World Business Academy Perspectives Editor's note: *This article describes a new organizational form that carries within it the seeds of a new organizational culture--a culture that might well spell the difference between a smooth, orderly transition to a salubrious and sustainable global society, and the chaos and anarchy that some see in our near-term future. I believe this is one of the most important articles we have published to date.*

--Willis Harman

**THE CHAORDIC ORGANIZATION:
OUT OF CONTROL AND INTO ORDER**

by Dee W. Hock

Dee Hock is founder and CEO Emeritus of VISA USA and VISA International. He has lectured throughout the world on innovation, quality, and the changing nature of commercial, social, and political organizations. He is one of thirty living Laureates of the Business Hall of Fame.

It is almost impossible these days to read a business article or participate in a seminar without stumbling over such popularities as "learning organizations," "empowerment," or "reengineering." It is equally common to encounter in the scientific community the study of complex adaptive systems, commonly referred to as "complexity." I find it cumbersome to either think or write about fundamental principles underlying both physical systems and human institutions in the terms unique to either business or science. So after grubbing in various lexicons for a suitable word to describe the kind of organization discussed here, it seemed simpler to construct one. Since the knowledge pursued is believed by scientists to lie on the knife's edge between chaos and order, the first syllable of each was borrowed and Cha–ord (kay–ord) emerged.

> By Chaord, I mean any self–organizing, adaptive, non-linear, complex system, whether physical, biological, or social, the behaviour of which exhibits characteristics of both order and chaos or, loosely translated to business terminology, cooperation and competition.

But first, let me introduce a particularly rich, robust chaord and then relate it to the principles presented here.

The VISA card had its genesis four decades ago as a California service of the Bank of America called BankAmericard. In response, five California banks jointly launched MasterCharge in 1966. In turn, Bank of America franchised its service. Other large banks quickly launched proprietary cards and offered franchises. Action and reaction were soon rampant. Bank after bank issued cards with little regard for customer qualifications, while television screamed such blather as, "The card you won't go berserk with," a challenge the public accepted with enthusiasm.

By 1968, the infant industry was out of control. Operating, credit, and fraud losses were believed to be in the tens of millions of dollars. Life magazine ran a cover story depicting banks as Icarus flying to the sun on wings of plastic above a red sea labelled losses, into which banks were soon to plunge, wings melted, and drown. In the midst of the mess, Bank of America called a meeting of its licensees to discuss operating problems. The meeting quickly disintegrated into acrimonious argument. In desperation, the bank proposed forming a committee of seven, of which I was one, to propose solutions to the more critical problems, which the bank would then attempt to implement. How I came to be there has relevance, so a bit of biography.

I was born, the youngest of six, to parents with but eight years of schooling in a small mountain community. At an age too young for memory of the source, came a passion for reading and the necessity to pursue it unencumbered by guide or mentor. With school and church, came awareness of the chasm between how institutions professed to function and how they actually did, along with a stubborn refusal to accept orthodox ideas, be persuaded by authoritarian means, or seek acceptance by conformity.

A dean at a local college put me in the way of the classics and awareness of both the power and limitations of the human mind. At the same time, conflict with that institution inflamed a growing preoccupation with the paradoxes inherent in organizations and the people who hold power within them. Thus at twenty, newly married, eager to learn but averse to being taught, absurdly idealistic and naive, emerged the ultimate Lamb hunting the Lion of life. The Lion was quick to pounce. The Lamb fell into a job at a small, floundering branch of a consumer finance company. Six months later the manager departed and his lot fell to the Lamb. Protected by remoteness, anonymity, and insignificance, four people, whose average age was twenty, ignored company commandments and did things as conditions, common sense, and ingenuity combined to suggest.

Within two years, the office led the company in growth and profit. Anonymity was gone and the inexorable fists of hierarchical power and orthodoxy were pounding for conformity. The Lamb escaped to open a new office in a small Oregon town. There, the pattern repeated itself. A year and a half later the Lion and the Lamb came face to face in the corporate headquarters––the Lamb responsible for nationwide marketing and determined to change the company, the company determined to control the Lamb. It was simply no contest. Within the year, no longer a Lamb but no less a Sheep and badly mauled, it was out the door much wiser in the ways of linear, hierarchical systems and the people who hold power within them.

We can skip details of the next fifteen years of guerrilla warfare between a Sheep irrevocably committed to iconoclastic, innovative methods and the success they brought, and three different command-and-control organizations; each time the Sheep determined to change the company, the company to corral the Sheep, and with the same inevitable result. Just another hunk of unemployed mutton, bruised and bleeding on the sidewalk. (As an aside, I am delighted to inform you those companies no longer exist.)

Throughout the years, the Sheep continued to read avariciously, including much organizational theory, economics, science, and philosophy. The preoccupation with organizations and the people who hold power within them became an obsession.

> *Why, the Sheep asked time and time again, are organizations, whether governmental, commercial, educational or social, increasingly unable to manage their affairs? Why are individuals increasingly alienated from the organizations of which they are part? Why are commerce and society increasingly in disarray?*

Today, it doesn't take much intelligence to realize we are in the midst of a global epidemic of institutional failure. Even then, the signs were everywhere if one cared to look. It has much to do with compression of time and events. Some of you may recall the days when a check might take a couple of weeks to find its way through the banking system. It was called "float" and many used it to advantage.

Today we are all aware of the incredible speed and volatility with which money moves through the economy and the profound effect it has on society. However, we overlook vastly more important reductions of float, such as the disappearance of information float.

As the futurist James Burke pointed out, it took centuries for information about the smelting of ore to cross a single continent and bring about the Iron Age. During the time of sailing ships, it took years for that which was known to become that which was shared. When man stepped onto the moon, it was known and seen in every corner of the globe 1.4 seconds later--and that is hopelessly slow by today's standards.

No less important is the disappearance of scientific float, the time between the invention of a new technology and its universal application. It took decades for the steam engine and automobile to attain universal acceptance. It took years for radio and television. Today, countless devices utilizing microchips leap virtually overnight into universal use throughout the world.

This endless compression of float, whether of money, information, technology or for that matter anything else, can be described as the disappearance of "change" float, the time between what was and what is to be, between past and future. Today, the present hardly exists at all, everything is change, *with one incredibly important exception.* There has been little loss of organizational float. Although their size has greatly increased, there has been virtually no new idea of organization since the concepts of corporation, nation–state, and university emerged a few centuries ago.

Newtonian science, along with the machine metaphor to which it gave rise, was the father of those concepts. It has dominated the whole of society and the mass of our thinking for more than two centuries to an extent none of us fully realizes. It declared that the universe and everything in it, whether physical, biological, or social can best be understood as a clock–like mechanism composed of separate parts acting upon one another with precise, linear laws of cause and effect. We have since structured society in accordance with that perspective, believing that with ever more reductionist scientific knowledge, more efficiency, more hierarchical command and control, we could pull a lever at one place and get a precise result at another, and know with certainty which lever to pull for which result; never mind that human beings must be made to perform like cogs and wheels in the process. For two centuries, we have been designing and pulling those levers, all the while hammering people to behave in the compliant, subordinate manner one expects from a well–trained horse. Rarely have we gotten the expected result.

Just as Newtonian science was the father of today's organizational concepts, the Industrial Age was the mother. Together, they dominated the evolution of all institutions. The unique, variable, individual processes by which products and services had been handcrafted were abandoned in favour of vertical, hierarchical organizations which, in order to produce huge quantities of uniform products, services, knowledge, and people, centralized authority, routinized practices, enforced conformity, and amassed resources. This created a class of managers and professionals expert at reducing variability to uniform, repetitive, assembly–line processes endlessly repeated with ever–increasing efficiency. Thus, the Industrial Age became the age of managers.

It also became the age of the physical scientist, whose primary function was to reduce diverse ways of understanding to uniform, repetitive, laboratory processes endlessly repeated with ever– increasing precision. In time, the university obtained a virtual monopoly on the production of both classes. This has led to one of those immense paradoxes of which the universe is so infinitely capable, which is having profound societal effect. The higher levels of all forms of organization, whether commercial, political, or social, now form an interchangeable, cognitive elite interwoven into a mutually supportive complex with immense self–interest in preservation of existing hierarchical forms of organization and the ever–increasing concentration of power and wealth they bring.

At the same time, that same complex is spawning an incredible array of scientific and technological innovation, immense engines of social change, which, in turn, demand radically different concepts of organization in which power and wealth are more widely distributed and more commonly shared. Thus, we are "hoist by our own petard."

> *The essential thing to remember, however, is not that we became a world of expert managers, but that the nature of our expertise became the creation and control of constants, uniformity, and efficiency, while our need has now become the understanding and coordination of variability, complexity, and effectiveness.*

The Sheep's incessant questions and sixteen–year guerrilla war led to several convictions:

First: The greatest danger to people and civilization was not the hydrogen bomb or degradation of the environment, but greater and greater concentration of power and wealth in fewer and fewer hands.

Second: The real consequence of emerging science and technology was not gadgets, whether hydrogen bombs or silicon chips, but radical, social change: ever–increasing diversity and complexity in the way people live and work. Which, in turn, demands radical organizational change.

Third: Industrial Age, hierarchical command-and-control pyramids of power, whether political, social, educational, or commercial, were aberrations of the Industrial Age, antithetical to the human spirit, destructive of the biosphere, and structurally contrary to the whole history and methods of physical and biological evolution. They were not only archaic and increasingly irrelevant, they were a public menace.

Fourth: Just as the human body is organized around a neural network so complex as to defy description, so too were electronic communication systems emerging and interconnecting into an equally complex economic and social network around which institutions and society would be forced to reorganize.

Fifth: The so–called Information Age could best be understood as the Age of Mindcrafting, since information is nothing but the raw material of that incredible chaord we call mind and the pseudo mind we call computer. Software, the tool with which we shape and manage that information, is purely a product of the mind.

Sixth: *The most abundant, least expensive, most under-utilised and frequently abused resource in the world was human ingenuity; the source of that abuse was archaic, Industrial Age institutions and the management practices they spawned.*

The Sheep argued his convictions at every opportunity. Those who would listen smiled and yawned. Along the way, he swore a thousand oaths that were he ever to create an organization, things would be different. Since that possibility seemed remote, the Sheep decided to engage in that popular American pastime, retirement on the job, selecting as victim a bank where a modest living could be had at the cost of a pleasant demeanour, conformity, and a fraction of one's ability and effort. It was not to be. Within the year, the bank took a credit card franchise from Bank of America and the Sheep was driven into management of the program––thus my presence at the meeting and appointment to the committee.

I thought the committee an exercise in futility and privately said as much to the BofA representatives, suggesting, instead, that the committee consider the sole question of how to create an orderly method of addressing all problems. They agreed, but concerned that the proposal might be suspect if advanced by them, insisted I put it before the meeting. The audience readily assented, in the way of all disorganized groups faced with a proposal creating the illusion of progress but requiring no money or effort. The meeting disbanded, the committee met, and I was elbowed into the chair, with no intent but to do a bit of civic duty.

Within six months, a complex of regional and national committees had been formed, which had but one redeeming quality--it allowed organized information about problems to emerge. These problems were much worse than anyone had imagined, far beyond possibility of correction by the existing organization. Losses were not in the tens of millions, but in the hundreds of millions and accelerating.

> *And suddenly, like a diamond in the dirt, there it lay. The need to create a new organization and a precarious toehold from which to make the attempt.*

All the "re's" now so popular––reorganizing, reengineering, reinventing––were the wrong "re's," for they imply yet another version of that which is. It was necessary to re-conceive in the most fundamental sense, the concept of bank, money, and credit card––even beyond that to the essential elements of each and how they might change in a microelectronic environment. Several conclusions slowly emerged:

First: Money had become nothing more than guaranteed, alphanumeric data recorded on valueless paper and metal. It would become data in the form of organized electrons and photons moving around the world at the speed of light, at minuscule cost, by infinitely diverse paths throughout the entire electromagnetic spectrum.

Second: "Credit card" was a misnomer, a false concept. It must be reconceived as a device for the exchange of value in the form of arranged electronic signals. The demand for that exchange would be huge--and global.

Third: Whatever organization could best globally guarantee and exchange data in the form of arranged, electronic signals would have a potential market––every exchange of value in the world––whose size beggared the imagination.

> *It became clear that no hierarchical corporation could do it, no nation–state could do it. In fact, no existing form of organization could do it. The resources of banks worldwide were calculated. The total dwarfed the resources of most nations. Jointly they could do it, but how?*

It was beyond the power of reason to design an organization to deal with such complexity, and beyond the reach of imagination to perceive all the conditions it would encounter. Yet, evolution routinely tossed off much more complex chaords with seeming ease. It gradually became apparent that such an organization would have to be based on biological concepts and methods. It would have to evolve--in effect, to invent and organize itself.

I asked three others to join me to address a single question based upon a single assumption. If there were no constraints whatever, if anything imaginable was possible, what would be the nature (not the structure) of an ideal organization *to create the world's premier device for the exchange of value?*

We isolated ourselves in a small, remote hotel. There followed a week of intense, night–and–day discussion. Slowly, a dozen or so simple principles emerged. Let me give you some examples.

- **It must be equitably owned by all participants.** No member should have intrinsic preferential position. All advantage must result from individual ability and initiative.

- **Power and function must be distributive to the maximum degree.** No function should be performed by any part of the whole that could reasonably be done by any more peripheral part, and no power vested in any part that might reasonably be exercised by any lesser part.

- **Governance must be distributive.** No individual, institution, and no combination of either or both should be able to dominate deliberations or control decisions.

- **It must be infinitely malleable yet extremely durable.** It should be capable of constant, self–generated, modification of form or function without sacrificing its essential nature or embodied principle.
- **It must embrace diversity and change.** It must attract people and institutions comfortable with such conditions and provide an environment in which they could flourish.

It took six months to perfect and gain acceptance of the principles. There followed an intense, year–long effort involving a great many people and disciplines. The principles were gradually enlarged into a concept, the concept into a theoretical structure, and the structure fitted into the interstices of law, custom, and culture. In June 1970 the VISA chaord came into being.

It remains difficult to describe that community, but the record is impressive with regard to what happened when chaordic principles were applied, power distributed, and human ingenuity released. Twenty–four years ago VISA was no more than a vague concept. Today, its products are created by 23,000 financial institutions and accepted in more than 200 countries and territories; 355 million people use those products to make 7.2 billion transactions exceeding $650 billion annually––the largest single block of consumer purchasing power in the world economy.

In the legal sense, VISA is a non–stock, for–profit, membership corporation. In another sense, it is *an inside–out holding company* in that it does not hold but is held by its functioning parts. The 23,000 financial institutions that create its products are, at one and the same time, its owners, its members, its customers, its subjects, and its superiors. It exists as an integral part of the most highly regulated of industries, yet is not subject to any regulatory authority in the world.

It is a chaord, the totality of which, excluding thousands of affiliated entities, would, if converted to a stock company, have a market value exceeding $150 billion. Yet, it cannot be bought, traded, raided, or sold, since ownership is held in the form of perpetual, non–transferable membership rights. However, that portion of the business created by each member is owned solely by them, is reflected in their stock prices, and can be sold to any entity eligible for membership--a very broad, active market.

VISA espoused no political, economic, social, or legal theory, thus transcending language, custom, politics, and culture to successfully connect institutions and peoples of every persuasion. It has gone through a number of wars and revolutions, the belligerents continuing to share common ownership and never ceasing reciprocal acceptance of cards, even though they were killing one another.

It is a chaord which, in less than five years, transformed a troubled product with a minority market share into a dominant market share and the single most profitable consumer service in the industry, while at the same time reducing by more than 50 percent the cost of unsecured credit to individuals and the merchant cost of handling payment instruments. It has had no less than 20 percent and as much as 50 percent compound annual growth for a quarter century, through the best and the worst of times.

It has multiple boards of directors within a single legal entity, none of which can be considered superior or inferior, as each has irrevocable authority and autonomy over geographic or functional areas.

Its products are the most universally used and recognized in the world, yet the organization is so transparent that its ultimate customers, most if its affiliates, and some of its members do not know how it exists or functions. At the same time, the core of the enterprise has no knowledge of or authority over a vast number of the constituent parts. No part knows the whole, the whole does not know all the parts and none has any need to. The entirety, like all chaords––including those you call body, brain, and biosphere––is largely self–regulating.

A staff of approximately three thousand people scattered in twenty–one offices in thirteen countries on four continents coordinates this two–thirds of a trillion dollar business, providing product and systems development, global advertising, and around–the–clock operation of two global electronic communication systems with thousands of data centres communicating through nine million miles of fibre–optic cable. Those systems clear a greater number of electronic financial transactions in a week than the Federal Reserve wire system does in a year. Their capacity is 1,100 transactions per second at a cost of less than a penny each.

Its employees received mediocre salaries by commercial standards, and could never be compensated with equity or acquire wealth for their services. Yet those people selected the VISA name, completed the largest trademark conversion in commercial history in a third the time anticipated, and built the prototype of the present communications system in ninety days for less than $25,000. Time and time and time again they demonstrated a simple truth we have somehow lost sight of in Newtonian, mechanistic organizations:

> *Given the right circumstances, from no more than dreams, determination, and the liberty to try, quite ordinary people consistently do extraordinary things.*

Enough of philosophy and VISA history. What about the future? Ten years ago, I severed my connection with VISA for a life of anonymity and isolation, thinking to grow woolly with books, nature, and uninterrupted thought. In 1993 I stumbled across the book *Complexity*, by Waldrup. The concepts in the book were not surprising; they seemed like old, familiar friends. What was surprising was that they were now beginning to emerge in the scientific world. Curiosity compelled me to a few dozen more books, visits to the Santa Fe, Foresight, and Bionomics Institutes, and to the Joyce Foundation in Chicago.

People at the Joyce Foundation shared many of my life–long concerns about the nature of contemporary institutions and the imminent risk of their collapse. They thought the principles that gave rise to the VISA community might have wide applicability to social and political, as well as commercial, organizations, intruding into my idyllic pasture to engage in a dialogue about the future.

They refused to accept my conviction that the current epidemic of institutional failure would become catastrophic, arguing that if such radically different organizations as VISA and Internet could emerge, equally radical change must be possible elsewhere. They posed an irresistible question: What would it take to greatly accelerate chaordic institutional change throughout all aspects of society?

After considerable research and thought, I suggested three things.

First: At least five or six large, extremely successful examples of chaordic organization, similar to VISA and Internet, would have to evolve. Ideally, they would span such diverse areas as education, government, social services, and commerce. Organizations ready and willing for such change must be sought out and resources provided to help them through the process.

Second: Sophisticated, three–dimensional, physical models of such structures would have to be created, so that people would have something tactile to examine and relate to existing organizations. Computer models would have to be created, graphically demonstrating how such institutions could self–organize, evolve, and link in new patterns of 21st-century society. The models would have to be supported with an impeccable, intellectual foundation. The economic, scientific, political, historical, technical, and philosophical rationale for such organizations would have to be documented. A considerable amount of such work has already been done. However, it is far from complete and lacks coherence and clarity, nor have the language and metaphors necessary for massive dissemination and understanding yet evolved.

Third: A global organization would have to emerge, whose sole purpose would be the development, dissemination, and implementation of new, chaordic concepts of organization, linking people and institutions committed to institutional re-conception in a vast web of shared learning, information, and ownership. It must be organized on the chaordic principles it espouses.

I insisted that the odds of the three happening were too small to calculate, that massive institutional collapse was inevitable. The Foundation argued that people had lost confidence in existing institutions and were eager for new concepts; that there was growing desperation about seemingly intractable problems, which, in the absence of constructive models for change, were turning to destructive behaviour. In their view, society was preparing itself for radically different ideas of community and organization.

They posed another provocative question: If the Joyce Foundation was willing to break with tradition and make their first grant to an individual for expenses, would I contribute a year of my time to investigate, as freely and broadly as I liked, whether the three objectives were indeed impossible, and if not, what would be required to set them in motion? I argued that it was a waste of time and money. They insisted they were willing to accept the risk.

Thus, it happens that for the better part of a year I have been on an odyssey more improbable than VISA and incomparably more important and interesting, travelling extensively to search out people concerned about such problems and committed to doing something about them. It has led me to hundreds of brilliant, deeply concerned people in such diverse places as the U.S. Army, the Gulf States business community, ghetto self–help organizations, the cutting edge of science and technology, institutes of many persuasions, Japanese industrialists, Native Americans, authors, entrepreneurs, and corporate leaders. Although the way is far from clear, there are enough dedicated people who share many of the same convictions that it is impossible to be discouraged. The seeds of chaordic thinking are sprouting everywhere.

Although the odds remain formidable, I no longer believe the three objectives are impossible. With an intensive, part–time effort by a few dozen, deeply committed people and two million dollars for, research, travel, and professional support, I now believe a Global Chaordic Federation might come into being within a year. There is a strong possibility it would then swiftly attract enough global support to become the instrument through which substantive examples of chaordic institutional success could materialize, models of such organizations come into being, and a coherent, intellectual foundation of such a society emerge. If that were to happen, it could catalyse within the decade the massive, cultural, spiritual, and institutional change that a liveable, sustainable future demands. Whether to undertake the effort in the months ahead will depend on response from those who could become the instruments of its emergence. I would, of course, be pleased to hear from anyone interested in the effort.

It is my personal belief, although I would be hard-pressed to prove it, that we are at that very point in time when a four–hundred-year-old age is dying and another struggling to be born; a shifting of culture, science, society, and institutions enormously greater than the world has ever experienced. Ahead, the possibility of regeneration of individuality, liberty, community, and ethics such as the world has never known and a harmony with nature, with one another, and with the divine intelligence such as the world has never dreamed.

There isn't the slightest doubt in my mind that chaordic we are, chaordic we will remain, chaordic the world is, and chaordic our institutions must become. It is the way of life since the beginning of time and the only path to a sustainable world in the centuries ahead, as life continues to evolve into ever–increasing complexity. The only question is whether we will get there through massive institutional collapse, enormous social carnage, and painful reconstruction, with the distinct possibility of yet another regression to that ultimate manifestation of Newtonian concepts of control--dictatorship.

Or have we, at long, long last, evolved to the point of sufficient humility, intelligence, and will to discover the concepts and conditions by which chaordic institutions can find their way into being? Institutions, which have inherent in them the mechanisms for their own continual learning, adaptation, order, and evolution and the capacity to co–evolve harmoniously with all other living things to the highest potential of each and all?

I simply do not know, but this I do know. At such times, it is no failure to fall short of realizing all that we might dream. The failure is to fall short of dreaming all that we might realize.