

THE FUTURE OF WORK¹

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Imagine organizations where bosses give employees enormous freedom to decide what to do and when to do it. Imagine that workers are allowed to elect their own bosses and vote directly on important company decisions. Imagine organizations where most workers aren't employees at all, but electronically connected freelancers living wherever they want to. And imagine that all this freedom in business lets people get more of whatever they really want in life—money, interesting work, helping other people, or time with their families. *The Future of Work* shows where these things are already happening today and how—if we choose—they can happen even more in the future.

The book argues that we are now in the early stages of a profound increase in human freedom in business that may, in the long run, be as important for businesses as the change to democracies was for governments. The key enabler for this remarkable change is information technology. By reducing the costs of communication, these technologies now make it possible for many more people, even in huge organizations, to have the information they need to make decisions for themselves, instead of just following orders from above. And so, for the first time in human history, we can now have the best of both worlds—the economic and scale efficiencies of large organizations, and the human benefits of small ones: freedom, motivation, creativity, and flexibility.

What will these new ways of organizing work look like?

There are three basic ways to make decisions in large groups while still giving individuals substantial freedom: *loose hierarchies*, *democracies*, and *markets*.

Some companies today, for example, already have *loose hierarchies* in which bosses still exist but considerable decision-making authority is delegated to very low organizational levels. Many management consulting firms, for instance, let the individual partners and consultants assigned to a project make almost all the operational decisions about it. And AES Corp., one of the world's largest electric power producers, lets low-level workers make critical multi-million-dollar decisions about things like acquiring new subsidiaries. In an even more extreme example, one of the most important computer operating systems in the world today—Linux—was written by a loosely coordinated hierarchy of thousands of volunteer programmers all over the world.

Going further, some businesses today already act like miniature *democracies* where decisions are made by voting. Many good managers, for instance, informally poll their employees about key decisions, and some companies have made the formal polling of workers a routine part of their management. In a few cases, such as the Mondragon Cooperative Corporation in Spain, the workers own the company and, therefore, can elect the equivalent of a board of directors and vote on other key issues.

The most extreme kind of business freedom occurs in *markets*. For example, many companies today outsource activities they used to perform inside—from manufacturing, to sales, to human resource management. In some cases, flexible webs of electronically connected free-lancers—"e-lancers"—can even do the same things big companies used to do but more effectively. In other cases, large companies can get many of the benefits of markets *inside* their own boundaries. For example, Intel is looking at letting individual salespeople and plant managers buy and sell products among themselves in an internal electronic market. This could give the plants immediate and dynamic feedback about which products to make each day, and help the salespeople continually fine-tune the prices they offer their customers.

To understand why such decentralized approaches to management are likely to happen more often in the future, we need to understand what leads to centralization and decentralization in the first place.

¹ This research brief summarizes the following recently published book: Thomas W. Malone, *The Future of Work: How the New Order of Business Will Shape Your Organization, Your Management Style, and Your Life* (Harvard Business School Press, 2004).

Why is this happening?

Dozens of factors affect how and where decisions are made in a business. But there is one crucial factor that is changing dramatically in the same direction almost everywhere today. In fact, when we look back carefully at the history of humanity, we can see that this very same factor has been implicated, time after time, in some of the most important changes in how entire societies were structured.

What is this factor?

It's the *cost of communication*.

Back when the only form of communication was face-to-face conversation, our distant hunting-and-gathering ancestors organized themselves in small, egalitarian, decentralized groups called bands. Over many millennia, as our ancestors learned to communicate over long distances—by writing—they were able to form larger and larger societies ruled by kings, emperors, and other centralized rulers. Then, only a few hundred years ago, our ancestors invented a new communication technology, the printing press, which reduced even further the costs of communicating to large numbers of people. This breakthrough allowed people to reverse their millennia-long march toward greater centralization. Soon after the printing press came into wide use, the democratic revolution began. Ordinary people—now much better informed about political matters—came to have more say in their own government than they had had since the hunting-and-gathering days.

Remarkably, this very same three-stage pattern appears to be repeating itself now—at a much faster rate—in the history of business organizations.

Throughout most of human history, up until the 1800's, most businesses were organized as small, local, often family affairs—farmers, shopkeepers, craftspeople—similar in many ways to the early bands of hunters and gatherers. But by the 1900's, new communication technologies like the telegraph and the telephone finally provided enough communication capacity to allow businesses to grow and centralize on a large scale, as governments had begun to do many millennia earlier. Because these “kingdoms” of the business world were so successful, many of us still unconsciously associate success in business with bigness and centralization.

But now, just as new technologies helped spur the rise of democracies, today's technological advances are beginning to spur a similar change in business. With new communication technologies like email,

instant messaging, and the Internet, it's becoming economically feasible—for the first time in history—to give huge numbers of workers the information they need to make more choices for themselves. That means that many more people can have the kinds of freedom in business that used to be common only in small organizations. And that can be very good news for both productivity and quality of life. When people are making their own decisions, for instance, rather than just following orders, they often work harder and show more dedication and more creativity.

Of course, reduced communication costs won't always lead to this kind of decentralization. In places where the benefits of economies of scale are overwhelmingly important—like some kinds of semiconductor manufacturing—we will probably see even more centralization. But in our increasingly knowledge- and innovation-based economy, the benefits of decentralization—flexibility, freedom, creativity, and motivation—are becoming important in more and more places. And in all those places, we should expect to see information technology leading to more and more decentralization.

What does this mean for you?

If decentralization becomes increasingly desirable in business, then we'll need to manage in new ways. But most of us still have—deep in our minds—models of management based on the classic centralized philosophy of “command and control.” To be successful in the world we're entering, we'll need a new set of mental models. We need to shift our thinking from “command-and-control” to “coordinate-and-cultivate.” Coordinating and cultivating are not the opposites of commanding and controlling; they are the supersets. That is, they include the whole range of possibilities for management, from the completely top-down and centralized to the completely bottom-up and decentralized. To be an effective manager in the world we're entering, you can't be stuck in a centralized mindset. You need to be able to move flexibly back and forth on the centralization continuum as the situation demands.

If more people have more freedom in business, this also means they will naturally seek the things they value. Of course, one thing people value is money and the things you can buy with it, but most people value other things, too: time with their families, a feeling of achievement, a sense of meaning in their lives. That means companies will increasingly need to compete for workers, investors, and customers,

not just in the marketplace for products and prices, but also in the marketplace for values.

And as individuals, we need to think more deeply than we usually do about what we really want from our lives and how our business choices can help us get those things. Because you will have more choices in this world, you'll be able to bring a broader range of your values, not just the economic ones, into your thinking about business. And that means, you can—if you choose—use your work to help create a world that is not just richer, but better.

CENTER FOR EBUSINESS MISSION

Founded in 1999, the Center for eBusiness is the largest research center in the history of the MIT Sloan School. Our research is supported by the National Science Foundation and corporate sponsors. We fund more than 45 faculty and more than 60 research projects. Our mission is to be the leading academic source of innovation in management theory and practice for eBusiness.

Examples of Current Focused Research Projects:

- Theory T: Trust-Based Marketing
- Implications of e-Commerce for New Services and Structure of Logistics Systems
- How Do Intangible Assets Affect the Productivity of Computerization Efforts?
- Wireless and Mobile Commerce Opportunities for Payments Services
- Two-Tier Support Business Models
- The Impact of the Internet on the Future of the Financial Services Industry
- Pricing Products and Services in the High-Tech Industry

The Center for eBusiness has recently entered into Phase II, adjusting its agenda to focus more explicitly on business value, while at the same time including technologies beyond the Internet in its purview. The early period of exploration and experimentation is coming to an end and there is now the opportunity, and the necessity, to focus more explicitly on using digital technologies to deliver measurable business value. Amidst all this change, the business fundamentals of investment, revenues, expenses, profits, and satisfying customers have only grown more important. At the same time, a broader, inter-related set of technologies is at our disposal. While the Internet has been an important catalyst, related digital technologies are often at least as relevant.

We are co-located with MIT Sloan's Center for Information Systems Research initiative and the Center for Coordination Science to facilitate collaboration. We also collaborate with the Media Lab and the Program on Internet and Telecoms Convergence.



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