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Time for the Big Small Company

By Professor Lynda M. Applegate

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Summary

Managers today are fascinated by new organisational possibilities for their companies. Because speed is increasingly seen as the key to competitive advantage, the dream is to marry the resources and reach of a global player with the adaptability and speed of a start-up. Such ideas are not new; as Lynda Applegate points out, companies in the 1960s experimented with new organisational structures such as the matrix which were intended to achieve very similar aims. Unfortunately, the volume and complexity of information flows required by such structures were too great for the information systems of the time, so many companies reverted to more traditional hierarchies. Now, however, advances in IT mean that new models can work. Complex operating processes can be accelerated and information about them - and about company performance in the market - can be fed back in real time to all levels of the organisation; the perspectives of senior managers and employees on the ground can converge. This shared understanding of the business, combined with suitably aligned incentives, makes it feasible for authority to be devolved to entrepreneurial teams instead of hierarchically ranked individuals.

Managers and academics have spent most of the 20th century building and perfecting the hierarchical organisation. If we are to believe the press, however, they are now busily destroying it, proposing in its stead "networked", "process-orientated", "learning", "team-based" or "fast-cycle" organisational models (to name but a few).

While the details of these visions vary, common themes can be found. The 21st-century organisation, it is argued, is flat, fast, flexible and focused on core competences. Inside, empowered teams of knowledge workers re-engineer and continuously improve their processes. Managers - the few who are left, that is - act as "coaches". They get their companies to "think globally and act locally". Some create virtual corporations, managing a vast network of independent businesses that must all work together to deliver products and services to customers.

But how many companies have actually managed to realise this vision? Take a walk around most large, established organisations and you will find that many vestiges of the traditional hierarchy remain. Standardised jobs, rigid procedures and policies, and a hierarchical chain of command continue to define how much of the work is performed.

While many organisations have downsized and delayered, authority and accountability for decisions continues to depend on hierarchical level. And although employees find themselves working in teams and spending a lot of their time at meetings, compensation and incentive systems continue to support individual performance and achievement.

Clearly the hierarchy is not dead. Yet when asked what their companies should look like within the next five years, many managers express strong support for organisational visions of the sort outlined above. In focus groups, many state that their companies are in the midst of - or are embarking on - change initiatives designed to create a more flexible and adaptive organisation. The problem confronting these managers, however, is that they cannot sacrifice efficiency for speed. They cannot abandon formal control systems as they empower employees to make decisions addressing real-time customer needs.

Jack Welch, chief executive of General Electric, summed up this dilemma when discussing the challenges that his company faced as it entered the 1990s (see Figure 1). "At the beginning of the decade," he wrote, "we saw two challenges ahead of us, one external and one internal. Externally, we faced a world economy that would be characterised by slower growth, with stronger global competitors going after a smaller piece of the pie. Internally, our challenge was even bigger. We had to find a way to combine the power, resources, and reach of a large company with the hunger, agility, spirit, and fire of a small one."

Percy Barnevik, ABB's chief executive, echoed these comments: "ABB is an organisation with three internal contradictions. We want to be global and local, big and small, and radically decentralised with centralised reporting and control. If we resolve those contradictions, we create real organisational advantage."

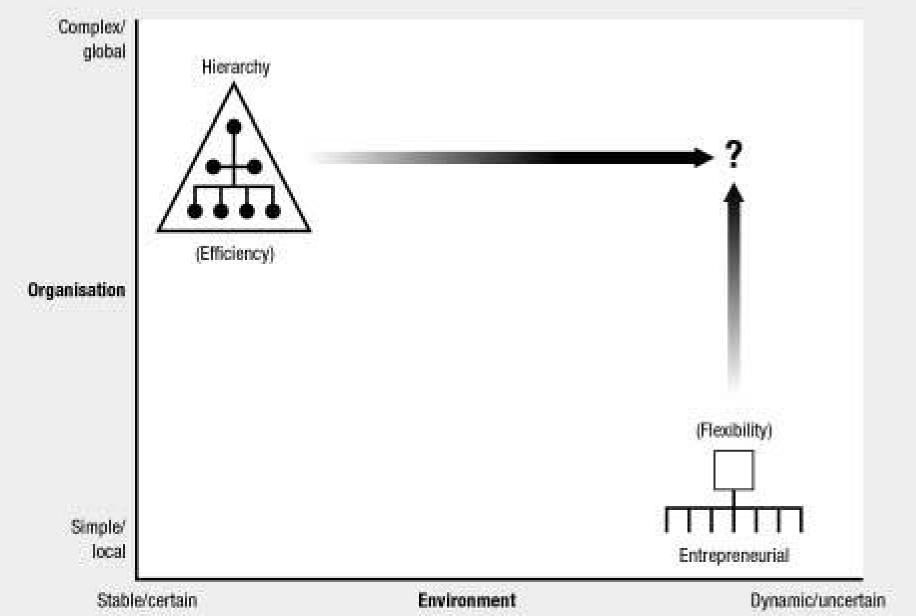
In the age of the internet, its not just large, established companies that are coping with these challenges; entrepreneurial start-ups are also struggling with the problems that come from getting very big very quickly. Consider the success - and resultant management problems - experienced by Yahoo!, Amazon.com and E*Trade. These three internet powerhouses grew from nothing in 1995 to global companies with market valuations of $33bn, $18bn and $7bn (respectively) on February 1 1999. While many would argue that the market value is overinflated (especially given that all three have yet to make a profit), no one can argue with the dramatic increase in complexity that these entrepreneurial start-ups face. In fact, a review of the operating expense lines in each of these companies' annual reports provides a glimpse of the infrastructure investments and management expertise that are required to keep up with the rapid pace of growth.

E*Trade's operating problems highlight the challenges that successful internet start-ups face. Between November 1 1998 and February 1 1999 transaction volumes over its online trading systems increased to 2.8m - up by over 75 per cent from the previous three-month period - and on January 25 1999 the company announced that it had set a single day record of over $108m in new customer deposits. To keep pace with its rapid growth, the company accelerated the expansion of its customer service systems. But the exhilaration was short-lived. On February 3 the business press reported that the company had experienced a "technical glitch" in its new systems that left many customers unable to trade for a portion of the day. As problems continued the next day, customers began to vent their anger and frustration on online bulletin boards. By the end of the third successive day of failures, the company's market value had dropped by over $1.5bn to $5.5bn.

Is history repeating itself?

As timely as it seems, the management dilemma depicted in Figure 1 is not new. Descriptions of "hybrid" organisations designed to enable companies to act "big and small" simultaneously were common in the 1950s and 1960s, and were pioneered by rapidly growing technology start-ups in the aerospace and computer industries. One of these hybrid designs - the matrix - was originally billed as the "obvious organisational solution" to the need for control and efficiency, while simultaneously enabling flexibility and speed of response. Decades ago, proponents of the matrix argued for an "adaptive, information-intensive, team-based, collaborative, and empowered" organisation - all characteristics of the new 21st-century organisation heralded in the business press.

Figure 1: The organisation design challenge



Adapted from Nolan, Pollack, Ware 1988

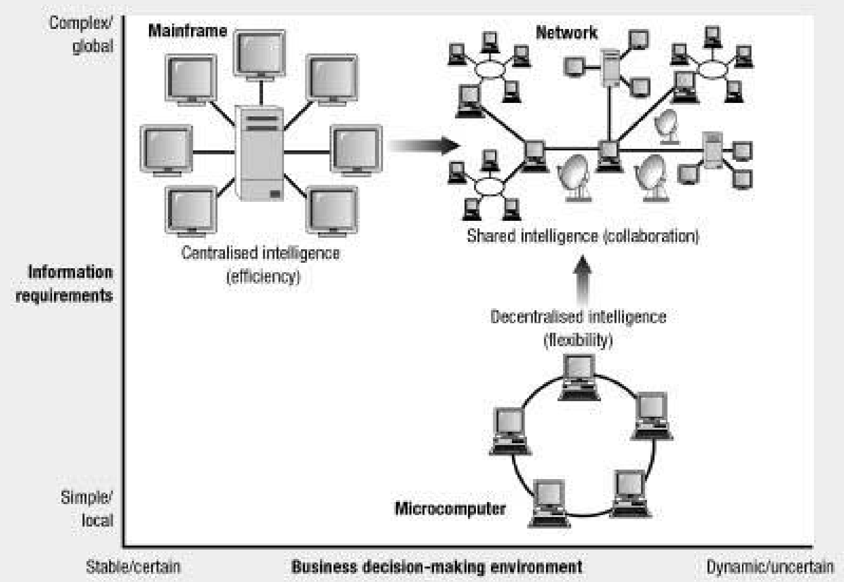
But companies that adopted the hybrid designs of the 1960s and 1970s soon learned that the new structures and systems bred conflict, confusion, information overload and costly duplication of resources.

Given such problems, we might legitimately ask, "If these hybrid organisations failed in the past, why are we trying this again?" Interestingly, one of the major sources of difficulty with the matrix was the dramatic increase in the need for timely information to manage it successfully. While the hierarchy managed complexity by minimising it, the matrix demanded that managers deal with complexity directly. Product managers had to co-ordinate their plans and operations with functional managers. Country managers had to co-ordinate their activities with headquarters. And senior managers, attempting to reconcile overall organisational performance and plan corporate strategy, were faced with a dizzying array of conflicting information.

In the large, hierarchical companies of the 1960s and 1970s, information moved slowly and channels of communication were limited. The mainframe computer systems of the day were designed to support centralised information processing and hierarchical communication channels (see Figure 2). The microcomputer revolution of the 1980s provided tools to decentralise information processing - which helped improve local decision-making - but the technology to support both local and enterprise-wide information sharing and communication was inadequate.

Only recently has IT become capable of meeting this challenge. The "networked IT revolution" of the late 1990s - reflected in the emergence of the internet, electronic commerce and increasingly integrated, powerful and flexible databases and business systems - has made possible information processing and communication infrastructures that match the requirements of companies wishing to operate as if they were both big and small.

Figure 2: The IT design challenge parallels the organisation design challenge



Most of the remaining problems are organisational. Although the networked IT infrastructure can provide important tools, it cannot define the information that needs to be in the system. The networked IT infrastructure can enable new organisational structures and systems but cannot motivate people to use the information to make decisions and take actions on behalf of the organisation.

Creating the information-age organization

Managers are caught in a dilemma. The organisational designs for executing their complex strategies depend upon a much more dynamic, networked approach to managing and communicating information; yet effective deployment of a networked information infrastructure means that managers must adopt a more flexible and adaptive organisation design. Over the past 10 years I have worked with hundreds of managers from both large and small companies as they have attempted to build organisations that can prosper in the information age. Analysis of their successes and failures has clarified several important lessons.

Speed counts, but not at the expense of control

Over the past few years it has become very clear that speed counts. New products must be introduced ever more quickly; order fulfilment cycles must be cut dramatically; and managers must create agile organisations that can turn on a sixpence. But the faster one goes - in an organisation as in a car - the harder it is to keep control and to anticipate and respond to changes in one's situation.

The faster the pace, the greater the need to monitor business operations closely and to have deep understanding of market, industry and business dynamics. But many believe that it is impossible to design a company for both control and speed of response. Understanding the fundamental principles upon which organisational control is based helps resolve this contradiction.

The control cycle in any organisation is determined by two tightly integrated sets of processes. Operating processes are activities that define how a company designs, produces, distributes, markets, sells and supports its products and services; common operating processes include procurement, product design and development, order fulfilment and customer service. Management processes are activities through which management defines strategic direction, allocates resources and co-ordinates and controls operations; common management processes include planning and budgeting, operating performance management and human resource management.

To maintain organisational control both operating and management processes must be integrated and synchronised. Thus efforts to reduce operating cycle times (for example, order fulfilment cycles) must included parallel efforts to reduce management cycle time.

In a traditional hierarchical organisation, management cycle time is defined around yearly business planning and budgeting, and quarterly reporting cycles. While line managers may quickly recognise environmental threats or opportunities, they are hampered in their ability to understand the organisational and industrial implications of what they are seeing. Channels for communicating their knowledge of local conditions to those in a position to make decisions and take actions on behalf of the entire organisation are limited.

In a traditional entrepreneurial organisation, management cycle time is based on daily personal interactions between the founders (who set strategy and allocate resources) and the employees (who execute the strategy). Since founders and employees are close to the market, they have instant access to information on opportunities and threats; since they are in direct, daily contact with each other, they are able to make decisions and take actions on the spot.

In both the hierarchical and entrepreneurial models, organisational control is founded on deep understanding of the business environment. That knowledge is then used to make decisions and take actions. In the hierarchical organisation, a much broader base of knowledge is required prior to action, and the tirneframe for obtaining and communicating that information is long. In the entrepreneurial company, the timeframe is greatly reduced but the opportunities (and information required to evaluate them) are more limited.

Now let us similarly consider an information-age organisation that must manage both complexity and speed simultaneously. Like its traditional organisational counterparts, information-age control depends upon deep understanding of the business context and the ability to relate what is happening to company performance. The information required to achieve such understanding must be readily accessible to everyone, uniting the perspectives of senior managers and those doing the work.

IT plays a critical role. It can co-ordinate complex, fast-cycle operating processes and, more importantly, give decision-makers access to detailed, real-time information about operations. It can also link this information with real-time performance and market information, a detailed understanding of business dynamics can be obtained.

These fast-cycle, information-based control systems resemble the cybernetic control systems that enable fault-tolerant operation of missile guidance systems, air conditioning systems and nuclear reactors. Such systems can run on "autopilot" if the parameters for successful control are known with certainty and programmed in. If conditions veer beyond these parameters, early warning systems can ensure human intervention. In organisations, decisions about how to evaluate and respond to changes often involve more than one unit and more than one organisational level. Communication mechanisms must be in place to enable decision-making teams to engage in timely dialogue to determine what course of action to take.

Once the information is flowing and employees have the motivation, knowledge and opportunity to use it, they can quickly evaluate actions and continually refine both strategy and operations. At this point, organisational control becomes a continuous, information-enabled learning process rather than a static, compliance-based monitoring system.

Empowerment is not anarchy

"Empowerment", "teams" and "collaboration" have become fashionable management concepts in the 1990s. They each describe different facets of organisational authority: the formal and informal structures, co-ordinating mechanisms, decision-making responsibilities, compensation, incentives and sanctions that define the distribution of power and accountability within a company.

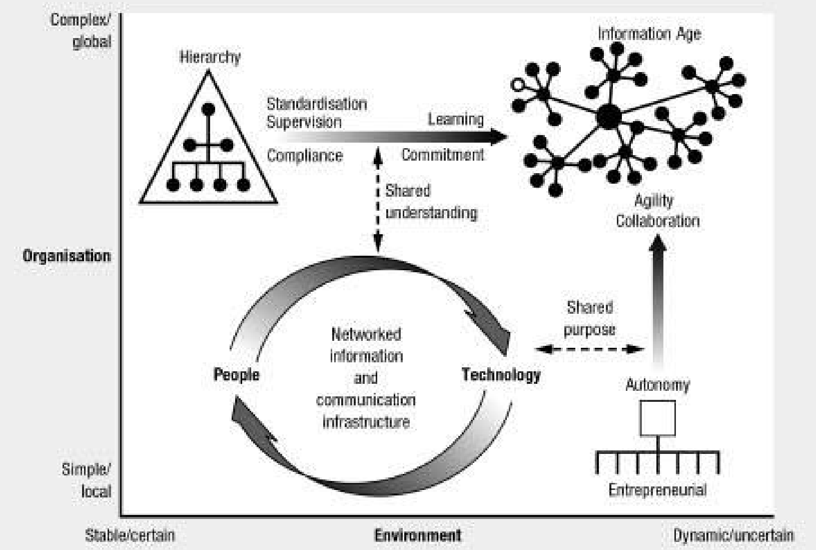
In thinking about organisational authority it is helpful to view the company as a network of roles and relationships that unite principals (owners and senior management) and agents (those individuals hired by the principals) in defining and executing strategy. The challenge in designing effective organisational authority systems is to ensure that principals and agents share the same perspective on the business, are motivated to accomplish the same goals, and possess the expertise and information required to make good decisions and take appropriate actions (see Figure 3).

In the traditional entrepreneurial organisation, owners and employees work as a team. They share the same information about and perspective on the business because they are in direct contact with each other and the market. Incentives are aligned because many entrepreneurial companies pay employees with equity, which enables them to share diretly in business risks and rewards. As organisations grow, the cost of developing a shared perspective and aligning individual interests increases, as do the risks of misalignment.

In the traditional hierarchies of the industrial era, information moved slowly and inefficiently. Co-ordination costs and risks increased dramatically whenever decisions were made outside the direct control of senior management. As a result, the tendency was to minimise the risks by centralising decision-making, segregating activities and rigidly structuring work. Deep hierarchical chains of command enabled direct monitoring and supervision of work. Segmentation of work and authority, together with direct supervision, ensured that, short of sabotage, no one had the authority - or opportunity - to perform an action that would threaten the entire company. But this consistency and control came at a cost.

As companies grew larger, employee self-interest and compliance replaced commitment and shared understanding and motivation. Real-time information on business and market dynamics was also lost. But as long as the business environment remained stable, there was plenty of time for analysts, controllers and senior managers at corporate headquarters to collect and analyse information, devise strategies and train others to do likewise.

Figure 3: The emerging information age organisation



These efficient, centralised hierarchical authority systems began to break down in the latter half of the 20th century. As the timeframe for collecting and analysing information and for changing strategies and operations decreased, large companies were carved up into stand-alone business units. But these new units merely replicated the same hierarchical organisation on a smaller scale; scores of analysts and controllers were hired for each new unit. As decision-making was pushed towards the middle of the company, senior management became further removed from operations.

As the situation reached a crisis during the 1980s and 1990s, most large, traditionally organised companies embarked on radical restructuring. Layers of middle management were removed and businesses were simplified. Operations were redesigned to integrate, streamline and synchronise processes that had become fragmented and dysfunctional. IT was a core component of the restructuring in many companies. As they used it to automate and streamline operations, companies were also able to collect valuable, real-time information on the business, which became the basis for a new approach to control. Advances in IT, coupled with over two decades of organisational evolution and learning, have enabled companies to redefine authority.

In the information-age organisation, the free flow of information throughout the company (and among customers, suppliers and business partners) enables the perspective of the principals to be reunited with that of the agents. Given a shared perspective - and assuming aligned incentives and motivations - large companies can adopt entrepreneurial-style authority structures and systems based on commitment rather than compliance. Teams rather than individuals become the new unit of work.

Shared incentives (such as team performance bonuses and employee stock ownership plans) are required to augment the shared authority and to help align individual, team and organisational priorities. But since personal accountability must still be maintained, performance evaluations and incentives must also recognise performance against individual goals.

What keeps these entrepreneurial, self-managing teams from doing things that will harm the company? Recall that in the entrepreneurial organisation, direct supervision of self-managing work teams enables the founder to be involved in all important (and often not so important) decisions. This approach is not possible in a large, complex global company. As a result, there is a risk of anarchy and a corresponding need for effective risk control.

In complex, global organisations senior managers cannot oversee every decision or action taken by empowered teams. As a result, it is more important for them to identify key strategic risks - which I call "critical failure factors" - and to ensure that they have effective control systems in place. The availability of real-time information can assist with risk management, but senior managers should not delude themselves that online monitoring is all that is required. Direct supervision and segregation of authority may be required to manage areas of extreme vulnerability.

Conclusion

Managers have made significant efforts during the 1990s to reorganise to meet the challenges of operating in a more dynamic, hypercompetitive world. But as the decade draws to a close, many are facing the grim possibility that the 21st century will demand even more radical change. As the internet redefines markets, industries and organisations, companies must respond even more quickly, deliver even better products and services, and cut costs even more deeply. Layers of management have been cut and spans of authority increased to the point where many worry that their organisations will spin out of control. The assumptions of traditional organisational models, such as the hierarchy and the entrepreneurial model, have been pushed to the limit.

Crisis is a precondition for the emergence of a new theory or model. But when presented with crisis, most people do not immediately reject existing models. Instead, they attempt incremental adjustments that, over time, begin to blur the fundamental structure and assumptions upon which the old models were based. Practitioners are often the first to lose sight of old models as the familiar rules for solving problems become ineffective. At some point, total reconstruction is required. During the transition, however, there is frequently an overlap between the problems that can be solved by the old and new models. But no matter which is used, there is a decisive difference in the modes of solution.

This appears to be the point at which we now find ourselves. A crisis, largely driven by a fundamental mismatch between environmental demands and organisational capabilities, has called into question many of the assumptions of traditional organisational models. Academic thinking in this area is being led by practice. The lessons from managers in the field suggest that a new organisational model is emerging that harnesses the power of today's technologies in the hands of a more knowledgeable workforce.

The old barriers between the hierarchy and the entrepreneurial organisation are becoming blurred. New structures are evolving that unite the flexibility and speed, motivation and creativity that used to be the hallmark of the entrepreneurial organisation with the efficiency, scale, scope and control of the hierarchy. Those companies that can make the transition will survive and prosper in the future. Those that cannot adapt will perish.

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