

THE CONFERENCE BOARD REVIEW

IDEAS AND OPINIONS FOR THE
WORLD'S BUSINESS LEADERS



Talent Is Everything

MAY / JUNE 2009

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Why you need to reconfigure the company around your people.

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Sometimes, people really do seem like companies' most important asset. Hardly a news cycle goes by without one CEO or another talking about talent: how important talent is to success, how worrisome it is that talent is becoming scarce, how determined CEOs are to win the race for talent.

But at the same time, that very talent is busy decorating their cubicles with newly clipped *Dilbert* strips and posting disparaging remarks about their managers on Facebook.

The contrast is striking: public declarations of love for talent from the top of the organization even as skeptical, even cynical messages of discontent float up from employees. Ironic, yes—and indicative of a deep problem with how many companies approach and regard their talented workers.

This issue is hardly particular to American corporations—it spans the globe. Success in global competition increasingly hinges on companies' and governments' ability and willingness to commit to talent development in ways extending far beyond conventional education and training programs.

Many companies—and countries, and even cities—focus on the worthy goal of hiring and keeping good people. “Attract and retain” is the mantra governing most of today's boardroom talent discussions: How do we find and hire the most talented people? What should our recruiting

strategy be, and how can we more effectively manage the recruiting pipeline? Once talented employees are in the door, how do we offer solid benefit packages? If our best employees are at risk for leaving, what can we do to keep them?

Top executives may be asking many of the right questions, but they often lose sight of what appeals to and keeps hold of talent in the first place. Compensation and benefit packages are surely important, but the opportunity to develop professionally consistently outranks money in surveys of employee satisfaction. Only by helping employees build their skills and capabilities can companies hope to attract and retain them. *Talented workers join companies and stay there because they believe they'll learn faster and better than they would at other employers.*

But how, exactly, does talent get better faster? Workers develop not through formal training programs but by trying new things, by experimenting with what they do in their jobs and how they do it ¹, and by tackling real problems with other talented people with different backgrounds and skills—people who are just as likely to work for other companies, in other locales, as they are to be working in the same company. Talented employees develop best by participating in talent networks—the largely invisible matrix structures, made up of knowledge flows, that run within firms and, with increasing frequency, between and across them.

Unfortunately, few of today's big companies are set up to encourage or even allow talented workers to tinker with their work practices, or to collaborate with other workers across the boundaries of the enterprise. Operations manuals explicitly discourage deviation from standardized practices and processes. Organizational silos and matrixed organizational designs hinder or even prevent workers from easily finding and collaborating with each other within the enterprise, let alone across enterprises. Corporate strategies fixate on meeting quarterly financial targets through aggressive cost-cutting and too often fail to create the growth needed to offer workers advancement and development opportunities. And so forth. Big companies listen with a tin ear to their best people's development needs. ²

These workers can be found at every level of the firm. They're not just the highly trained and deeply skilled knowledge workers one typically thinks of as "talent," such as quant equity traders or software engineers. They are also the wide range of workers—truck drivers in a logistics operation, front-line employees talking with customers, workers on a manufacturing assembly line—who interact with and monetize intangible assets. Intangible assets include the institutional skills, intellectual property, brands, networks, and reputation that increasingly determine a company's profit per employee and thus its total profits and market capitalization. ³

Because talent works at every level of the corporation, the changes necessary to develop people extend into nearly every aspect of the firm's activities: *Companies must truly become talent-driven firms.* Operations, organization, and strategy must be reconceived through the talent lens—and new information technologies and managerial "dispositions" (the fundamental ways executives regard the business world, and even human nature) now become essential.

Executives will even find themselves asking the most fundamental question of all: What business are we really in?

Don't Just Push

Let's start with operations. During the last century, large Western companies built their business operations around the concept of "pushing" resources into the areas of greatest anticipated need. Whether it's the shelves of a retail store, the activities of a manufacturing plant, or the processes

comprising HR management, push approaches try to forecast demand and then design operations to ensure they deploy the right resources to the right place at the right time.

Push programs have enabled scalable, cost-effective operations. But they've come at a steep price: the rigid standardization and specification of activities and tasks they require. The highly specified operations manuals created by traditional push programs are in many ways antithetical to talent development, which requires workers to improvise and experiment with their working practices in order to learn and grow.

What if, then, rather than treating exceptions—unanticipated events that fall outside a company's policies and rules—as nuisances, companies welcomed them as opportunities for participants to tinker and experiment? Examples might include a customer requesting special financing terms on an order, a supplier seeking new information that isn't "authorized" for release but that could help the supplier design a more efficient process, or a discovery by a product-development team that there is a new technology available that's not yet on their company's authorized component list. In a world of near-constant disruption, we would expect these unanticipated events to multiply.

As they do, they become early indicators of innovation opportunities—especially if the same events begin to occur with increasing frequency, which might suggest unmet needs or unexploited capabilities.

So what if, rather than trying to forecast demand and standardize operations so as to avoid surprises, companies were to create more flexible "pull" platforms to help participants access resources whenever and wherever they are needed?

Pull platforms are essential to fostering learning on the job, since they make it easier to access unexpected resources in unexpected ways and thereby encourage participants to try new approaches. Yet Toyota's pull platform, and that of companies like it, are in reality a very limited form, working with a small and circumscribed group of partners. To fully realize the potential for people development in broad, cross-enterprise talent networks, the talent-driven firm will need to deploy even more ambitious pull platforms that scale to large numbers of companies. It's vital to expand the diversity of participants and ensure that you have world-class capability in all the domains relevant to your company. This is necessary in part for the purpose of enhancing flexibility in identifying and integrating new practices and technologies into the network and in part for the purpose of amplifying learning among participants in the network.

Global process networks—in which large numbers of highly specialized participants work together across multiple steps of a core operating process, such as a supply chain—demonstrate the potential of these more scalable pull platforms. In demanding industries as diverse as apparel, consumer electronics, and motorcycles, orchestrators are emerging and creating pull platforms for hundreds and even thousands of specialized participants. Li & Fung, an orchestrator of a global process network in the rapidly shifting apparel industry, has a pull platform embracing more than ten thousand companies operating in more than forty countries.

Creating these scalable networks requires a very different set of operational management techniques, including the use of loosely coupled modules of activities and the development of long-term, trust-based relationships among participants. These networks allow management to expand the scope of the core operating processes of the firm—supply-chain management, product innovation and commercialization, and customer-relationship management—well beyond the boundaries of the enterprise. Only when companies have embraced a truly end-to-end view of all the activities required to deliver value to the end customer can their employees participate in

and benefit from cross-enterprise talent networks.

Only Connect

Most companies will likely struggle putting pull platforms into play unless at the same time they rethink how they interact and collaborate with other companies. Large Western firms have thrived by building scalable operations within their own enterprise and paring their broader partner networks down to a very few key partners. What happens when they try to increase the number of partners—as they must, for example, in global process networks—in order to better connect to talent wherever it resides? Most will encounter a sharply increased cost of complexity. The complexity grows until companies master a new form of innovation, one that reconceives roles and relationships across large numbers of institutional entities so as to make them less transactional and more relational, less “hard-wired” and more “loosely coupled,” and, generally speaking, more supportive of richer cross-enterprise interactions and collaborations among their workers.

In these network arrangements, companies forge connections and carry out interactions less expensively and more rapidly and flexibly than they can through conventional institutional practices. Once they do, their talent can begin to connect more effectively with other talent to achieve new performance levels.

In the past, executives have tended to be wary of cross-enterprise collaboration out of concern for loss of intellectual property, hold-up (the ability to extract unfair payments out of others because of a unique position or set of assets), and distribution of rewards. However, these concerns are largely shaped by a zero-sum view of the world. Focusing on talent development helps to shift to a positive-sum view: As talent improves, more value gets created in aggregate, and all participants have an opportunity to gain.

Consider, for example, how a new generation of motorcycle assemblers emerging in Chongqing, China, demonstrates the power of a positive-sum approach. Assemblers such as Dachangjiang Group cultivate rapid improvement in motorcycle design and performance through innovative working arrangements with their design partners. Rather than providing designers with detailed product blueprints, assemblers supply them with rough sketches and performance outputs along a variety of tightly specified dimensions.

When interdependencies surface across components and subsystems—as they inevitably will in even the most modular design—the assemblers expect the participants from all relevant design partners to figure out how to resolve them. Thus ensues a lot of testing and refining to reach the assembler’s aggressive performance targets. As a result, learning increases across the network of participants, as shown by the decline in the assembler’s average motorcycle price from \$700 to \$200 from 1997 to 2002, without any corresponding decline in reliability or quality.

Productive Friction

Global process networks are not the only organizational arrangements that harness a positive-sum view of the world to scalably collaborate across institutional boundaries. Their close cousin global *practice* networks are even looser forms of collaboration involving participants from similar skill areas engaging around common performance issues. Global practice networks are emerging in such diverse areas as open-source software and extreme sports.

Consider, for example, how extreme surfers have used global practice networks to push the limits of their sport. In the 1950s, six-foot waves were considered challenging; today, big-wave surfers routinely and successfully ride sixty-to-seventy-foot waves. Big-wave surfers tend to congregate at specific beaches and breaks to learn their craft, and they connect at competitions and,

increasingly, through the Internet. They gain from carefully watching each other and observing new techniques and practices under different wave conditions. Regular competitions pit these surfers against each other and demonstrate which approaches have the greatest potential to drive performance. While the surfers generally operate as individual participants, their activities and interactions are more often than not orchestrated by commercial entities such as surfboard shapers and contest organizers, who work hard at defining new performance challenges and motivating participants in their network. Even where money is at stake, the collaborative spirit generally moves to the forefront, as illustrated in the 2008 Mavericks Surf Contest in Half Moon Bay, Calif.: As the six finalists paddled out to catch the final set of waves, they agreed to share the prize equally, regardless who was declared the winner.

Both kinds of networks—global process networks and global practice networks—create opportunities for talent to come together and generate “productive friction,” the conflict that shapes learning as people with different backgrounds and skill sets engage with each other on real problems. Many executives pursue the supposed nirvana of a frictionless economy, but we believe that aggressive talent development inevitably and necessarily generates friction. It forces people out of their comfort zone and often involves confronting others with very different views as to what the right approach to a given situation, challenge, or opportunity might be.

The key is to organize the right environments to generate friction. This requires bringing together appropriate participants with diverse experience sets, investing the time required for them to develop shared respect, defining aggressive performance requirements, and providing them with tools that can help them negotiate the approaches that are most promising for achieving these performance requirements.

Most importantly, it requires carefully specifying action points that will force the participants to produce a solution meeting the performance requirements within a certain period of time⁴. This is challenging enough when it occurs within a single firm but gets all the more challenging—and rewarding—when companies generate productive friction by connecting talent across multiple institutional boundaries. Again, participating in global process and practice networks is the best way to learn the institutional innovations needed to make these connections. Doing so ensures that talented workers benefit from the broad range of experiences and approaches that diverse participants within such networks bring to a given problem or situation.

Of course, companies must also innovate how they handle talent within the firm. Companies must, for instance, recognize that today’s career is no longer a straight shot up the corporate ladder but, instead, what Deloitte executives Cathy Benko and Anne Weisberg characterize as a “combination of climbs, lateral moves, and planned descents” along the “corporate lattice”—thereby extending the concept of mass customization into a new approach for how work gets done and careers are built.⁵ Many companies have recognized the value of accessing people’s diversity to get creative and unexpected approaches to business issues. The lattice concept takes this one step further by enhancing the diversity of experiences for each individual as well. Diversity of people and diversity of experiences combine to create a much richer pool of talent.

What Business Are We Really In?

Putting talent development center stage also forces a reassessment of business strategy, particularly growth strategies. Companies growing slowly (or not at all) often fail to provide a rich set of development opportunities for their employees, since they confront fewer new performance requirements and generally offer slower advancement opportunities than faster-growing companies. At a disadvantage in developing their employees, slow-growth companies will over

time likely find it harder to attract and retain world-class talent.

Consider Google's ability to poach top-quality talent from slower-growing technology companies—and notice how even Google has recently been losing its own talent to still-faster-growing companies such as Facebook. As companies grow bigger, of course, further growth becomes difficult to achieve. That's why leveraged growth strategies—which help big companies achieve higher levels of growth with more limited resource commitments—are essential to developing talent faster.⁶

At another level, many markets' broad-based shift from product-based to service-based businesses also informs how well and how fast companies develop talent. Services typically offer the opportunity for richer and quicker market feedback loops and more rapid iterations on the design of customer offers than products do. As a result, companies with a higher percentage of services relative to product businesses will have a talent advantage.

A simple contrast drives this home. In the software business, firms still sell and deliver most application software as packages installed on customers' premises. Because installation presents logistical challenges and cost, packaged software upgrades occur in six-to-eighteen-month cycles. Compare this to the new generations of application software, delivered to customers as services over networks. These services are updated in much shorter cycles—often hours rather than weeks or months. Because of long upgrade cycles, packaged-application software developers tend to be much more conservative about what features or new designs to include in each release—the risk of getting it wrong is too high. With software delivered as a service, by contrast, developers can introduce a new feature or design, watch how it is used, gather feedback, and implement modifications and refinements much more quickly. Companies can encourage experimentation and tinkering, and software developers get better faster because they can test and refine their approaches more rapidly.

At an even more basic level, an aggressive focus on talent development forces management to address the most fundamental strategic question of all: What business are we really in? Despite decades of unbundling the diversified conglomerates that were the rage in the 1960s and '70s, most companies today remain an unnatural bundle of three very different kinds of businesses: infrastructure management, product innovation and commercialization, and customer-relationship businesses. Each of these businesses has very different skill sets, economics, and even cultures, yet they often remain tightly bundled together within a single firm.⁷

Keeping these businesses tightly bundled makes it more difficult to develop talent rapidly, given the inevitable organizational and operational compromises companies make to accommodate the divergent, even conflicting, needs of these three businesses. More focused companies have an advantage in talent development. Consider the many pure plays created by outsourcing. As they've invested in their employees' professional development, companies specializing in assembly-line manufacturing, logistics, and even routine customer call-center operations have generated eye-opening performance improvements. One big factor: The workers in these companies were often viewed as second-class citizens when employed by more diversified companies; in more specialized companies, they are core contributors of value.

Take, for example, focused call-center operators such as Philippines-based eTelecare. Interviews show that eTelecare employees derive a high degree of motivation from being at the core of the business rather than on the periphery of a much more diversified business. Because the performance of eTelecare's call-center operations is so central to the company's overall success, it

invests highly in worker development. The company has a 1:8 ratio of front-line supervisory management to call-center operators, versus the average 1:20 in the call centers of diversified U.S. companies. Its investment in staff development allowed eTelecare to exceed the performance of one of its clients' world-class telemarketing facilities within one week and, within four weeks, to generate three times as much revenue per hour. Staff also benefits as they move up the skill ladder, from relatively modest initial skills in the call center to more sophisticated customer-support capabilities and, in some cases, all the way to handling complex mutual-fund advisory calls. Some staff made the jump from entry level to NASD Series 7 broker certification in a mere eighteen months.

IT Makes It Easier

The foregoing recommendations aim to strip away the surface barriers confronting executives as they make development the centerpiece of their talent strategy. Pull platforms take aim at the deadening standardization and rigid specification of push programs. Global process and practice networks extend companies' ability to develop talent beyond the four walls of the enterprise. And leveraged growth and unbundling strategies create the conditions for talent to thrive. Once these obstacles are cleared, however, two more fundamental barriers appear: today's information-technology infrastructure and management dispositions.

Until very recently, our IT architectures and infrastructure significantly limited companies' ability to make flexible choices regarding how they operate, organize, experiment, and establish the strategic direction of the business. The hard-wired technologies that compose client-server IT architectures make it next to impossible to implement pull programs across large numbers of enterprises or to pursue leveraged growth strategies.

Fortunately, a new generation of loosely coupled, modular technologies—the building blocks for service-oriented architectures, cloud computing, and Web 2.0 platforms—provide a much more robust foundation for fundamental changes to our working practices. A variety of tech-savvy companies such as Google, Amazon, and Cisco are already deploying these new technologies to support their own talent-development initiatives, often going well beyond the boundaries of their companies.

Cisco, for example, has invested heavily in an e-learning platform that blows up the notion of centralized training facilities and creates a pull platform for employees from more than forty thousand business partners, all of whom can access analytic tools and information regarding Cisco products on an as-needed basis. SAP, meanwhile, has created robust online forums for independent developers that use SAP products to come together and problem-solve ways to get more value from these products. In the process, not only do Cisco and SAP help their own employees get better faster—they also help the employees of their business partners and customers get better faster.

Attitude Is Everything

Difficult as embracing a new generation of information technology might be for companies heavily committed to legacy IT systems and architectures, technology may prove the easy part. Executives must also transform the dispositions they hold regarding the sources of business success.

Executives are often unaware of these unstated and unexamined assumptions. It may not overly simplify things to characterize today's prevailing management disposition as follows: "We live in a largely static, zero-sum world where change is episodic and unpredictable. Change is threatening because it inevitably creates winners and losers. The best way to capture value in this world is to

tightly control intellectual property and all the resources required to generate value from that intellectual property. Collaboration, to the extent it is necessary, works best with a few carefully selected partners with similar mindsets.”

Contrast this with an alternative management disposition: “We live in a dynamic world where the patterns of change are discernable and understandable, even if specific events are less predictable. Continuing innovations create the potential for much greater resource abundance and positive-sum outcomes where all participants can gain from collaborating with each other. Collaboration is essential to tapping into this potential, and the most powerful forms of collaboration are highly scalable, mobilizing large numbers of participants with diverse and very deep specializations.”

The first management disposition—let’s call it the control disposition—offers limited room for talent development. If the world is largely static and control is the name of the game, talent certainly counts but has little need for continual refreshing. In this worldview, talent development on the job actually undermines the higher goal of control.

The second management disposition—let’s call it the collaboration disposition—provides a much stronger foundation for the talent-driven firm. If the world is continually changing in discernable patterns and continuing innovation is the source of significant new value, talent development becomes a much higher priority. Executives with this disposition will recognize that existing talent rapidly obsolesces and that success depends upon continually renewing their employees’ skills and orientation. These executives are also more inclined to recognize the importance of accessing talent wherever it resides.

Executives realize that the race for talent is one they cannot afford to lose. Yet all too few of them grasp the far-reaching changes needed to become a truly talent-driven firm—changes not just to strategy, organization, operations, and technology but to the more basic dispositions underlying today’s managerial actions, practices, and interventions. By embracing these new dispositions, companies can become magnets for talent in a world where talent is increasingly scarce.

Zero-Sum to Positive-Sum

Companies can do a lot to reframe and refocus talent-development efforts, but at the end of the day, their efforts can extend only as far as the broader policy environment allows. At a fundamental level, public policy needs to be broadly reframed with a talent-development lens.

Educational policy, for instance, must move beyond formal educational programs confined to narrow stages of our lives, and even beyond the notion of retraining programs later in life. We must foster environments that create the opportunities, incentives, and capabilities to discover and act on people’s passions throughout life.

We also need to harness the forces that have enabled Silicon Valley and Manhattan to become global talent spikes, attracting top people from around the world. Rather than confining this success to highly trained engineers and financial “quants” in a few cities, we should provide opportunities for everyone, whether a machine-tool worker in Cincinnati or a farmer in Nebraska, to get better faster and thrive in our global economy.

With the benefit of a talent-development lens, unexpected and exciting policy solutions could be developed for hotly debated public-policy issues such as immigration, telecommunications, intellectual property, and trade. Consider telecommunications: An ambitious broadband and open-spectrum policy might build learning-on-demand into a system in which anyone can find the

information she needs, when she needs it, and turn that information into action.

On immigration, the question might become how we can more broadly emulate the Silicon Valley model, where talented immigrants from around the world have helped domestic engineers to learn faster as they engage with others who see the world quite differently from them. (Few people realize that about half of the entrepreneurial talent fueling Silicon Valley's success originated outside the United States.)

Even more promisingly, a focus on talent development can transcend national interests. After all, if we are serious about developing our own people, we must find rich and creative ways to access and connect with talent wherever it resides around the world. No matter how skilled Americans are, they will develop their talent even more rapidly if they have the opportunity to interact with other equally talented people outside this country. There is no place for building walls and sheltering talent from the challenges of others.

A talent-development perspective might also lead to a reassessment of public diplomacy. We could build deeper relationships with the countries that are most successful in developing their people, so that the workers of our respective countries can get better faster as they collaborate. At the same time, we might provide a more compelling role model for governments and, perhaps more important, the populations of countries that are lagging behind in talent development.

Thinking more expansively, accelerating talent development provides a robust platform for reconceiving both domestic and foreign policies. Indeed, the actions of the United States will lack credibility and power if they are not applied consistently and continuously in both domains.

Talent development requires sustained effort and a respect for the texture of complex issues and diverse perspectives. But the rewards are worth the effort. We may ultimately be able to move from the zero-sum mindsets that dominate our current political discourse to a positive-sum outlook—one in which overall rewards increase at an accelerating rate and everyone can share more fully in an expanding pie. ■

The Knowing-Doing Gap

BY EDWARD E. LAWLER III

In one of my favorite *Dilbert* cartoons, the boss says, "I've been saying for years that 'Employees are our most valuable asset.' It turns out that I was wrong. Money is our most valuable asset. Employees are ninth." When asked what came in eighth, he says: "Carbon paper." I realize that not everyone remembers carbon paper, but I hope those of you who don't still get the joke—and the real point: Lip service and window dressing are not enough.

A modest effort to attract, retain, and motivate talent is all that's needed in some organizations, because they achieve good enough performance from their human capital and people are not their primary source of competitive advantage. But for companies that are truly competing on the performance of their people, it is not enough. It is not just about controlling people costs because they are a major expense—it is about how well people perform that determines whether their organization is effective.

What does it take to create an organization that successfully competes on the basis of the performance of its talent? The first answer many give is "the right people." It is hard to argue

with this, as talent is certainly critical to innovation, change, and high performance. Finding, acquiring, and retaining the right talent is a necessary but insufficient step in creating an organization with a sustainable competitive advantage. An organization also needs the right structures, systems, processes and practices in place. All too often, organizations have great people but fail to manage or support them correctly. People are stifled by systems and processes that restrict experimentation, limit learning, hinder the transfer of knowledge, fail to motivate, and suppress innovation.

Until recently, it might have been possible to argue that a major barrier to managing organizations in a way that treats talent as the most important source of competitive advantage was a lack of knowledge about how to do it. No longer: Thousands of research studies on organizational effectiveness have provided an enormous amount of evidence on how to manage the human side of organizations effectively. The scientific literature not only provides useful theories—it contains a considerable amount of data on how effective a variety of practices are. If there is a knowledge problem at this time, it is the persistence of a knowing-doing gap. In other words, the knowledge exists but is not being used effectively.

For example, in the area of rewards, most organizations still have job descriptions and merit-pay systems. They fail to use knowledge-based pay, profit-sharing, and stock-ownership plans that create a high level of involvement in the success of an organization.

With respect to their structure, they fail to use self-managing teams and flat structures that optimize member contact with the external world. As a result, they fail to create the right amount of organizational surface area so that the members of the organization are close to and in touch with key external individuals and issues.

Most organizations also fail to appropriately reward managers for developing individuals and individuals for developing themselves. Indeed, performance-management systems all too often are seen as a bureaucratic pain in the posterior rather than as a key strategic tool to help develop and manage individual and organizational performance.

Information and decision processes often exclude many members of the organization from having input to key decisions. Those processes also fail to deliver to them the kind of information they need in order to make good decisions and to be engaged in the business of the organization.

The HR function in many organizations is poorly staffed and lacks the kind of decision-making sophistication that is required to adequately manage the organization's most important asset: its talent. Most corporate boards lack the information and expertise they need if they are to oversee an organization. Last but certainly not least, most organizations fail to develop the kind of shared leadership approach that is needed.

It is one thing to say people are our most valuable asset; it is another to act on it. Those organizations that do the best job of acting on it will be the winners. Most of what organizations need to do is clear; it is time for those who make the performance of their people a priority to do it.

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¹ See, for instance, “Smart People or Smart Contexts? Cognition, Ability, and Talent Development in an Age of Situated Approaches to Knowing and Learning,” by Sasha A. Barab and Jonathan A. Plucker, [publication home](#)

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“Mapping the landscape of organizational learning,” by Georges Romme and Ron Dillen, [European Management Journal](#)

[Volume 15, Issue 1](#), February 1997, Pages 68-78; and “Organizational Learning and Communities of Practice: Towards a Unified View of Working, Learning, and Innovation,” by John Seely Brown and Paul Duguid, *Organization Science*, 1991 2(1): 40-57

² See “Mysteries of the Region,” by John Seely Brown and Paul Duguid, in *The Silicon Valley Edge*, Chong-Moon Lee, et al, editors, Stanford University Press, 2000

³ For more about how monetizing intangible assets drives corporate wealth creation, see *Mobilizing Minds*, by Lowell Bryan and Claudia Joyce, McGraw-Hill, 2007.

⁴ For more about productive friction, see “Productive Friction: How Difficult Business Partnerships Can Accelerate Innovation,” by John Hagel III and John Seely Brown, *Harvard Business Review*, February 2005.

⁵ See *Mass Career Customization*, by Cathleen Benko and Anne Weisberg, Harvard Business School Press, 2007

⁶ See “Leveraged Growth: Expanding Sales Without Sacrificing Profits“ by John Hagel III, *Harvard Business Review*, October 2002

⁷ See “Unbundling the Corporation,” by John Hagel III and Marc Singer, August 2000.