willingness to help customers and provide prompt service.

Assurance: The knowledge and courtesy of employees and their ability to convey trust and confidence.

Empathy: The caring, individualized attention provided to the customer.

While "reliability" is largely concerned with "service outcome", the other four factors are more concerned with the "service process". As the team summed up, "whereas the customers judge the

accuracy and dependability (i.e., reliability) of the delivered service, they judge the other dimensions as the service is *being delivered*."

In their earlier research, customers had always rated "reliability" as the most important of the five factors. Their more recent research has thrown up something very important: "Although reliability is the most important dimension in meeting customer expectations, the process dimensions (especially assurance, empathy and responsiveness) are most important in exceeding customer expectations. This is a crucial point to make note of. No longer are customers satisfied when their needs are merely met. They need to be anticipated, in terms of what would delight them, and the same delivered to them without being asked to do so. Again, this has to be necessarily done by those who are in contact with them, which brings us back to the crucial role of the front-line staff.

Forum Corporation's Findings

Secondly, we will consider the research findings of the Boston-based Forum Corporation who recently conducted a research study on customer focus.

They uncovered four management factors and four internal environment factors that set customer-focused companies apart from others. The four management factors were:

1. Setting customer-focused performance goals and standards;
2. Taking personal action to help solve customers' problems;
3. Seeking innovative ways to serve customers better;
4. Helping employees learn how to serve customers better.

The four internal environment factors were:

1. Aligning the larger organisation to serve customers;
2. Building capability to serve customers;
3. Seeing excellence of service as an important value, and living up to it;
4. Connecting with customers (through a continuous two-way dialogue).

Profile of Customer Focused Companies

They found that the best customer focused companies take action in three specific areas:

1. They create a special relationship between the company and the customer by avoiding complacency, working to retain existing relationships, connecting people and systems to customers, paying attention to service quality and focusing on reliability.
2. They manage people so as to value employees, particularly at the front line, set customer focused

(Continued on page 17)

THE GIFT OF CHAOS - INNOVATION -

Innovation is the gift of chaos, appropriated by High Learning, and made useful through Normal Learning. That rather bald statement encapsulates what I understand to be the central benefit of chaos for our organizations and businesses. Although extreme in appearance, that statement may also make some sense out of the strange phenomenon that all major breakthroughs (no matter how defined) always seem to occur by "mistake" - a polite way of talking about chaos. I know that is not the way things are supposed to happen, for we would all like to think that our advancement proceeds along an ordered course, well thought out in advance, and definitely according to plan.

The classic case was the discovery of penicillin and with it, the advent of the so-called miracle drugs. According to the story, we never would have had this wonder drug if Sir Alexander Fleming had washed his laboratory dishes. Fortunately, he made a mistake, and left a mess over the weekend. Upon his return he found a hairy, green substance growing in the dirty dishes. That was disturbing, but what caught his attention (a difference that made a difference) was that where the mold grew, bacteria did not. Naturally, prior training was necessary to be able to tell the difference between mold and bacteria, and also to perceive the lack of bacterial growth as significant. Normal Learning is important. However, it was the mess that catapulted Fleming from "more of the same old stuff" into genuine innovation.

Over the years, I have collected what can only be called anecdotal evidence from clients and colleagues concerning the circumstances surrounding real breakthroughs. The interesting thing is that absolutely none of them ever occurred according to plan. While I may have found only what I was looking for (which is usually the case), I am still searching for a breakthrough which happened the way it was supposed to.

The Birth of Fiberglas

Fiberglas, the discovery and major product of Owens/Corning Fiberglas (OCF) began with a mess. Shortly before World War II, OCF was seriously looking for other ways of using what it knew best, glass making technology. Up to that point it had largely been making bottles, but with the advent of plastic, it looked as if the bottle market might take a dive. So the search for new applications and products.

One fine day, their director of research decided that if a way could be found to weld glass blocks (the sort you build transparent walls with), that would be a new, marketable product. I have never been clear exactly why he thought this was so, but he did. In

any event, he summoned his research assistant, one Dale Kleist, and directed him to figure out the appropriate means.

Dale obediently assembled a pile of glass blocks, a gas torch, glass rods, and set about doing what he had been told. Unfortunately the fruits of his labor were not as envisioned. The harder he tried, the messier things got. As he melted the glass rods with the gas torch, preparatory to "welding," the force of the escaping gas blew the molten glass all over the floor - in long thin fibers. In a very short time, he had accumulated a considerable pile, and so far as he was concerned, the grand experiment was a disastrous mess.

As Kleist was reaching despair, the director returned to the scene of the crime. Kleist was prepared for the worst, but instead of loud denunciation for failure, the director was enraptured. What he saw in that mess was the tensile quality of the glass fibers, and FiberGlas was born.

The curious thing about this story is that forty years later, when I was consulting with a division of the company, virtually nobody remembered it, except for a few old timers. Even though that moment in OCF history required, as possibly never before, some useful examples of how to make an opportunity out of a mess.

The situation was a common one in the 1980s. The corporation had been attacked by a corporate raider, and management was doing its best to hold on. In the final round, management won, but it was a bittersweet victory. In order to meet the ransom the company sold businesses and closed facilities to the point that once robust annual sales of \$4 billion shrank to a little more than \$2 billion.

Even more critical was the fact that, even though not everybody lost their jobs (many folks went with the sold businesses), there was a very significant reduction in force. This meant that the business the remained had to be done with many fewer hands. It is a testimony to those who stayed that they put their best foot forward and rallied the company, but at tremendous cost. Fourteen-hour days, seven days a week, and at the end of six months, the folks were simply exhausted. There comes a point when you can't run any faster; you have to run smarter. But the options for smart running seemed limited indeed. It was a simple case of playing a new ball game by rules created in the halcyon days when money and staff were no problem.

And they had forgotten their story. Once upon a time, OCF had made opportunity out of a mess, virtue out of a mistake, new business out of a failed experiment. And doing all that again would be infinitely easier if they could remember having done it once before. No guarantees, of course.

Harrison Owen

How could they forget their story? The question really bothered me, and I have no certain answer, but I did notice a curious coincidence. Shortly before The Fall, OCF was proudly investing an incredible amount of money in the support of research. Millions of dollars went into maintaining a large research campus, home of 1200 people. Everything was carefully managed. Programs and systems piled on top of each other, all dedicated to insuring the relevancy of research to market needs. It was a well-oiled machine with no chaos allowed. There was, however, one small problem. According to local lore, the preceding 10 years of carefully managed research had produced absolutely no new products. Safer products, prettier products. But nothing new.

Given their recent history, it would have been very difficult to admit that everything had begun with a mess. And as a matter of fact, it is quite unlikely that, given the way they were doing research, Fiberglas would ever have been discovered. Rather, that mass of messy glass fibers would have been swept up, and Dale Kleist directed to take some new approach. After all, you have to stick with the plan. As for the story of Dale Kleist? Better forget the whole thing.

Breakthrough Technology

A research department of Dupont retained my services to assist them in achieving what they called "Breakthrough Technology." Apparently they saw the market taking some interesting, and not necessarily beneficial turns, and thought they should get ahead of the game. In the course of this assignment, I met with the directors of the several local laboratories, and asked them whether they had ever had any breakthroughs, on the grounds that if it had ever happened before, we would at least know what we were looking for.

After some thought, they identified six events that qualified. To this day, I am not entirely sure that they actually were, as each seemed to involve stranger ways of twisting molecules, none of which did I understand. But the directors were satisfied, and that was all that counted.

In order to get some sense of the importance of these breakthroughs, I asked what would be the profitability of their product line had these breakthroughs *not* occurred, and all agreed that the current bottom line results would not be pleasing.

My next question was a little rougher. How many of these breakthroughs, I asked, occurred according to plan, with the right people doing the right thing at the appropriate time, and place, all within budget? There was a very long pause. And the answer, when it came, seemed more than a little embarrassing. NONE.

Then I went to the heart of the matter, and asked whether any of them had almost failed, not for technical reasons, but for other causes. There was an even longer pause, and eventually two candidates were named, but the reasons why remained unstated. I asked why, and a young manager answered almost sheepishly, "When we tried to manage them."

It struck me as both strange and sad that the only successes that these folks could identify occurred in spite of their best efforts to do what they were supposed to do. Further, failure loomed when they did their job.

Eventually the silence was broken by the same young manager who had last answered my question. He said, "Harrison, I think we are wasting a lot of our money and your time. All we have to do is do intentionally what it seems we are doing anyhow." I couldn't disagree with him, and that session marked the end of my assignment.

The simple truth of the matter was that these laboratory directors held a notion of research and innovation so predicated on orderly, programmed activity, that they simply couldn't recognize (without prodding) any significant event (read "breakthrough") which occurred outside of their expectations. Obviously they all "knew" that the breakthroughs had occurred, but their occurrence was treated as an aberrant phenomenon, an exception to the rule of ordered research. It turned out, of course, that the exception *was* the rule.

Forcing Mistakes To Happen

The story of the creation (invention) of Post-Its at 3M has been told so often as to have assumed a virtually unassailable position in current organizational mythology. The omni-present Post-It began with a terrible mistake, compounded by happenstance. The mistake was the creation of a glue that never quite set, and for an adhesive company, such a thing had better be forgotten. Then, happenstantially, a 3M employee, who sang in a local church choir, wished he had page marks that wouldn't fall out of his hymnal, but weren't permanently attached either. After all, a permanently gummed up hymnal would not be a thing of beauty, and you couldn't always sing the same hymns. As chance would have it, the two met, and the Post-It was born. Not without many trials and tribulations, to say nothing of total, initial corporate rejection, but it was born.

One of the young Turks who participated in this underground adventure, Tom Eckstein by name, was reflecting on their experience. Of the many things he learned and told us, one phrase sticks in my mind. "Learning," said Tom, "is forcing mistakes to happen, not just allowing them to happen." At the time,

this suggestion seemed to take my notion of the necessity of chaos for creativity just a little bit too far. But when I pressed Tom on the matter, he responded by reminding me how to build a good race car. You may start with the best available engine, but if you just leave it sitting in the garage, it won't get any better. Improvement comes only when you take the beast out on the track, drive right through the "red line," blow the engine, and then build a better one. For Tom, breakthrough learning occurs truly when you force mistakes to happen.

There is nothing approaching proof here, but in 10 years of asking, I have never found any person, presumably involved in innovative activities, who could remember any time that the breakthrough occurred according to plan. That may be faulty memory on their part, or faulty listening on mine. But that is the situation, and I believe it is significant.

Going to the Depths: The Ultimate Gift of Chaos

When chaos strikes, as it certainly shall, old things tend to pass away, and new things emerge, but in the Open Space between one and the other, there is a moment for seeing the really important things of life. While never comfortable, such a moment provides the essential opportunity for asking about meaning. In business, as in other aspects of living, we get so involved with the details that we tend to forget our purpose. Indeed, the details often become the purpose, and that is scarcely satisfying.

As the climax approached in the saga of Owens/Corning Fiberglas, senior executives found themselves in a maelstrom of activity. The only certainty was that nothing was certain, and they had to find some new way of doing business which would be acceptable to the banks, stockholders, customers, and employees. The name of the game was re-organize, not once, but quite literally dozens of times. Not that each organizational plan was published, but many were laid on the table as appropriate fit and function were sought. In the words of the chaos theorists, it was Periodic Doubling with a vengeance and total chaos was just around the corner.

In the midst of it all, there were periods of momentary respite, even silence, when it became possible, even mandatory, to ask the unaskable question: Why bother with it anyhow? What did it all mean? Asking such questions runs the risk of coming up with a troubling answer - there is no reason. And I suppose that can be beneficial.

On the other hand, the posing of the question can also create deeper opportunities. In the case of at least one OCF executive, I believe that occurred. After most of the dust had settled, this executive

reflected on the situation as follows:

"We re-organized so many times that more than occasionally, I couldn't remember who we were. But the remarkable thing is that through it all we never lost our Spirit. However, if we had lost that, I think we would have lost it all."

The true Spirit in an organization often (usually) gets buried in the daily round of important things to be done. For a period of time, that situation is of no consequence, for after all, the business is being accomplished. But there comes a time when the state of the Spirit becomes of more than incidental concern. The initial signs are usually quite small and very forgettable. People just don't seem as involved and excited as they were in the "old days." At first, such observations are passed off as the nostalgic remembrances of the old-timers. But then it seems that something deeper may be involved. Organizational relationships become frayed, tempers snap. Arguments and backbiting break out for no apparent reason. The "zinger" replaces genuine humor in the corporate conversation. And the great "They" emerges as the source of all evil. Unless it was all those poor secretaries and junior accountants, who having been relegated to the backroom and cut off from the excitement of the business, now are left with the "administrivia" (trivial minutia), which is only trivial when it is not done.

Eventually more serious signs of a sagging Spirit surface. Vision goes, innovation slows, creativity is visible mostly by its absence. Customers go unlistened to, and quality is only something to talk about. A sagging Spirit is a weak Spirit which inevitably produces a sagging bottom line. For the truth of the matter is, Spirit is the bottom line.

Coming to this realization, or remembering it, is never a pleasant experience. For it usually occurs in the midst of chaos. At precisely the moment when we need every ounce of spirited participation that we can muster, the spirit has apparently gone on vacation and off the job. That should come as no surprise, for nobody was taking care of the Spirit. Somehow, it just didn't seem to be an important thing to do.

In the good old days, back when things were normal, conversations about Spirit were best left to the more ethereal aspects of society (religion), while the rest of us got on with the important things of the moment, namely business. However, as transformation asserts itself as a continuing reality, concern for the spirit of this place (our place of business) is more than incidental. The chaos of the moment has captured our attention and provided the Open Space in which we may (must) consider what is really important, and how to take care of the truly important things.

CHAOS AND CHANGE - John Epps

We usually think of organisations as defined by a certain regularity of interaction so that it is predictable and structured and manageable. But even the most cursory glance discloses that the regularity of an organisation is like that of a fractal: it sets the outer limits to an infinite variety of complexity and change. Humans do not interact with impunity or predictability. We affect each other and are affected by each other, even within the most "structured" organisation. Organisations -- corporations, businesses, institutions -- ARE complex adaptive systems.

So what are the properties of those systems that science has discovered? There are seven that seem especially relevant:

1. Order emerges spontaneously from chaotic interactions;
2. Interaction among components affects the environment in which the interaction takes place which, in turn, re-affects the interaction;
3. Dynamical complex systems progress towards the "Edge of Chaos" at which point maximum performance of constituents takes place;
4. Complex adaptive systems exhibit "punctuated equilibrium," moving from emergence to stasis to rapid change;
5. At the "Edge of Chaos," the slightest perturbation occasions a massive change;
6. Attractors exhibit a powerful influence on the forces operating within a complex adaptive system;
7. Once a complex dynamical system has come apart, it cannot be reassembled using the original components: there is a "Humpty Dumpty Effect."

1: Order emerges spontaneously from chaotic interactions. To rephrase the insight in more organisational terms, "Rigid control over interaction is more likely to stifle than to enhance appropriate order." This observation is exactly opposite our common assumption about business, to wit, that you have to "get organised" before you can do anything. Not true. In fact, if you do, you probably won't get much done. The organisation emerges out of the activity, not vice versa. Most of the great companies emerged, literally grew, out of people getting things done that required cooperation and some coordination. The activity (we've named it "entrepreneurship") was primary, the organisation, secondary.

The implication for management might be to attend to the work itself rather than to making sure all the regulations are followed to the nth degree. In fact, attempting to control interaction and to make relations predictable is guaranteed to stifle productivity. That approach uses the organisation to set limits on business activity rather than to enhance it. Instead, the new science suggests that maximising interaction will generate order rather than the chaos it suggests.

The form of organisation that will genuinely enhance the operation has to emerge out of the business activity itself. Will it? Probably not in the form of a multi-layered hierarchy so commonplace in business today. Assistant deputy vice-presidents for operations probably don't emerge blow-dried and pin-striped out of thin air. What will emerge is certain functions that need regular attention and certain people willing and able to provide it. The rest is invented to ensure it keeps happening. But the ways of ensuring that are infinite, certainly not limited to our notions of a hierarchy.

This insight challenges our addiction to specific organisational forms and requires us to focus on the activity rather than to its form.

2: Interaction among components affects the environment in which the interaction takes place which, in turn, re-affects the interaction. In more familiar terms for management, "The business climate" is determined by the amount and quality of interaction within its organisations, and it then affects them. This also is a contradiction to popular assumptions which suggest that a company must adapt to its environment, i.e., in a very hierarchical society, business must adopt a hierarchical style.

But a company is not a victim of its circumstances; in fact, it is often in the best position to make changes. The link between the company and the "business environment" is a two-way street. It is not just that the company mirrors the larger environment; the company **forms** that environment by its activities.

The business environment extends beyond the borders of the company. The influences of a company reach out to the entire society. When an organisation has confrontational relations among management and labour, then expect to see those tensions manifest in the community. Where teamwork dominates within, then expect to see similar relations outside. And similarly, when, for example, racial tensions dominate a community, you may expect to find them mirrored in the workplace.

The company may offer a leverage point for addressing some social ills. Because it is a relatively restricted society, it may be able to enact and enforce rules (like racial teamwork, or non-smoking, or anti-pollution) that would be unpopular outside. When this happens, the surrounding society feels the impact. The organisation is leading society and generating values that will have their effect.

Responsibilities of an organisation, then, are not limited to its members (or shareholders), but reach out to its larger social setting. On that basis, we have to reject Milton Friedman's notion that the sole moral responsibility of a company is to make money for its

shareholders, and so to provide a benefit to the society. That might be an arguable position if the impact of a company on its environment were limited to providing jobs. But since even the internal operation of an organisation affects its surrounding society, a company must take account of the environment it is creating.

Any changes the company makes are reflected in the environment which then perpetuates the alterations, i.e., generates a certain momentum in the direction of the change. It is easier the second time than the first.

3: Dynamical complex systems progress towards the "Edge of Chaos" at which point maximum performance of constituents takes place. In more practical terms, "People move towards working to their maximum potential." We often speak of increasing productivity and reducing the slack in organisations. There seems to be an in-built move in that direction. Despite appearances to the contrary, making improvements seems to be the natural direction of an organisation. These improvements are often measured by increased productivity and maximum use of resources.

But there is a limit beyond which disaster - or at least chaos - looms. When people or machines reach their capacity, it may not be obvious, but it is delicate. It is a "straw that broke the camel's back" situation in which nerves are stretched to the limit and stress is high. But work is getting done. Some describe this as "peak performance" and aspire to it as a goal. Others take a dimmer view of its value, having perceived the risks involved. However risky, it seems to be the direction in which organisations move. In trying to avoid these risks, managers typically judge 20% slack to be optimal. But the systems themselves push on towards maximising productivity, i.e., towards the "edge of chaos."

4: Complex adaptive systems exhibit "punctuated equilibrium," moving from emergence to stasis to rapid change. To put it differently, "Companies do not achieve permanent stability; stability is a phase in the overall organisational development." We should not expect enduring security in a company. Even though we work towards creating a certain permanence, it will not last. In consequence of the push for improvements, companies are always on the move. Stability is an illusion, and those who fault *In Search of Excellence* because its case studies are no longer "excellent" miss the point. Organisations experience "punctuated equilibrium."

Companies rise to the breaking point, go through chaos and emerge in a new form which then proceeds with the journey all over again. We may work

for the "answers" and formulas that ensure continuity and stability, and that is part of the grand design that keeps dynamism active. But there seems to be no possibility of permanent peak performance, only a permanent process of moving towards it. This phenomenon has been noted in reference to "business cycles." But the image of a cycle is too pat. The dynamism is much less predictable and much more dynamic than a simple cycle. Although over long enough time it is possible to observe a pattern in the movement of a company, punctuated equilibrium is quite unpredictable.

5 & 6: At the "Edge of Chaos," the slightest perturbation occasions a massive change; Attractors exhibit a powerful influence on the forces operating within a complex adaptive system. It would seem from these principles that the best strategy for occasioning lasting change in organisations is to put into place "attractors" for the new direction, then to generate some "perturbations."

Many features of an organisation can function as "attractors," that is, as factors which prevent straying too far from accepted norms. The business itself is one: an insurance company is not likely to start manufacturing pharmaceutical, however great its desire for diversification. Likewise, in some cases the company has been the attractor. Not just customers, but also employees can be subject to "brand loyalty." This particular attractor is less effective than in the past, partly because of recent recessionary layoffs and partly because people are more mobile than in the past. Leaders as attractors are the most sought-after and also the most overrated. Yes, charismatic leadership is, well, charismatic. But it is rare by definition, and vulnerable to the disillusionment that invariably accompanies excessive reliance on individuals. Other attractors may be star performers, mission statements, corporate cultures, benefits packages ("golden handcuffs"), recognition practices, or even company symbols.

Perturbations may also be of various sorts. They may include sudden loss of market share, industry innovations, illness, accidents, industrial actions, or even a simple breakdown of communications. It doesn't take much to perturb a high-performing system.

I think both attractors and perturbations are necessary for substantial change to occur. Attractors alone will not attract very much. A star performer or a charismatic leader or a model team or a demonstration department are capable of functioning as attractors; but alone, they are mere flukes of the system - admirable, certainly, but not replicable. People may elevate them, but will have no particular urge to emulate them.

Likewise, perturbations alone won't perturb very much. They're just another set of problems to be dealt with in the same old way. After all, corporations are accustomed to dealing with problems; and the inadequacy of their solutions often will not appear for years. Furthermore, if the perturbations are urgent, in the absence of attractors, there are no other models to follow.

With both, the crisis forces people to take account of the successful segments of the organisation and to copy them. As one prominent Malaysian manager who is known as a turnaround artist puts it, "What people need to make a change is a *symbol* and an *excuse!*"

7: Once a complex dynamical system has come apart, it cannot be reassembled using the original components: there is a "Humpty Dumpty Effect." We all long for "the Good Old Days," but it is a futile effort. The past cannot be recreated, however grand it may have been. Organisations are on a fast track into the future. Period.

This does not mean that they fall apart. New elements can come into play and lead the system to rejuvenation. It is only the same parts that cannot be rearranged as before. So rather than trying to correct past errors, we can look for innovations to begin the journey over again.

Conclusion

These insights from new scientific breakthroughs do not warrant panic. One need not become a chaos

practitioner in order to manage effectively. Though Tom Peters talks of "Liberation Management" and sometimes sounds like a managerial terrorist, even he does not really mean destroying organisations in hopes that a phoenix will spontaneously emerge from the ashes.

Rather, the new science suggests that we place the organisation in its proper perspective as a secondary reality, secondary to the primary purpose of the company, i.e., providing goods and services to customers. The organisation needs first and foremost to support that purpose.

It seems obvious, but organisations have an insidious capacity to turn inward and to exist for supporting themselves. Power and position are protected; politics becomes a consuming activity; back-biting and brown-nosing become the norm instead of the exception; favoritism dominates decisions; and people get disillusioned. Returning to the proper perspective means getting rid of anything in the company that does not support the business.

The new science also suggests working towards creating "attractors" or role models in the organisation. Whereas a manager may not be able to reorganise the entire structure, that approach may not be effective anyway. Placing people in new reporting configurations may not change anything about the way things operate. But creating numerous high-profile role models will beckon people to new levels of achievement.

(V. S. Mahesh - continued from page 11)

standards, select and develop employees, ask and listen to employees (about their problems and about what they want to say about customer dissatisfaction and create service delivery teams.

3. They form the company into alignment such that everyone shares the purpose of creating positive experiences for the customers, systems are arranged to support what is important to customers and provide the leadership that routinely and visibly enables employed to act on behalf of customers.

Boundarylessness of Phase IV: Customer Empowerment

As if this were not complicated enough to manage, the global customer has made matters even more difficult by moving into Phase IV of the evolving relationship with his supplier. He has begun to demand a more involved relationship whereby the supplier's assurance is expected to extend into the

formation of what GE's Jack Welch describes a boundaryless relationship. The vendor - value adding company - customer relationship has to now be viewed as a seamless organism with leaky margins, an organism that has a synergistic, empowering relationship between its interdependent members. Customer empowerment becomes the new focus, as that is what he demands in his relationship with his supplier.

"Every man is more than just himself; he also represents the unique, the very special and always significant and remarkable point at which the world's phenomena intersect, only once in this way and never again."

-Herman Hesse

CREATIVE CAUSALITY - ALIVENESS -

"I can't tell you what gives true intensity but I know it when I find it." - Catherine Anne Porter

What is creative causality at essence, at its simplest? If creative process is the "basic building block" of living reality, how might we best define it?

Unfortunately, as nice as it would be, having a simple definition is not in the cards. To define is to say: there is this, and then there is that. But with creative causality there is no "that;" there is nothing which is not an aspect of it.

A precisely parallel, though usually unacknowledged definitional pickle sits at the center of thought in the biological sciences. It makes a nice jumping off point for our explorings here.

Biology is the study of life. But ask a biologist what life is and you will get either a sheepish shrug or a tangle of tautology. Neither yardsticks nor fancy transducers are of any use in measuring it. Biologists find themselves in the curious position of asserting that all else must be understood in relation to life, but that life cannot be either defined or measured.

Is life then some rare and elusive creature? Obviously this is not the problem; life is everywhere we look. The problem is simply that our usual ways of addressing life are inappropriate to the task. In thinking of something as "having" life, we have created a causal separation between life and thing which is alive. And just as the separation of matter and energy locks us into a mechanistic world, so when we demand an objective definition of life, we are left only with what life is not. In our brow-furrowed search for truth, this elusiveness might easily seem some perverse trick, but it is hardly that. We are simply witnessing nature's incorruptibility to the whole.

So if we want a full picture, we must do more than just define. We must as well explore - play off creative causality's different facets, immerse ourselves in it as experience. We will do this several ways here, then take the kernel of understanding that results and let it be challenged, expanded, and brought to maturity.

We can open one very helpful window into understanding reality as creative by taking some time with that critical question of just what we are going to call "truth" in times ahead. If isolated form-defined arbiters will no longer suffice - roles in relationship, education as facts and skills, the accumulation of goods as the measure of progress - what is it then that we are wanting to measure?

Our usual ways of thinking are not going to be able to help us. They are part and parcel of the same reality as our form-defined answers. Without a larger approach to understanding, the best we can do is stand by confused, and watch as what has worked

before becomes more and more the problem rather than the solution.

From within a form-defined reality, it is hard to understand the loss of familiar truths as anything but chaos, a loss of order. A creative perspective offers a new way of understanding order, and with this a larger vantage from which to measure truth. From here, movement beyond truth as form reveals itself, in its timelessness, as the only way to have order. It does not reject form, but simply places it within a larger picture.

What are we wanting to measure? Put in creative terms, we are looking for a measure that concerns itself not just with the formed products of creation, but with those products in their living contexts. We are wanting to measure the degree to which something in fact makes existence, in whatever its sphere, more fully alive. We are wanting to measure the larger dynamic, the health and integrity of the creative process as a whole.

To do this we must leave behind the idea that truth is fact, an "objective" measure. Here truth becomes a much more dynamic and relativistic kind of quantity.

Actually, that living truth is larger than objectivity is not that hard to see; indeed, it is quite obvious if we examine our lives with honesty. While we usually have ideas about why we do things, they are rarely, in fact, sufficient to explain our actions. Pressed for the real bottom line, we are likely to end up, like the biologist trying to define life, in a maze of redundant verbiage. In the end, the best we can do is throw up our hands and say with a mixture of wonder and embarrassment: "Well, when you know, you know . . . When something tastes good, it tastes good. . ."

This need to step beyond objectivity as what defines truth is a central theme in emerging thought in the hard sciences. To quote physicist John Wheeler, there is nothing more important about recent observations than that "(they) destroy the concept of the world as 'sitting out there,' with the observer safely separated from it by a 20 centimeter slab of glass." In the words of Werner Heisenberg, "What we observe is not nature itself, but nature exposed to our method of questioning . . . Natural science does not simply describe and explain nature, it is part of the interplay between nature and ourselves."

This is not to suggest that reality is in fact "just subjective." In saying that living truth is larger than objectivity, I am in no way taking sides in the battle of science and poetry. I am simply asserting that intelligence in action is ultimately a function of the whole of what we are. Truth in the big picture is an inherently participatory measure: it is a measure not

Dr. Charles Johnston, M.D.

just of things, but of relationships between things, and one of the key relationships is that between ourselves and what we are measuring.

While we can't define a larger referent in terms of other things, or measure it objectively, there is certainly nothing to keep us from giving it a name and defining it functionally. That we have a word, I call it simply **aliveness**. Defined in creative terms, it is the amount of creation, the amount of "living reality," embodied by a particular act or situation.

Aliveness, just by what it is, confronts the key issues that now face us. At the personal level, the pivotal questions of our time concern purpose and identity: who are we - our roles, our beliefs, what we own, the images we get from media, parents and peers? Aliveness is a direct statement about, and measure of, purpose. We feel purpose and "are" someone precisely to the degree we risk living from, and in relation to, what makes us most alive. Culturally, what we are wanting to do in each sphere is find ways of thinking and measuring that are sensitive to the place of that sphere in the larger living whole. From here, there becomes no more important task

than learning to ask together the relative aliveness that different social options offer us.

In one sense, making the creative our referent is a radically new kind of notion; in another the creative is what we have been measuring all along. Each of our previous arbiters - the voices of nature spirits, moral canons, the laws of science - were also measures of the edge of creation. The difference with a creatively-based perspective is simply that now, in measuring creation, we are being conscious of the fact that this indeed is what we are measuring. We have moved far enough into creation that we are able to be not just creators of culture, but beings conscious of, and in, this process of creation.

By making a notion such as aliveness our referent, our thinking, in whatever sphere we apply it, gains a radically new kind of precision. This is not because it is now more exact - in a creative reality truth is always partial, never fully objective and always in process - but because, in taking what makes something alive as basic, we are measuring what in fact we need to measure.

(Semco - continued from page 23)

business, not the environmental business," we might never have pursued that solution to the problem. As it was, we addressed the company's overall need, jettisoned the pump, and when it was all over, we'd also acquired a small environmental consulting firm to flesh out our own limited expertise. More recently, we've also entered into a joint venture with one of the world's leading environmental consulting groups. Today, the division represents about 14% to 15% of our total business and is growing at a rate of 30% to 40% per year.

The lesson this story teaches me is about the negative value of structure. Structure creates hierarchy, and hierarchy creates constraint. We have not utterly abandoned all control, but the old pyramidal hierarchy is simply unable to make leaps of insight, technology, and innovation. Within their own industries, pyramidal hierarchies can generate only incremental change.

What goes for planning goes equally for culture, vision, and responsibility. We find that fragmentation is strength in all these areas. Semco has no corporate credo, for example, and no mission statement. An articulation of company values or vision is just a photograph of the company as it is, or wants to be, at one given moment. Snapshots of this kind seem to hold some companies together, but they are terribly static devices. No one can impose corporate consciousness from above. It moves and shifts with every day and every worker. Like planning, vision at its best is dynamic and dispersed.

At Semco, so is responsibility. We have little control, even less organization, and no conventional discipline at all. People come and go whenever they like; many set their own compensation; divisions and units perpetuate themselves however they can; satellite companies work on our machines in our factories for us and others in a great confusion of activity; the system tying it all together is painfully loose - and this is *manufacturing*, much of it assembly-line manufacturing.

When I describe Semco to other manufacturers, they laugh. "What do you make," they ask me, "beads?" And I say, "No, among other things, We make rocket-fuel propellant mixers for satellites." And they say, "That's not possible." And I say, "Nevertheless. . ."

The point is simple but perhaps not obvious. Semco has abandoned a great many traditional business practices. Instead, we use minimal hierarchies, ad hoc structures, self-control, and the discipline of our own community marketplace of jobs and responsibilities to achieve high quality, on-time performance. Does it make me feel that I have given up power and governance? You bet it does. But do I have more sleepless nights than the manufacturer who runs his business with an iron hand and whose employees leave their troubles in his lap every night? I think I probably sleep better. I know I sleep well.

SEMCO CASE STUDY - Ricardo Semler

I own a manufacturing company in Brazil called Semco, about which I can report the following curious fact: no one in the company really knows how many people we employ. When we walk through our manufacturing plants, we rarely even know who works for us. Some of the people in the factory are full-time Semco employees; some work for us part-time; some work for themselves and supply Semco with components or services; some work for themselves under contract to outside companies (even Semco's competitors); and some of them work for each other. We could decide to find out which is which and who is who but for two good reasons we never bother. First, the employment and contractual relationships are so complex that describing them all would take too much time and trouble. Second, we think it's all useless information.

Semco has long been a laboratory for unusual employment and management practices. What we're now engaged in might be called a radical experiment in unsupervised, in-house, company-supported satellite production of goods and services for sale to Semco itself and to other manufacturers by employees, part-time employees, ex-employees, and people who have never had any connection with Semco whatsoever (but who work on our premises and on our equipment). This is not at all the same thing as outsourcing. This is a borderless system of short-term, noncontractual task assignment often using Semco's own fixed assets, some of it in Semco plants and some dispersed at a dozen sites that don't belong to the company.

This satellite program, as we call it, sounds chaotic, can be frustrating, and is in some ways uncontrollable. It requires daily leaps of faith. It has serious implications for corporate culture. It has destroyed any semblance of corporate security. And, for the three years it has been in place, it seems to be working very well.

Ever since I took over the company 12 years ago, Semco has been unorthodox in a variety of ways. I believe in responsibility but not in pyramidal hierarchy. I think that strategic planning and vision are often barriers to success. I dispute the value of growth. I don't think a company's success can be measured in numbers, since numbers ignore what the end user really thinks of the product and what the people who produce it really think of the company. I question the supremacy of talent, too much of which is as bad as too little. I'm not sure I believe that control is either expedient or desirable.

I don't govern Semco - I own the capital, not the company - but on taking over from my father, I did try to reconstruct the company so that Semco could govern itself on the basis of three values: employee participation, profit sharing, and open information systems. We've introduced idiosyncratic features

like factory-floor flextime, self-set salaries, a rotating CEO-ship, and, from top to bottom - from the owner to the newest, greenest maintenance person - only three levels of hierarchy.

You might say that what we practice is an extreme form of common sense: "common" because there's nothing we do that thousands of other people didn't think of ages ago, "extreme" because we actually do it. Another way of looking at Semco is to say that we treat our employees like responsible adults. We never assume that they will take advantage of us or our rules (or our lack of rules); we always assume they will do their level best to achieve results beneficial to the company, the customer, their colleagues, and themselves. Participation gives people control of their work, profit sharing gives them a reason to do it better, information tells them what's working and what isn't.

With rare exceptions, this approach has been successful. We've had two or three strikes, but they were quickly settled, especially once the strikers saw that we would neither lock them out of the plant nor suspend their benefits during the work stoppage. (They were able to plan ongoing strike tactics while eating lunch in the company cafeteria.) We've had a few employees take wholesale advantage of our open stockrooms and trusting atmosphere, but we were lucky enough to find and prosecute them without putting in place a lot of insulting watchdog procedures for the nine out of ten who are honest. We've seen a few cases of greed when people set their own salaries too high. We've tried a few experiments that we later backed away from. We've had to accept occasional democratic decisions that management disliked, but we learned to swallow hard and live with them.

On the whole, as I say, our approach has worked. Loyalty is high, quality is excellent, and sales and profits are surprisingly good for a manufacturing company in one of the world's most lunatic business environments. But in Brazil no state of the economy is permanent. Few last long enough to be called temporary. Surviving the ups and downs of the Brazilian economy is a little like riding a Brahma bull. It is even more like riding a Brahma bull in an earthquake. Some of the worst jolts come not from the bull but the landscape.

In 1990, the jolt that sent us into our present experiment came from the minister of finance, who, believing Brazil's inflation was simply the result of too much money being unused for too much speculation, seized 80% of the country's cash and introduced an extended period of economic bedlam. Employers could not meet payrolls. Consumer spending vanished. Business spending shuddered to a halt. Bankruptcies soared. Industrial output plummeted.

At Semco, we had several months of zero sales.

After all, what company was going to buy machinery with a ten-month delivery when it didn't know if it could last out the week? Worse yet, back orders were canceled, or we found that our customers had gone out of business.

We cut costs. We organized workers into teams and sent them out to sell replacement parts directly to ships and restaurants. We cut down on coffee breaks, locked up the copiers, canceled orders for new uniforms, turned off all the lights we could find, scrimped on telephone calls. None of it was enough, and anyway, I don't really believe in cost-cutting. I like to think we don't waste money even when we've got it. And who can say how many sales we lose when we play Scrooge with the travel money or penny-pinch the phone bills?

Finally, we called the workers together in groups of 100 and discussed what we should do. They came up with lots of ideas, and we tried them without success until we reached a point where no one had anything else to propose and neither did we - except for two unhappy alternatives: cut pay or cut workforce. We thought we could avoid layoffs by cutting salaries 30% across the board until business picked up again. But a lot of people were already struggling with bills and rents and mortgages and wanted us to start laying people off instead, so that those who stayed could at least survive. We went on searching desperately for a third way out.

And then suddenly the shop-floor committee came to us and said, "Okay, we'll take a 30% pay cut, but on three conditions." The first was that we increase their profit sharing by 15%, from just under 24% to just under 39%, until they got back up to their former salary levels. The second was that management take a 40% pay cut. And the third was that a member of the union committee would co-sign every check we wrote; because the workers wanted to be absolutely certain that their sacrifice would be worthwhile, they wanted to oversee each and every expenditure.

Well, at that moment, we had no profits to share, so there was nothing for us to lose and everything to gain. And by the second month, we were actually covering expenses. In their drive to save, the workers took on more and more of the former contract work. They did security and cleaning, drove trucks, even cooked the food in the cafeteria. No expense went unchallenged, and for four or five months, we made a small profit in the worst economic times any of us had ever seen.

But we kept on looking for a better solution. In the first place, pure cost reduction has to be a temporary measure. What about training, research, new product development, and all the other seemingly peripheral activities that produce profits over the long haul? Those weren't areas we could abdicate.

And what about those checks? The dual-signature scheme was working for the moment, but management couldn't permanently yield its power of the purse to a person chosen by the union without management input or approval.

Yet the explosion of energy, inventiveness, and flexibility we'd been witnessing was hugely attractive. And when we then added in several other factors - the need to cut our standing labor costs, the demands of Brazilian labor law - what began taking shape was a radically new principle of organization.

The Thinkodrome at the Free-for-All Corporation

Semco's sales had gradually increased again, and we were making enough money to restore salaries to where they had been before the 30% cut. We took back our check-signing privileges. We were surviving in a crisis economy, but only just, and we began to face the fact that we had to cut our permanent staff and contract more of our work. We looked hard for a way of doing it without destroying the support system that Semco people lived on. It was here that a free-form structure called Nucleus of Technological Innovation (NTI) suggested a solution. In the mid-80s three engineers proposed a plan to drop their guaranteed salaries sharply down, but share in the proceeds of their inventions, innovations and improvements, for which they would receive a percentage of any savings they introduced. This group uncorked such an array of inventions, changes, and refinements that by 1990, we'd begun to feel that we'd like to NTI the entire company, liberate more creativity, tie compensation even more specifically to performance, loosen the ties that bound us all together, and scramble our overall structure.

Instead of giving contracts out to strangers, we decided we could just as well give contracts to our own employees. We would encourage them to leave the Semco payroll and start their own satellite enterprises, doing work, at least initially, for Semco. Like NTI, these satellites could stay under our larger umbrella by leasing our machines, even working in our plant. Like NTI, they could also do work for other companies, again on our machines and in our factories. Like NTI, their compensation would take a variety of forms - contract payment, royalties, commissions, profit sharing, piecework, whatever they could think up that we both could live with. And like NTI, they could have some beginning guarantees. In particular, we would offer all of them some contract work to cut their teeth on, and we would defer the lease payments on all equipment and space for two full years.

This satellite program would have obvious advantages for Semco. We could reduce our payroll, cut inventory costs by spreading out raw materials and spare parts among our new suppliers, and yet

enjoy the advantage of having subcontractors who knew our business and the idiosyncrasies of our company and our customers. Moreover, we would pick up the benefit of entrepreneurial motivation. Because of profit sharing, our employees already worked evenings and weekends when necessary, without any prompting from management. Being in business for themselves ought to raise that sense of involvement higher still.

But what in heaven's name were the advantages for our workers, who'd be giving up a secure nest at Semco for the risks of small business? And in the midst of economic bedlam? To begin with, of course, they all had the chance to make many times what they could earn at Semco - if the economy straightened out. Of course that was a big *if*. And should the recession persist, they might make less. But only assuming they continued to have a job at Semco, which was becoming an even bigger *if* with every day that passed. The fact was, they had distressingly few choices. And so did we.

We eased the transition in every way we could. We created a team of executives to teach cost control, pricing, maintenance, inventory management. To provide seed money, we gave people layoff payments on top of severance pay and all the other legally required benefits. No one had to start a satellite. Some took their severance and left. Some managed to stay on the payroll for months or for good. But despite the difficulties, satellites sprang up quickly. White-collar workers were the first. Our tax accountants, human resource staffers, and computer programmers all went off on their own. Then blue-collar workers in food service and refrigerations systems followed suit.

Today, about half the manufacturing we once did in-house has gone to satellites, and we think we can farm out another 10% to 20% in the coming years. Best of all, to this day only one satellite has failed. Some are expanding and looking for partners. Some satellite workers have been rehired by the company, and a few have moved repeatedly back and forth between satellite and employee status as needs - theirs and ours - shifted. Some satellites have broadened their scope so greatly that most of their time - often right on our premises, remember - is spent with customers and production partners who have no other connection with Semco whatsoever.

In 1990, Semco had about 500 employees. Today, we have about 200, plus at least that many in our satellites, with another 50 or 60 people who work for a satellite and also work for us part-time. We have employees with fixed salaries. We have employees with variable salaries made up of royalties or bonuses based on self-set objectives like cash flow, sales, profits, production units, or any one of a dozen

other measures. We have employees with both fixed and variable salaries. All our employees share in our profits.

On the satellite side, compensation may take the form of a fixed fee, an hourly stipend, a percentage of increased sales, a finder's fee, an honorarium, a retainer converting to an advance converting to a royalty, or even a simple win-or-lose commission.

In one of our plants, we've set aside a large room full of desks and computers to give everyone within our company sphere and, for all we know, a variety of guests and visitors from well beyond it, a place to sit and plan and ask questions and solve problems. We call it the Thinkodrome, and it's a busy, quiet place. That Semco survives at all we owe in large part to surrounding ourselves with people who look at everything we do and ask why we can't do it better or cheaper or faster or in some entirely novel way.

Hunting the Free Market

Our ancestors laid out the ground rules of human teamwork several thousand generations ago, and they go like this: the woman and the keen eyesight is Chief Mammoth Finder, the guy with the strong arm and the long spear is Head Mammoth Killer, and the tribal elder with the special feel for herbs and spices gets to be Grand Mammoth Cook. For now. All these positions are temporary and to some extent self-selecting. If you want to be Chief Finder, go find some mammoths and the job is probably yours. But since everyone's well-being depends on your success, your status is also highly situational. Fail to find, and the job will pass swiftly and naturally to someone else.

Generally speaking, Semco's production process works along similar lines, both for satellite operations and for the work we do in-house. All work, including some aspects of management, goes to people with proven track records who want the jobs and can compete for them successfully. Satellite as well as in-house business units rise and fall on their merits along - at least in theory.

Control...

At the center of Semco is a group of six so-called counselors, and all of us take six-month turns as acting CEO. We also do six-month as opposed to yearly budgeting, because an annual budget tempts managers to postpone unpleasant decisions to the third and fourth quarters.

The budget cycles are January to June and July to December, but the CEO cycles begin in March and September. In other words, we avoid what other companies and shareholders think they want - responsibility nailed down to a single man or woman. Our CEOs don't wear themselves out trying to meet quarterly financial goals, and there's no one person to blame if the company goes down the drain. When

financial performance is one person's problem, then everyone else can relax. In our system, no one can relax. You get to pass on the baton, but it comes back again two-and-a-half years later.

Once consequence of this system is that we need to keep each other well-informed, which we do at regular weekly divisional meetings and biweekly interdivisional meetings. All these meetings are open and optional, and those who attend make decisions that those who don't may simply have to live with.

This self-selecting element in decision making is another consequence of the deliberate fragmentation of responsibility. Like our predecessors the mammoth hunters, the people who get responsibility are the people who seek it out and meet it. In fact, the actual, ad hoc control structure we work with from day to day builds on this principle and on two others that, together, create a kind of invisible order from the apparent chaos that characterizes the Semco environment.

The first principle holds that information is the ultimate source of virtually all power. For this reason, we try to make all of it available to everyone. All meetings are open. Designs and specifications are shared. The company's books are open for inspection by employees and for auditing by their unions. In short, we try to undercut and so eliminate the process of filtering and negotiating information that goes on in so many corporations. Meetings are chaired by the person who knows most about the subject under discussion rather than by the person who has the highest declared status or apparent income.

The second principle is that the responsibility for any task belongs to the person who claims it.

The third is that profit sharing for employees and success-oriented compensation for satellite enterprises will spread responsibility across the Semco map. With income and security at risk - and with information readily available - people try hard to stay aware of everyone else's performance.

... And Lack of Control

Semco needs to maintain in-house just a limited number of functions - top management, applications engineering, some R & D, and some high-tech, capital-intensive skills that we do exceptionally well. We don't care how everything else gets done, whether by contractors or subcontractors, satellites or nonsatellites, former employees or total strangers or by the very people who do the same thing for our competition. None of that matters.

When we started, people warned me that all sorts of information about our company would get into the wrong hands, that we had to protect ourselves. I heard the same argument when we started distribut-

ing profit-and-loss statements to our employees. But it's a waste of time to worry about leaks.

First of all, we no longer know whose the wrong hands are. The competition used to be a company a mile away that made the same products we did, but now the competition comes from companies we've never heard of in Taiwan and Finland. Second, I've never seen a company overtake another because it had seen its 10K or even the specifications for a value. Third, we want to be a moving target. We don't care about yesterday's information or last year's oil pump, which in any case the competition can buy, take apart, and study to its heart's content.

Finally, we don't think people give out much information anyway. I know. I've tried on numerous occasions to get a copy of, let's say, a pamphlet some company passed out to 1,000 employees, and nobody can lay their hands on one. The Chinese printed hundreds of millions of copies of Chairman Mao's Little Red Book, and still they're as rare as hen's teeth.

People also warned me about the loss of central goal setting and control. I admit that the lack of control is often hard to live with. But let's not compare Semco's circumstances with some ideal world where managers actually get to decide what people will do and when and how they'll do it. We have limited control over the day-to-day behavior of the people who make most of our components, but so do companies that do all their work in-house. At least none of our satellite people work nine to five and leave their problems at the plant when they go home at night - which means leaving them to management. WE have motivation and responsibility working on our side. Our satellite workers are in business for themselves, so they'll work all night to complete an order to specification and on time. And if the order is late or fails to meet our quality standards, then we're free to give the next order to someone else. We can forget the witch-hunt and all the grief that goes into firing people or not promoting them.

As for planning and the control it presupposes, I think good planning is always situational. Thinking about the future is a useful, necessary exercise, but translating such conjecture into "Strategic Planning" is worse than useless. It's an actual barrier to survival. Strategic planning leads us to make things happen that fly full in the face of reality and opportunity.

For example, Semco is today in the environmental consulting business, which I could not have imagined five years ago. Our gadfly NTI group was looking at one customer's need for an environmentally active pump - a pump that would shred and process the material it moved - and saw that the company could reengineer its production line to do away with the pump altogether. Had we said, "We're in the pump

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