

*The challenge in fast-changing environments is clear: continually innovate and adapt - or die. Companies face paradoxical demands of innovation, adaptability and creativity versus predictability, order and control. This paper explores these seemingly conflicting requirements and how they can be resolved. It proposes acceptance of disorder and unpredictability, guided by vision and values, as essential features of sustainable, competitive organisations. It further argues that leaders who are willing to live on the edge of chaos are urgently needed in order to breathe new life into business.*

## Order and Chaos:

One of the advantages of being disorderly is that one is constantly making exciting discoveries. - A.A. Milne

### ***The Life of a Typical Start-up***

Someone once remarked that there are five stages in a start-up's life: chaos, confusion, order, bureaucracy and aftermath. *Chaos* reins in a typical start-up. Everybody does everything and the environment is constantly on the verge of going out of control. Nobody and everybody seem to know what is going on. In spite of the chaos things often almost miraculously get done. It can be exciting, stressful, fun, and incredibly hard work. Such an organisation can be extremely flexible and respond almost immediately to market or technology changes. It can and does lead to huge progress in short amounts of time. Roles and responsibilities overlap and are unclear. It works because peoples' enthusiasm often compensates for other shortcomings and the organisation is so small that people can communicate quickly and informally as needed. Anybody who has ever been involved in a start-up enterprise will recognise the scene.

As the organisation grows it can enter the *confusion* stage. There are just too many people around for the old ways to work anymore. Too much is happening for a single person to know everything or to be in control of it all. More specialisation and role definition becomes necessary. It is no longer appropriate for the CEO to be lending a hand as the delivery truck waits outside. Business suffers, as vital information gets lost. Customers suffer. Misunderstandings and confusion arise. People hanker after the good old days when everybody knew what was going on. Some order is needed so that communication is clearer and work gets done in a more consistent fashion.

This is often the critical stage in the emerging organisation's life. How much *order* to introduce and how? If excessive order is introduced too quickly then creativity and adaptability are stifled. It becomes too difficult to get things done. Neglect order and we slip back to into chaos, which no longer works. Many organisations introduce order as a response to emergencies: a kind of sticking plaster approach. A problem, such as losing a customer due to poor internal communication or quality control, leads to the introduction of a procedure to ensure this kind of thing doesn't happen again. Controls, processes, procedures and reorganisations get implemented in an ad-hoc fashion in response to unpredictable circumstances.

If this is overdone we end up in the *bureaucracy* phase. Now nothing much useful can happen without great pain. Following the rules can get rewarded over getting the job done. Creative people either abandon ship or resign themselves to a life of

frustration. A system stagnates when excessive order is imposed, leading to aftermath - a slow lingering death. Bureaucracy is not confined to large organisations; it can exist in companies with only a handful of staff.

How do we organise and order sufficiently without becoming bogged down in procedures or slipping into chaos? Business needs to be flexible and responsive to change, which is difficult in a highly ordered environment. But chaos implies loss of control, unpredictability and powerlessness to lead and direct the organisation.

### ***The edge of chaos***

One of the main advantages of organisations is their ability to intelligently process information. Complex systems can process most information when they are at the 'edge of chaos', hovering between order and chaos. Such systems are very well equipped to adapt to environmental turbulence. Complexity theory shows that systems whose behaviour seems to be chaotic can evolve a stable form driven by an *attractor*. The attractor can be thought of as a magnet that pulls the system in a certain direction. The actual state of the system is impossible to predict at any given moment, but its behaviour over time is highly stable. It seems paradoxical that chaos can lead to order, but this is how living systems evolve to become highly stable, adaptable organisms.

Finding the appropriate balance is key. How can we create sufficient coexisting order and flexibility? Where in the organisation do we need more or less order and freedom? Senior managers of technology companies often complain that engineering tends to be inflexible and slow to respond to change due to overly strict procedures. It is difficult to get estimates for proposed new work and the predictions wildly differ from reality. Imagine in such an organisation that the sales process is chaotic, with different representatives meeting the same customer at different times, making contradictory statements and failing to communicate internally about this. This can drag an already inflexible engineering into paralysis and is potentially fatal for the business.<sup>1</sup>

### ***VISA - The Chaordic Organisation<sup>2</sup>***

When the first credit card, BankAmericard, was launched, a host of competing banks followed with their own proprietary services. By 1968 the industry was chaotically out of control, with operating, credit and fraud losses running into hundreds of millions of dollars. Something had to be done to arrest this spiralling disaster in the making.

Bank of America called a meeting of its licensees to propose solutions to some of the most critical problems. A committee was formed whose aim was to look at all problems and see if they could come up with a way to address them. The committee spent six months investigating the problems. They came to the realisation that a new form of organisation was required:

*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?*

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<sup>1</sup> See [The Sales Engineering Divide](#) for a more complete description of this problem.

<sup>2</sup> Summarised from "The Birth of the Chaordic Age" by Dee Hock, founder and CEO Emeritus of VISA USA and VISA International.

The answer that emerged was the *chaordic organisation*. The term Chaord<sup>3</sup> comes from combining the words chaos and order. Some of VISA's founding principles were:

- Equitable ownership from all participant financial institutions
- Power and function distributed to the maximum degree
- Distributive governance
- Infinite malleability combined with extreme durability
- Embracement of diversity and change

These principles were gradually refined and eventually became VISA. VISA products are created by 23,000 financial institutions and accepted globally. It represents the largest single block of consumer purchasing power in the world. The visionary CEO behind VISA was Dee Hock, who had a history of challenging and questioning command and control, hierarchical organisation. His refusal to blindly follow the status quo had landed him in trouble with his superiors on a number of prior occasions. Hock states:

*Its products are the most universally used and recognized in the world, yet the organization is so transparent that its ultimate customers, most of 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 is largely self-regulating.*

### **Chaords in action**

When I first glimpsed chaords in action, I had no knowledge of Hock, complexity theory or chaords. It was more of a feeling than something tangible. I was managing a group of about forty people. There was little or no obvious order - people just got things done. There was an atmosphere of living on the edge. Theoretically we could not produce and support as many products as we did; yet we consistently out-performed the competition and enjoyed it. People still remember those times fondly. The group was largely self-organising. As the appointed manager I had little knowledge of what was going on. Once an employee came into my office with a product release form to sign. 'What's this?' I asked, half-guessing the answer, but with the certainty that - whatever it was - something very good, wholesome and productive was unfolding.

The second occasion was in a very bureaucratic company. The team was under tremendous pressure to complete a project. Everyone knew that following the rules would guarantee missing the deadline. The potential consequences to the business were severe. So we threw away the rulebook. Everybody just pitched in. Roles and rank lost a lot of their significance. Schedules and timelines changed daily. And we were making huge progress. Then one day in the office, it hit me: 'this is it. This is the edge of chaos.' It was more in the atmosphere rather than something I could measure or touch.

I still am just a beginner in relation to this, but am clear enough that there are some common elements in chaordic organisations<sup>4</sup>. Most important is a common

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<sup>3</sup> Chaord: 1. Any self-organizing, self-governing, adaptive, nonlinear, complex system, the behaviour of which harmoniously blends characteristics of chaos and order. 2. An entity whose behaviour exhibits observable patterns and probabilities not governed or explained by the rules that govern or explain its constituent parts.

vision that holds everybody together. Next is the existence of some shared values, or principles regarding how people should try to behave. Trust, a belief in people's inherent potential and goodness, is always present. And a willingness to get out of people's way and allow them freedom to solve problems is crucial.

This is a far cry from the arid atmosphere present in many companies. One can often sense the suffocation upon entering the premises. There can be the surface illusion of wealth, efficiency and quality, supported by the location and décor of the offices. Under the surface, one is more likely to find mediocrity, inefficiency, boredom, and stifled creativity. As David Whyte writes:

*In a country dedicated to the ideals of personal freedom, there has been endless opportunity to be a numberless clone completely replaceable by another corporate clone. The iridescent colours of individual character are too often watered to a gray wash by slogans, wall plaques, and thoughts for the day. Other people's words may rise from our throats at the drop of a hat... excellence...total quality management...number one... but we struggle to remember the simple character of our own voice. It takes only a modicum of psychological savvy to admit that a corporate culture that constantly repeats the word excellence to itself must still have endless reservoirs of mediocrity on which to draw, and is deathly afraid of facing up to this fact.<sup>5</sup>*

### **ISO9000 - Anachronistic Order**

ISO9000 originated as a British manufacturing standard during the Second World War to ensure that people didn't blow themselves while manufacturing bombs. It is an international standard designed to guarantee a level of quality in a company's operations. In practice, through its endless documentation, procedures, checks and re-checks, it fosters an unprecedented level of mediocrity, poor service and mind-numbing boredom. Its effect is to usually drive an organisation towards a decreasing level of quality, flexibility and innovation. Once a company follows all the rules, regulations and procedures to an assessor's satisfaction, regardless of how well it serves its purpose or customers, it receives the quality mark.

ISO9000 requires a company to define in advance how it will cater for almost any eventuality. It then forces it to strictly adhere to this theoretical process through a typically huge set of procedures. The organisation is further required to prove that it has done so to the satisfaction of an external assessor, who turns up periodically to check that all procedures have been followed. Any exceptions must be documented; otherwise there is a non-conformance. More often than not the assessor doesn't understand how the work really gets done, and is little more than an inspector to ensure that all required documentation is completed. Organisations can almost grind to a halt coming to inspection time making sure that they can document everything. Some companies resort to forging documents to pass the inspection!

Any cases of ISO9000 implementation I have encountered have systematically removed creativity, flexibility, responsiveness and concepts of true service. It is hated and feared by most people I have spoken to who are affected by it. Many companies are being forced to introduce this standard in order to be eligible to tender for business because their customers (bureaucratic institutions) demand

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<sup>4</sup> Hock's *Birth of the Chaordic Age* provides principles and process for building such an organisation. See also [www.chaordic.org](http://www.chaordic.org)

<sup>5</sup> *The Heart Aroused. Poetry and the Preservation of the Soul in Corporate America.*

that that all vendors are certified are compliant.<sup>6</sup> This is ironic, as in demanding this they are in effect dooming themselves to poor service.

### **Why ISO9000 doesn't work**

Warren Bennis sums up something of the true nature of organisations:

*I used to think that running an organization was equivalent to conducting a symphony orchestra. But I don't think that's quite it; it's more like jazz. There is more improvisation. Someone once wrote that the sound of surprise is jazz, and if there's any one thing that we must try to get used to in this world, it's surprise and the unexpected. Truly we are living in a world where the only thing that's constant is change.*

ISO9000 is a mechanistic model. Organisations are not machines. From the outset it is working from a set of invalid assumptions about how real organisations work. It suffers from the illusion that certainty and control are both possible and desirable, that cause and effect are tightly coupled. It views customer service from the contractual, objective lens: that service should conform to agreed criteria, rather than a relational, subjective one, i.e. satisfied customers. It has a reductionist and objective approach to business and is a good example of the perils of ignoring the subjective, dimensions of service, quality and success<sup>7</sup>.

Most people who perform the work, especially complex or creative work, are uninterested in sitting on ISO9000 committees. Therefore the people who don't understand the work end up defining the procedures. But once the rules are written down workers are expected to conform. Either of two things now happens: people ignore the procedures to get the job done, or they try to follow them resulting in decreased quality and poor morale.

**In real organisations, much of the real work happens despite the organisation.** The informal organisation is what really enables people to do their jobs effectively. People form friendships, alliances, do each other favours, share information informally and generally improvise as needed. ISO9000 has the effect of suppressing the informal organisation and thus severely hampering people's efforts.

### **Inappropriate Order<sup>8</sup>**

In a scene from the film *Cool Hand Luke*, a chain gang are being supervised in 'make-work', consisting of shovelling mud out of a swamp and then shovelling it back in again. Many companies engage in make-work, often caused by lack of horizontal communication. A typical example is where different departments use incompatible systems to store related data. It becomes almost impossible to share information. Even in many small organisations, departments use conflicting procedures, making cooperation complex and error prone.

In one medium-sized company three product groups produced three different variants of the same common component. Each common component would only work with its own product. If a customer tried to use two products simultaneously, then one of them would become inoperable! This caused a lot of embarrassment and much effort undoing the incompatibilities. In addition to the loss of time and money the incompatibilities caused much competition and suspicion between the

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<sup>6</sup> See *In Search of Quality, the Case against ISO9000*: This book is a must for anybody who is contemplating adopting this standard

<sup>7</sup> See [Integral Organisation Development](#) for a discussion of the subjective and objective dimensions of business.

<sup>8</sup> For many humorous examples, see *Dilbert*

groups. When eventually people were given the opportunity to sit down and talk together, agreement was quickly reached on a way to co-operate and share common tasks.

It is interesting that in most make-work scenarios nobody is to blame. Everybody is doing the best they can, making logical decisions based on the information at their disposal, but without sufficient knowledge of the wider context in which they are working. No amount of excellence within one function can compensate for the lack of coordination of the whole. People work harder in isolation to improve efficiency, while the real problems go unnoticed and unattended.

Procedures can provide the illusion of protection against the unknown and can easily become a cover for incompetence. Inappropriate procedures are the single biggest creativity-killer in any organisation. They often take on a life of their own and once introduced, are extremely difficult to eradicate. Most people who define procedures don't have to adhere to them. An example from Michael Hammer:

*When buying anything through their purchasing organisation, even small stationary items costing less than \$10, Chrysler incurred internal expenses of £300 in reviews, sign-offs and approvals.<sup>9</sup>*

A procedure should only exist as a response to a need, which does not include the need to control for the sake of control. When a new procedure is proposed, it is advisable to consider whose need it serves, how it serves it, and whom it affects. Procedures should be considered temporary snapshots that need to be constantly evolving to meet changing requirements. All people affected by new procedures should be consulted before implementation. Cross-departmental consultation is extremely important. There may also be consequences for external stakeholders. It is not risky to adopt new procedures without sufficient feedback from stakeholders. It should be culturally acceptable for anyone, anytime to challenge any procedure's suitability and efficacy.

This is not to say that appropriate procedures are not required. They are absolutely vital. The point is they must be our servants rather than masters. Without suitable, sensible procedures it becomes impossible for any large group to be effective. For example, procedures for building and maintaining products are of fundamental importance in the software industry. Strict control is required for changes to versions, components, interfaces and functionality. Failure to adhere to these could have serious business consequences. But many software organisations have plenty of signoffs and procedures without actually controlling any of the key variables. Similarly, procedures are obviously required to control and measure costs. But this is a far cry from having a rule requiring faxed quotes from three different vendors items as trivial as screwdrivers, a real-life example I came across.

### **Organisation Charts**

*To my mind there is no bent of mind more dangerous than that which is sometimes described as the "genius for organisation." This usually results in the birth of a great big chart.... It takes about six weeks for a man living in one berry at the lower left-hand corner of the chart to reach the president or chairman of the board.<sup>10</sup>*

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<sup>9</sup> *Beyond Reengineering*, Michael Hammer

<sup>10</sup> Henry Ford, quoted in *Leading Minds*, Howard Gardiner

The organisation chart is the most commonly used tool to describe the structure of the organisation. It describes the formal structure, but says nothing about the informal structure and operational processes. It is static and cannot convey movement. As with any other tool, it can be used or misused. The first danger is that it reinforces the mechanical, clockwork model of organisation, offering the illusion that the company is in charge of its affairs. A living, evolving system cannot be adequately represented in such a crude fashion. Organisation charts need to be augmented by process descriptions that describe key interfaces. Even then, only a vague description of reality is available. There is no substitute for talking to the people to find out what is really going on.

On first inspection it may seem that every function is covered, but it is not uncommon to find key tasks for which nobody is responsible. This is most common in the grey areas that don't naturally fit into any single box, such as interdepartmental functions. Either of two scenarios is likely here: nobody will take ownership because there is little recognition for doing so, or the people who take responsibility are under-rewarded and undervalued. These people, often vital to success, are often prime candidates when it's time for downsizing.

Examination of the chart can be quite revealing of the organisation's priorities and values. HR reporting Finance is a statement of how management views its staff. Here you will typically find severe morale and productivity problems. One company's chart had a very detailed breakdown of Sales and Marketing whereas only the Engineering Manager figured, although engineering was by far the largest part of the organisation. Not surprisingly, after interviewing a few people it became clear that engineering staff felt undervalued and the products and technology were poorly understood by management. This led to predictable problems gaining and retaining customers.

Charts, although necessary especially in larger organisations, should be used with caution. Strict organisational roles hinder adaptability and readiness for change. Structure is more appropriately viewed as a temporary response to dynamic complexity. Fewer and looser structures produce more effective organisations. Boxing people too tightly severely limits their creative potential. Any group of people is in a continual, dynamic relationship with its environment. None thrive on static rules and roles. As Stephen Covey says:

*Low performance is often institutionalised in the structure and systems, procedures and processes, of the organisation. Some executives pilot their single-engine, propeller-driven firms at slow speeds and low altitudes, cocksure that anything smacking of high performance would cause them to lose control and crash.<sup>11</sup>*

### **Information Processing Capability**

Organisations spend huge amounts of money gathering, processing, transforming and disseminating information. How well it is used often determines competitive advantage. The business of many organisations is information. Select an organisation at random and ask people their top three gripes: lack of communication is likely to figure prominently. Many companies are aware of this but struggle to do anything effective about it. This is because they view information as something belonging to senior management, which needs to be communicated in a 'top-down' fashion. The ability to make use of information can be viewed as a measure of 'organisational intelligence'. So how can we enhance

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<sup>11</sup> Principle Centered Leadership, Stephen Covey

the way information is processed within an organisation? In order to answer this question, some background is required on the nature of information. Information has some unusual qualities:

- Information multiplies and is generative. When I give you money then you have more of it and I have less. When I give you information, we both end up with more of it. Each new piece of information we receive is capable of producing further new information through its interactions with us.
- Information cannot be easily hoarded. When I give you information, I cannot predict what will happen to it. You may sign confidentiality or non-disclosure agreements, but I have no way of knowing what connections to other information might be established and where they might lead. When you leave the organisation I cannot delete the information inside you and the information inside you is no longer available to the organisation.
- Information is subjective. It goes 'inside us' and interacts with other information and our consciousness in ways that are impossible to predict. Give two people the same information. One might use it to great effect while the other sees no value in it. It is the same within organisations. Because of its subjective nature, it doesn't make sense to try to control it objectively.
- Information is more than data, but less than knowledge, and still less than wisdom. Information has meaning and is contextual. The meaning and actions arising from information that I receive is highly dependent on what other contextual information I know. Many of the problems associated with information are due to insufficient understanding of context.
- Information travels through multiple channels. In organisations, formal channels only carry a small percentage of the useful information conveyed. Informal channels are vital to the effective operation of all organisations.
- Information needs to be filtered. Quantity of information is less important than quality. Most senior managers suffer from receiving excessive information, while at the same time they lack sufficient information about what is really important.

Taking these points into account, organisations need to take a different attitude to information. This is that **information should be encouraged to travel freely unless there are compelling reasons otherwise**. Allowing it to move freely enriches the organisation and increases its intelligence. Withholding it leads to suspicion, resentment, false assumptions, bad decisions, waste and rumour.

The most important factor for effective information flow is corporate culture. A culture of openness, team spirit, co-operation and common vision will encourage information to flow where it needs. The more opportunities and freedom to communicate, the less need for formal channels. Information channels will evolve themselves. The attitude of senior management has far greater impact than any set of procedures or imposed structures. Does management believe that information should be freely available? Do they really believe that their people are the organisation's most important asset? If not, then all the structures in the

world, all the memos, meetings, reports and newsletters are not going to achieve much.

Good information flow is not achieved merely through managers talking to each other - although this would be an improvement in some enterprises. People at all levels of the organisation need to the freedom and opportunity to communicate. People, when informed of information that is relevant to them or to their environment mostly make sensible decisions and take sensible action.

Many people are bursting with ideas and creativity, and just waiting for opportunities to express their talents. A fundamental human need is to create. I have met numerous people full of great ideas whose talents are wasted. When asked why, the response is something like 'Nobody will listen to me. I've given up trying. What's the point', or 'I didn't know where to go with this idea'. This is a real loss. In many cases the idea might have been acted on had the information ended up in the right place, or if supervisors took them seriously.

There is no formula for ensuring that information gets to where it needs, but there are bottlenecks and blockages that can be removed. Rigid structures and formal communication channels make it almost impossible for any new initiative to be adopted. In the traditional hierarchy information goes upwards, then possibly across, then (sometimes) downwards again, before it travels back in the reverse direction. The path is just too complex and cumbersome and it is too onerous to communicate formally. Information that is only allowed to move along pre-defined channels loses its richness and becomes sterile.

People need to be encouraged to foster informal channels and to have an active interest in the total organisation. Information will move where it needs to, if only people stop trying to control it. Unnecessary information doesn't travel well in the informal network. People aren't interested in conveying it. The organisational overhead associated with informal communication is insignificant compared to the inefficiency and waste resulting from poor information.

### ***The implications for management***

Allowing information to flow freely brings new challenges to organisations and management. Information can no longer viewed as a source of control but as a shared resource. In the traditional organisation, the higher up the corporate ladder one is, the more information one has access to (however diluted and distorted it may have become at this point). The traditional manager derives a lot of his power from having access to information that others do not possess. An organisation clinging to the traditional notions of power and authority will not follow through in its attempts to allow information flow freely.

Organisations wishing to unleash the forces of information and human creativity require more leadership and less management. **A true leader has willing followers.** The essence of leadership is freedom. Wherever there is good leadership you will find shared vision and values. A manager relies on positional authority and force (often implicit) to get subjects to act. But human creativity is not subject to coercion. Creativity comes from within. It cannot be extracted, measured and deployed in the same way as physical resources. When creativity is required freedom is the order of the day. All that can be done to 'control' creativity is to create the conditions that encourage its appearance.

Leadership appeals to peoples' higher values and aspirations. Almost everybody wants to be proud of their work and feel that they are making a valuable contribution to something worthwhile. This provides a sense of meaning. When people are enthusiastic and proud of their work the need for control is dramatically reduced. **A shared sense of vision is the attractor that pulls the organisations towards its future.**

Reliance on traditional command and control management will not result in the appropriate information traversing the organisation. It will merely ensure that prescribed information flows in prescribed ways. This is always insufficient. Most of the really valuable information gets lost or neglected. All that can be done is to create the conditions and freedom for information to go where it needs to go. The information conveyed and the routes it travels cannot be predicted. Thinking that this is possible is akin to supposing that the people and organisations are deterministic, clockwork mechanisms - a notion belonging to the nineteenth century.

Leading chaotic organisations is not for the fainthearted. The challenge is to abandon the illusions of certainty and control. Dependence on control needs to be replaced with trust - of self and others. Belief in certainty needs to be replaced by trust - that the organisation can and will emerge to adapt conditions. And perhaps the trust that whatever happens is for the best in the larger context of life and the world.

This is far from easy. The temptation is always to step in and impose control when things seem to be going wrong. Departing from accepted practice requires courage - and it means taking personal responsibility. Even if we accept that new approaches are called for, we have to deal with those who think otherwise. And some of these are likely to be in positions of power. It is sometimes unnerving and entails going outside of our personal comfort zones. Fitting in with the status quo is a much less risky business. Machiavelli has this to say about it:

*There is nothing more difficult to take in hand, more perilous to conduct or more uncertain in its success than to take the lead in the introduction of a new order of things.*<sup>12</sup>

Managers need to consider what kind of organisations they want to lead. How much personal responsibility do we want to take? Are we willing to risk status and position to improve them? Until sufficient numbers opt for 'the road less travelled' most organisations will remain energy-draining, under-performing, anachronistic entities. It doesn't need to be like this. In the end, it's a matter of personal choice.

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<sup>12</sup> The Prince, Nicolo Machiavelli