

Preface

We wrote this book because we wanted to understand why so many managers know so much about organizational performance, say so many smart things about how to achieve performance, and work so hard, yet are trapped in firms that do so many things they know will undermine performance. This book was inspired by several intertwined events. After the publication of two books on how to manage people for enhanced organizational performance, Jeffrey Pfeffer was intrigued and puzzled to find that, over and over again, on this topic and many others, people obviously knew what to do, but didn't do it. Pfeffer also noticed that many of his colleagues at Stanford Business School almost invariably didn't do anything remotely related to what they taught when they found themselves in leadership roles. Finally, he noticed that there were more and more books and articles, more and more training programs and seminars, and more and more knowledge that, although valid, often had little or no impact on what managers actually did.

So, it was clear that knowing what to do was not enough. It was clear that being smart was not enough to turn knowledge into practice. It was evident that reading, listening to, thinking, and writing smart things was not enough. Pfeffer was taken with this problem because, while it is obvious | ix

and pervasive, and there is no doubt it is important, there is precious little understanding about what causes it or how firms overcome it. He suspected the problems were largely in organizational practices, not individual psychology, but he needed much more evidence. So he decided to launch an intensive long-term research effort to discover what prevented organizations that are led by smart people from doing things that they know they ought to do.

This was, and is, an unstructured and messy question. There are relevant bodies of literature and ideas, but it was clear that the only way to explore what we came to call the knowing-doing gap was to use both qualitative and quantitative field methods for studying organizations. Pfeffer needed an ally who knew how to use these kinds of methods and who was equally intrigued by this problem. So, Pfeffer enlisted the help of Robert Sutton, a friend and Stanford colleague for many years. And off we went, to learn how some organizations failed to turn knowledge into action, how some succeeded, and why.

Our conviction that this is one of the most important and vexing barriers to organizational performance has been fueled throughout this project by the strong, and quite emotional, reactions we always get to this topic. When talking about other topics to the engineers, managers, and executives we teach or when working with the organizations we try to help, we often make brief allusions to the knowing-doing problem. Again and again, after just a one-sentence description of the problem, people tell us (often interrupting us in the middle of our second sentence on the topic) that they already know what effective organizations should do and, if they don't have such knowledge, it is usually easy for them to find a book or, in the case of executives or firms, to hire new employees or consultants to find out what they need to know. What they don't know how to do, what they get wildly frustrated about, what makes them whine, holler, curse, moan, and even cry, is to understand why their firms so often fail to turn this knowledge

into action. This frustration has also meant they are curious, at times even desperate, to learn how other firms avoid or overcome barriers to turning performance knowledge into organizational actions. The depth of this frustration and the deep interest we encountered everywhere about how to surmount knowing-doing gaps inspired us to press ahead throughout the four-year program of research that led to this book.

We were also so devoted to this project (“obsessed” is probably more accurate) because our collaboration was among the most delightful and engaging working relationships we ever had. The mix of intellectual excitement and rollicking, ranting fun we shared during the last four years was a rare privilege. We both have extensive experience writing with collaborators, with over 100 coauthored books and articles between us. We know that the intellectual spark and joy we have shared during this project only happen a few times in a researcher’s lifetime. There were so many wonderful moments. Or at least we thought they were wonderful. The people around us probably found them silly and annoying. Hollering, arguing, and jumping up and down in our regular brainstorming sessions. Ranting at each other during long airplane flights that seemed short because we had so many ideas to argue about. And, perhaps the best memory of all, an evening in September of 1997 in the Palace Hotel executive floor lounge in New York City, when a demanding Jeffrey Pfeffer kept pushing a grouchy and resistant Robert Sutton to develop ideas for the book. Sutton complained mightily that he was tired, he just wanted to eat, drink, and talk about something else. But an hour or so later, we had an outline that matches the chapter headings in this book almost perfectly.

We don’t want to leave the impression that this project flowed easily and entailed no setbacks. On the contrary, we had lots of failures along the way. We devoted a full year to a failed collaboration with a consulting firm (that, by the way, is in the knowledge management business) that

tried mightily, but proved unable, to implement a study of the gap between knowledge and action. We tried other ideas that also didn't work out. But once something was clearly not working, we abandoned the path quickly, stopping just long enough to figure out what we should learn before trying something new. We never stopped to worry about how much time we had wasted and never spent one minute talking about which one of us was to blame for the last dead end. Rather, we were inspired by the successful firms we studied, in which setbacks and mistakes were viewed as an inevitable, even desirable, part of being action oriented. We heeded their advice that the only true failure was to stop trying new things and to stop learning from the last effort to turn knowledge into action.

Acknowledgments

There are so many people who have helped us learn. Our students in various courses at the Stanford Business School and Engineering School not only did enlightening case studies, but were also real learning partners in an exploration into the messy but important question of why knowing-doing gaps existed. Each of them has our heartfelt gratitude. We also want to thank every person at every company who participated in the various quantitative and qualitative studies that we and our students did during the course of this project. Special thanks go to Peter B. Ashley, Dennis Bakke, Gwen Books, Charlie Bresler, Patricia Dunn, Larry Ford, Betty Fried, Ben Gibert, James Goodnight, Fred Grauer, Gary High, Jeff Jefferson, David Kelley, Tom Kelley, Annette Kyle, Diane Lumley, Charles Lynch, Dave Morthland, David Russo, Roger Sant, Steve Scammell, Elmar Toime, Burgess Winter, and George Zimmer for being so generous with their time and for helping us gather useful data and insights in so many different ways. We would also like to thank our research assistants. We are grateful for the major roles that Laura Castaneda and Tanya Menon played

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We thank Marjorie Williams, our skilled and wise editor, and her many colleagues who have been so helpful at the Harvard Business School Press. When we say that Marjorie is our favorite editor, we aren't just talking. We have backed this statement with action. Between the two of us, this is the fifth book that we have finished under her guidance, and both of us have another HBS Press book on the way. Marjorie's mode of operation reminds us of the most effective leaders we studied while writing this book. She never stops moving forward, never stops talking about how good things already are, how much better they can be, and exactly what should be tried next to achieve excellence. We don't always agree with Marjorie, but we always appreciate her because, more so than any editor we have ever met, she cares about the quality of the work and about maintaining long-term relationships. If people elsewhere followed Marjorie's lead and always acted as if quality and long-term relationships with suppliers were their top priorities, the gap between knowledge and action would disappear in many organizations.

We thank the institutions, and especially the supportive people within them, that provided us with the time and resources to write this book. The Stanford Business School, and particularly David Brady, the associate dean over the organizational behavior group, provided financial support of many forms, including time, the most important resource. The Boston Consulting Group provided funding for some research assistance and incidental expenses, money that was vitally important for successfully completing this project. Jeffrey Pfeffer wrote this book partly during the year he was a Fellow at the Center for Advanced Study in the Behavioral Sciences. Neil Smelser and Bob Scott are role models of how to run an academic institution and how to build a culture that encourages learning, collaboration, and personal development. Thanks don't seem adequate

for the opportunity they have provided. Support for Jeffrey Pfeffer's year at the Center came from National Science Foundation Grant SBR-9022192.

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Much of our field research was completed when Robert Sutton served as a faculty member at the Haas Business School during the 1997–98 academic year. The Haas School supported his research time, and U.C. Berkeley's Institute for Industrial Relations supported a research assistant during that year. He thanks Jennifer Chatman, Richard Meese, and Barry Staw for their ideas, their help, and most of all, their understanding.

The ideas in this book were shaped by conversations with many other colleagues. Our dear friend Charles O'Reilly gave us many ideas about the hazards and virtues of strong organizational cultures and how to change such strong belief systems. Talking to Bob Cialdini, although not nearly often enough, kept us grounded in good social psychological theory. Arie Kruglanski provided research on the need for cognitive closure.

We owe special thanks to the people who gave us detailed comments on earlier drafts of this book. Beth Benjamin did a fabulous job, under terrific time pressure, of reading a draft of the manuscript and providing insight, examples, wisdom, and encouragement. J. Richard Hackman offered both support and concrete suggestions for improving our work. We hope we learned all we could from his generous advice. Francine Gordon, once again, was kind enough to provide not only moral support and facilitate financial support of the project, but also to furnish ideas and helpful suggestions on the manuscript. Colleagues like these are more precious than any mere words can express.

1 | Knowing “What” to Do Is Not Enough

Why do so much education and training, management consulting, and business research and so many books and articles produce so little change in what managers and organizations actually do?

In 1996, more than 1,700 business books were published in the United States,¹ and more are published each year. Many of these books are filled with the same analyses and prescriptions, albeit using different language and graphics, as could be found in similar books published the year before. In fact, many of the ideas proclaimed as new each year can be found in similar books printed decades earlier.² Yet these books find a ready market because the ideas, although often widely known and proven to be useful and valid, remain unimplemented. So, authors try, in part through repackaging and updating, to somehow get managers to not only *know* but to *do* something with what they know. And managers continue to buy the books filled with ideas they already know because they intuitively understand that knowing isn't enough. They hope that by somehow buying and reading one more book they will finally be able to translate this performance knowledge into organizational action.

Each year, more than \$60 billion is spent on training in and by organizations, particularly management training. | 1

Much of this training, on subjects such as Total Quality Management (TQM), customer service and building customer loyalty, leadership, and organizational change is based on knowledge and principles that are fundamentally timeless—unchanged and unchanging. Nevertheless, the training often is repeated. Regardless of the quality of the content, the delivery, or the frequency of repetition, management education is often ineffective in changing organizational practices.

Professor Mark Zbaracki of the University of Chicago studied Total Quality Management training in five organizations in which senior executives believed that TQM methods could enhance the quality of their products and services and that the training had changed how people performed their jobs.³ Zbaracki found, however, that the quantitative TQM methods were not used *at all* in four of the organizations and only on a limited basis in the fifth. This result is not unique to TQM—we observed it repeatedly during our research.

Each year, billions of dollars are spent on management consultants by organizations seeking advice—one estimate for 1996 was \$43 billion.⁴ But that advice is seldom implemented. One consultant, making a presentation to obtain work from a large U.S. bank, showed an overhead slide that had the recommendations from four previous consulting studies conducted in just the prior six years for that bank. All four studies had come to the same conclusions, which is not surprising given that smart people from four different firms looked at essentially the same data. The presenter, selling implementation and change rather than analytical services, asked the assembled executives, “Why do you want to pay for the same answer a fifth time?” He and his firm got the job. As another example of knowing but not doing in the world of management consulting, two consultants from one of the leading firms worked on a project for a large electrical utility in Latin America that was facing deregulation. They were chagrined to discover that

management already had a four-year-old, 500-page document with extensive plans and recommendations produced by a different consulting firm in a previous engagement. They reported:

The old document was very good. It had benchmarking cost studies from best-practice utilities all around the world, summaries of the most successful training systems in other industrial companies, and pretty detailed implementation calendars. . . . As our analysis was based on the same . . . information that was given to the last consultants four years before . . . our recommendations were basically the same. The problem was not analysis. It was implementation. Although we could identify some new areas for improvement, the core was almost a copy of the old document. . . . The client already had the basic information we were giving them.⁵

Each year the hundreds of business schools in the United States graduate more than 80,000 MBAs and conduct numerous research studies on business topics. Business education and research are growing in scope and prominence in countries around the world. Yet the translation of this research and management education into practice proceeds slowly and fitfully. There is little evidence that being staffed with people who have an advanced education in business is consistently related to outstanding organizational performance. Many top-performing firms—Southwest Airlines, Wal-Mart, The Men's Wearhouse, ServiceMaster, PSS/World Medical, SAS Institute, AES, Whole Foods Market, and Starbucks—don't recruit at the leading business schools and don't emphasize business degree credentials in their staffing practices. Numerous researchers have found that "little of what is taught in college or even business schools really prepares would-be managers for the realities of managing."⁶ One study reported that 73 percent of the surveyed MBA program graduates said "that their

MBA skills were used ‘only marginally or not at all’ in their first managerial assignments.”⁷

Did you ever wonder why so much education and training, management consultation, organizational research, and so many books and articles produce so few changes in actual management practice? Did you ever wonder why the little change that does occur often happens with such great difficulty? Why it is that, at the end of so many books and seminars, leaders report being enlightened and wiser, but not much happens in their organizations?

We wondered, too, and so we embarked on a quest to explore one of the great mysteries in organizational management: why knowledge of what needs to be done frequently fails to result in action or behavior consistent with that knowledge. We came to call this the *knowing-doing problem*—the challenge of turning knowledge about how to enhance organizational performance into actions consistent with that knowledge. This book presents what we learned about the factors that contribute to the knowing-doing gap and why and how some organizations are more successful than others in implementing their knowledge.

We have spent the last four years on a crusade to learn about what causes the knowing-doing gap and how to cure it, and how some organizations avoid the gaps in the first place. We started by scouring the popular and academic literature to find stories, case studies, and large-scale studies of multiple firms that could provide insights into the knowing-doing problem. We found evidence that organizations in every industry suffer from this malady. But we found few satisfactory answers about either the causes or remedies for this vexing problem. Therefore we performed about a dozen of our own qualitative and quantitative studies of knowing-doing problems in organizations, including financial service firms, product design firms, traditional “metal-bending” manufacturing corporations, mining firms, electric power firms, and retail and restaurant chains. We also taught classes at Stanford, in both the business and

engineering schools, where our management students did about 100 of their own case studies of knowing-doing problems and how these problems had been, or might have been, repaired.

We examined a wide range of organizational practices to learn about the knowing-doing gap. However, we have focused more on a set of practices that, although seldom implemented, are known by most managers, are widely talked about in organizations, and have been consistently shown to increase organizational performance: so-called high-commitment or high-performance management practices. These practices have been described, and their positive effects on performance analyzed, in numerous books and articles.⁸ We will touch on this evidence as needed to make our points about the knowing-doing gap, but will not present detailed descriptions of each of these practices or an extensive review of the evidence showing their positive effects on performance. Our interest is in understanding the barriers to turning knowledge into action and how some firms overcome such barriers. The knowing-doing problems we have observed are general and seem to cross topic domains, including the application of marketing knowledge and best practices in customer service and retention and the implementation of superior manufacturing practices.

We found no simple answers to the knowing-doing dilemma. Given the importance of the knowing-doing problem, if such simple answers existed, they would already have been widely implemented. And the rare firms that are able to consistently translate knowledge into action would not enjoy the substantial competitive advantages that they do. We will provide you with insights and diagnoses of some important sources of knowing-doing problems and with examples of companies that suffer severely from such problems, companies that don't, and some that have been able to overcome knowing-doing gaps. But one of the most important insights from our research is that

knowledge that is actually implemented is much more likely to be acquired from learning by doing than from learning by reading, listening, or even thinking. There is a limit to what we can do for you in this book, regardless of the insights we have acquired. One of our main recommendations is to engage more frequently in thoughtful action. Spend less time just contemplating and talking about organizational problems. Taking action will generate experience from which you can learn.

When we described the knowing-doing problem to others, we frequently got the same response. People would say that the knowing-doing problem comes from inherent problems of individuals—a lack of knowledge or skills or “personality” problems—and that its existence is a reflection of individual deficiencies. It isn’t. If you work in a place where you or your colleagues don’t turn your knowledge into action, it probably isn’t just your fault. There is no doubt that some people are better able to act on their knowledge, that some people are mentally healthier and better adjusted than others, and that individual psychology must surely play some role in the knowing-doing problems we uncovered. But our research suggests that this is not a large part of the story. Some organizations are consistently able to turn knowledge into action, and do so even as they grow and absorb new people and even other organizations. Other organizations, composed of intelligent, thoughtful, hard-working, nice people, fail to translate their knowledge about organizational performance into action. It is almost as if there were some kind of brain vacuum in those firms that sucks the wisdom and insight out of their people. These differences across firms come more from their management systems and practices than from differences in the quality of their people. Great companies get remarkable performance from ordinary people. Not-so-great companies take talented people and manage to lose the benefits of their talent, insight, and motivation. That is why we focus on management practices that either create or reduce the knowing-doing gap.

Implementation or Ignorance: Does a Knowing-Doing Gap Really Exist?

How do we know that knowledge isn't always implemented and that this is a problem affecting organizational performance? And perhaps even more important, how can organizations discover to what degree they are not actually doing what they think they should? These are important, but relatively straightforward, issues.

Evidence of Knowing-Doing Gaps

There are a number of studies within single industries demonstrating that there are superior ways of managing people and organizing their work. Yet although these superior management practices are reasonably well known, diffusion proceeds slowly and fitfully, and backsliding is common. A study of apparel manufacturing demonstrated that modular production, with an emphasis on team-based production, produced far superior economic performance along a number of dimensions compared with the traditional bundle system of manufacturing using individual piecework and limited training.⁹ Trade publications, industry associations, and the relevant unions had favored modular production since the early 1980s. Nonetheless, in 1992 about 80 percent of all garments were still sewn using the bundle method, and some plants that had adopted modular production abandoned it and returned to the bundle system.

Similarly, evidence for the advantages of flexible or lean production in automobile assembly is compelling.¹⁰ This knowledge is widely diffused within the industry and has been for some time. Nevertheless, a five-year follow-up study of the diffusion of flexible manufacturing systems found that there was only modest implementation of flexible arrangements and that "some plants undertook only minor changes in their use of high-involvement work practices . . . and still

others showed modest decreases.”¹¹ And a large-scale study of semiconductor fabrication revealed substantial differences in performance, as measured by cycle time, line yield, and defect density, based on the management practices used. Yet the study found substantial variation in these practices, even in an industry that was characterized by geographic concentration, particularly of corporate headquarters, and substantial movement of personnel between firms. In these and other studies the evidence seems compelling that, although there are better ways of managing and organizing, these superior practices are not necessarily quickly or readily adopted.¹²

Some other examples illustrate the frequently large gap between knowing that something is important and actually doing it. For instance, the Association of Executive Search Consultants conducted a survey in which “three-quarters of the responding CEOs said companies should have ‘fast track’ programs, [but] fewer than half have one at their own companies.” As noted in a *Fortune* article commenting on this study, “Maybe chief executives don’t say what they mean, and maybe they have trouble implementing what they say.”¹³ Our research indicates that it is the latter problem—implementing what leaders say and know—that is more pervasive.

Evidence from various industry studies, and from studies of firms in multiple industries, shows that knowledge of how to enhance performance is not readily or easily transferred *across* firms. Moreover, there is evidence that knowledge of how to enhance performance doesn’t transfer readily even *within* firms. There are persistent and substantial differences in performance within facilities in the same company. One study of 42 food plants in a single company doing essentially the same manufacturing tasks with similar technologies found differences in performance of 300 percent between the best—and worst—performing plants. The best plant earned 80 percent more than the mean, and the worst plant earned 40 percent less than the mean for all

the plants.¹⁴ A study of oil refineries reported little consistency in performance in multirefinery organizations. There was no evidence of a "company effect" on performance, indicating that there was not much consistency in management practices or philosophy across different facilities within the same company.¹⁵

An intensive study of an effort to make a Hewlett-Packard (HP) manufacturing unit more effective reported: "By interviewing thirteen such stakeholders from other departments, including procurement, process generation, engineering, and finance, design team members discovered that communication between departments was poor, thus limiting the degree to which they learned from each other. . . . Opportunities to share innovative process technologies or other sources of competitive advantage were being overlooked."¹⁶ The problems associated with transferring knowledge within HP have led Lew Platt, the CEO, to lament, "I wish we knew what we know at HP."¹⁷ Another study of the transfer of best practices, or knowledge, within firms, noted:

You would think that . . . better practices would spread like wildfire in the entire organization. They don't. As William Buehler, senior vice president at Xerox, said, "You can see a high-performance factory or office, but it just doesn't spread." . . . One Baldrige winner [said], "We can have two plants right across the street from one another, and it's the damnedest thing to get them to transfer best practices."¹⁸

Measuring the Knowing-Doing Gap

We wanted to see if we could quantitatively measure the knowing-doing gap and if there were statistically significant differences between what managers thought should be done and what was actually being implemented. Perhaps the observed differences in practices even within a single

organization were a function of differences in beliefs about what ought to be done rather than because that knowledge wasn't being implemented. So, based on the literature on high-commitment management practices and on organizational innovation, we developed a set of 25 statements that represented these management practices. The appendix presents the full list of these statements. We describe the survey in more detail there because it is a useful tool that firms can employ to learn about themselves. We then administered a survey based on this list in a telephone interview with the managers and assistant managers in a randomly drawn representative sample of 120 units of a large, multiunit restaurant chain.

The managers were asked to what extent they agreed that the practices in the survey enhanced a restaurant's financial performance, using a six-point scale from strongly disagree to strongly agree. These questions assess managerial knowledge as we define it—that is, what leaders believe is important in affecting performance in their units. Then, both the managers and the assistant managers were asked to what extent the behavior in question was descriptive of what occurred in their restaurants—a measure of what was actually done—using the same six-point scale. In most cases, there was excellent agreement about what did, in fact, occur in the restaurant. There were, however, big differences between what the restaurant managers believed produced success and what they reported practicing in their units. For 17 of the 25 management practices, there was a statistically significant difference between what the managers thought was important for restaurant success and what they and the assistant managers reported using in the restaurant. In each instance, the direction of the difference indicated that they weren't doing what they knew to be important (see Table 1-1). The data show that, for the most part, restaurant managers recognize the importance of sharing information with their people, providing feedback, and involving them in learning about how to improve operations. These actions are easier to

Table 1-1
Differences between Knowing and Doing in
120 Units of a Restaurant Chain

Statement	We Know We Should Do This	We <i>Are</i> Doing This
Getting good ideas from other units in the chain	4.9	4.0
Instituting an active suggestion program	4.8	3.9
Using a detailed assessment process for hiring new employees	5.0	4.2
Posting all jobs internally	4.2	3.5
Talking openly about learning from mistakes	4.9	4.3
Providing employees with frequent feedback	5.7	5.2
Sharing information about your restaurant's financial performance with everyone	4.3	3.8

Note: Responses are rated on a six-point scale on which 1 equals "strongly disagree" and 6 equals "strongly agree." All differences were statistically significant at less than the .001 level of probability.

the extent that managers hire carefully, so the restaurants have the right people to begin with. Yet, there was much less implementation of these practices even though their importance was widely understood.

Time after time people understand the issues, understand what needs to happen to affect performance, but don't do the things they know they should. We did a similar study of another restaurant chain that found nearly identical results. In that study, we also observed that leaders frequently rationalized their actions—or more accurately

their inaction—by creating elaborate explanations for why they chose not to do the things they knew were important to their business success. The senior executives, managers, and workers that we interviewed in this second chain invariably had convincing explanations for particular knowing-doing gaps and why they persisted. The firm paid low wages and operated in a very competitive labor market. This made hiring, particularly for service skills, difficult. Store managers also had so many reports to fill out that even had they wanted to, they didn't have enough time to devote to hiring. But when the stores hired the wrong people, turnover was higher. With higher turnover, the managers were under even more pressure to fill positions quickly and became even less selective. This led to further service and employee quality problems, more turnover, and a vicious cycle.

Does the Knowing-Doing Gap Matter?

The answer to the question of whether the knowing-doing gap actually matters for organizational performance is not as obvious as it might at first seem. It is possible that differences in organizational performance come from differences in what firms *know*—the quality and depth of their insights about business strategy, technologies, products, customers, and operations—rather than from their ability to translate that knowledge into action. There are, however, numerous reasons to doubt this is the case. We do not deny that there are important differences in knowledge across firms, such as differences in the sophistication of their understanding of management and operations. But we argue that such differences are only part of the reason for differences in firm performance, and that a much larger source of variation in performance stems from the ability to turn knowledge into action.

Why do we argue that the gap between knowing and doing is more important than the gap between ignorance and knowing? First, because there are too many activities and organizations involved in acquiring and disseminating knowledge to plausibly maintain that there are many important performance "secrets." Consider the plethora of books, articles, consultants, and training programs we have already described. All of these have as one of their objectives the transmission of information. There are organizations that specialize in collecting knowledge about management practices, storing it, and then transferring the information to those who need such information about enhancing performance. These organizations, sometimes called *knowledge brokers*, make a business of transferring performance knowledge. At least two major consulting firms, Andersen Consulting and McKinsey & Company, have units that specialize in transferring knowledge about best practices learned from work with past clients to current clients who did not know, or at least did not use, such information.¹⁹

Although the market for information about "best practices" may not be as efficient as financial or capital markets are reputed to be, it is nonetheless implausible to presume that better ways of doing things can remain secret for long. There are few managers who can resist the temptation to tell their counterparts at other firms or the business press about what they are doing to achieve organizational success. Managers of successful firms are also frequently interviewed and hired by competing firms in the same industry and by firms in other industries that hope to learn and implement the practices of these firms.

Southwest Airlines is a firm that uses fairly simple business practices that are widely known, but it continues to have the best financial performance in the airline industry. Numerous books, case studies, and television shows have described Southwest's management approach,²⁰ but the firm's competitors have either not tried to imitate what it

does or, when they have, like the United Shuttle did, they have not been nearly as successful as Southwest.

Second, research demonstrates that the success of most interventions designed to improve organizational performance depends largely on implementing what is already known, rather than from adopting new or previously unknown ways of doing things. Consider one representative study. A field experiment was conducted with an electrical wholesale company with headquarters in Melbourne, Australia. The experiment compared sales changes in branches that used benchmarking with branches that set high performance goals. In the more-effective benchmarking treatment, “at the beginning of each month . . . each branch was sent a ‘League Ladder’ showing the percentage improvement [in sales] and ranking of all the branches in that group for the past month. In addition, they were sent a list of ‘Best Practice’ hints compiled . . . from information provided by managers of the best-performing branches.”²¹ Over a three-month period, these branches improved their sales performance by almost 6 percent.

The “Best Practice” hints were actually “well-known practices, with the extra dimension that they were reinforced and carried out reliably in the better performing branches. . . . Most managers agreed with the hints, but claimed they were already aware of and employing most of them. . . . Given the nature of the ‘Best Practice’ hints, we can rule out discovery and communication of highly original and effective practices as the reason for improvement in the benchmarking group.”²² Using regular schedules to plan weekly activities, conducting meetings of branch staff to review and discuss branch staff performance, training sales representatives in understanding and interpreting sales trend reports, and using practices that ensure fast and reliable customer service are far from rocket science. They are, in fact, common sense.²³ It is interesting how uncommon common sense is in its implementation.

Or consider Honda's efforts to enhance the performance of its suppliers, which resulted in productivity increases averaging 50 percent at the 53 suppliers participating in Honda's BP (Best Practice, Best Process, Best Performance) program.²⁴ A study of Honda's process noted that "the underlying scientific knowledge for the reengineering of production lines was primarily concrete and simple rather than abstract and complex."²⁵ The changes were consistent with the idea of *kaizen*, or continuous improvement, most of them being small, simple, and in many cases, quite commonsensical given the particular manufacturing process. The genius of the Honda system was in its implementation, not in particularly novel or complicated technical ideas for enhancing productivity.

If there is widespread diffusion of information on "best" (or at least "better") practices, and if the evidence suggests that many successful interventions rely more on implementation of simple knowledge than on creating new insights or discovering obscure or secret practices used by other firms, then our position that the gap between knowing and doing is important for firm performance follows logically. This conclusion means that although knowledge creation, benchmarking, and knowledge management may be important, transforming knowledge into organizational action is at least as important to organizational success.

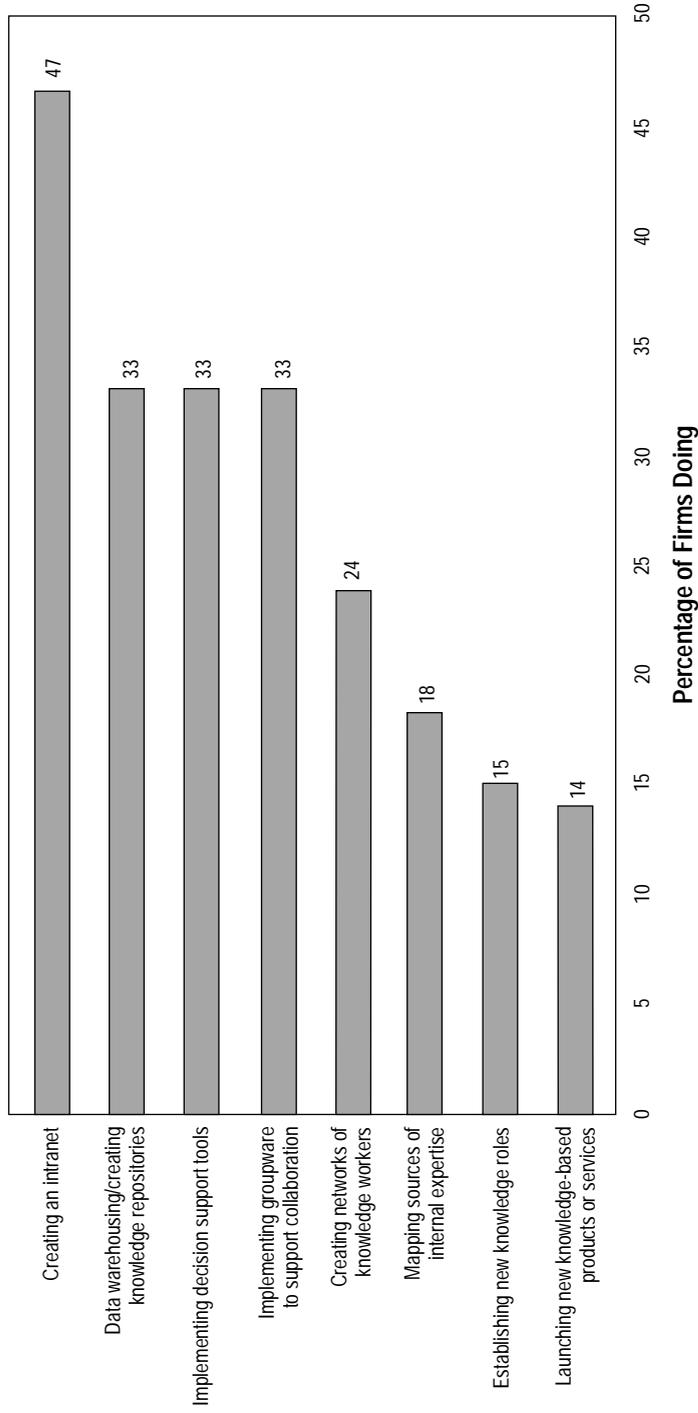
How Knowledge Management Contributes to the Knowing-Doing Problem

One might think that with the current interest in "knowledge management" and intellectual capital, there wouldn't be a knowing-doing problem. After all, there is general acceptance that "knowledge has become increasingly important as a contributor to a country's and individual

firm's success in industrial competition."²⁶ Tomas Stewart's conclusion is typical: "The new economy is about the growing value of knowledge as an input and output, making it the most important ingredient of what people buy and sell."²⁷ But the view of knowledge taken by many consultants, organizations, and management writers is of something to be acquired, measured, and distributed—something reasonably tangible, such as patents. There are two problems with this conception of knowledge or know-how. First, the conception of knowledge as something explicit and quantifiable draws a problematic distinction between knowledge as a tangible good and the use of that good in ongoing practice. The emphasis that has resulted has been to build the stock of knowledge, acquiring or developing intellectual property (note the use of the term *property*) under the presumption that knowledge, once possessed, will be used appropriately and efficiently. As we have seen, this presumption is often not valid.

There is some attention in both the management literature and in management practice to knowledge in use, but this perspective is comparatively rare. Commenting on the papers at a conference on knowledge management, Don Cohen noted, "In the U.S., most knowledge practice focuses on collecting, distributing, re-using, and measuring existing codified knowledge and information. Practitioners often look to information technology to capture and distribute this explicit knowledge; firms measure success by near-term economic returns on knowledge investment."²⁸ An Ernst & Young survey of 431 firms conducted in 1997 is quite revealing about why most firms' efforts in knowledge management are not likely to do much good and may even be counterproductive regarding turning knowledge into organizational action. According to data from that survey (Figure 1-1), most firms' efforts consist of investing in knowledge repositories such as intranets and data warehouses, building networks so that people can find each other, and implementing technologies to facilitate collaboration. These are

Figure 1-1
Knowledge Management Projects



Source: Data from Rudy Ruggles, "The State of the Notion: Knowledge Management in Practice," California Management Review 40 (summer 1998): 83.

all activities that treat knowledge pretty much like steel or any other resource, to be gathered, shared, and distributed. What firms haven't done very much is build knowledge into products and services, or develop new products and services based on knowledge. Furthermore, there is no item on this list of knowledge management projects that reflects implementing knowledge on an ongoing basis.

One of the main reasons that knowledge management efforts are often divorced from day-to-day activities is that the managers, consulting firms, and information technologists who design and build the systems for collecting, storing, and retrieving knowledge have limited, often inaccurate, views of how people actually use knowledge in their jobs. Sociologists call this "working knowledge."²⁹ Knowledge management systems rarely reflect the fact that essential knowledge, including technical knowledge, is often transferred between people by stories, gossip, and by watching one another work. This is a process in which social interaction is often crucial. A recent study of 1,000 employees in business, government, and nonprofit organizations reported that "most workplace learning goes on unbudgeted, unplanned, and uncaptured by the organization. . . . Up to 70 percent of workplace learning is informal."³⁰ This study by the Center for Workforce Development found that informal learning occurs in dozens of daily activities, including participating in meetings, interacting with customers, supervising or being supervised, mentoring others, communicating informally with peers, and training others on the job.

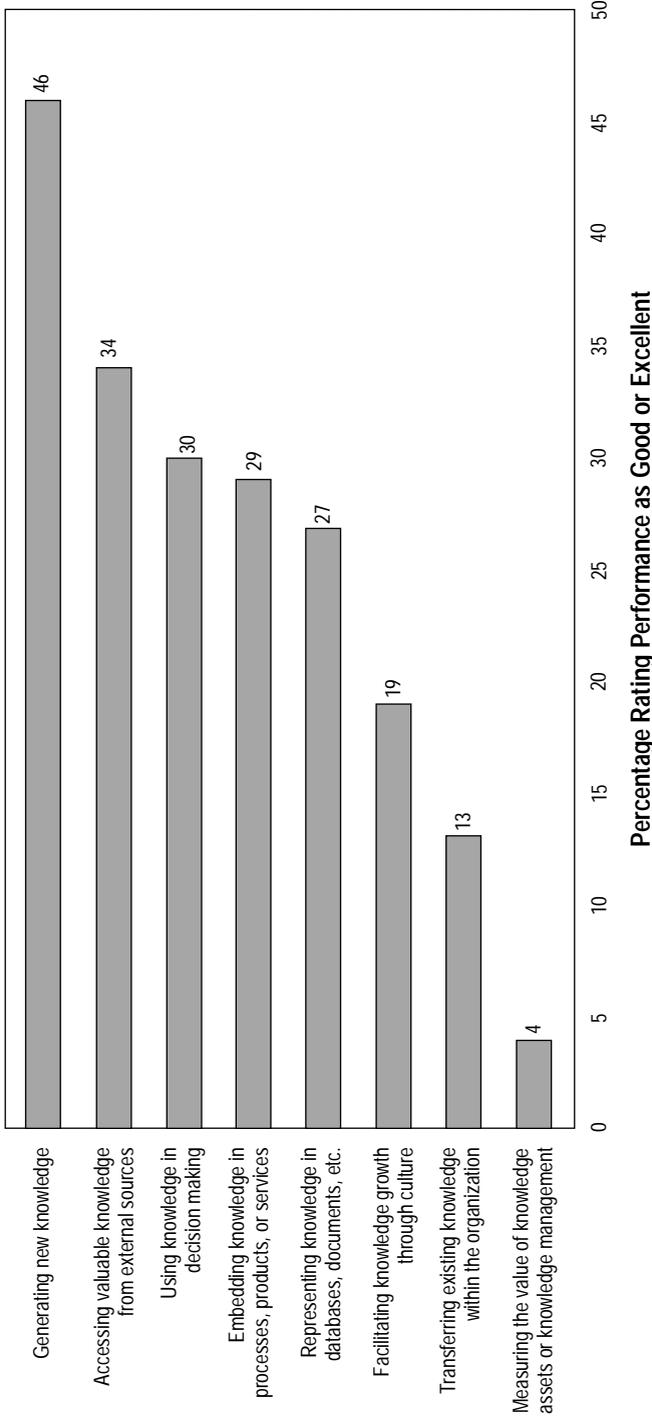
Yet, most knowledge management efforts emphasize technology and the storage and transfer of codified information such as facts, statistics, canned presentations, and written reports. A June 1997 Conference Board conference on creating and leveraging intellectual capital reported: "Most corporate initiatives to manage intellectual capital are focused on specific projects, the most common of which deploy technology to share and leverage knowledge and best practices."³¹ There is an unfortunate emphasis on

technology, particularly information technology, in these efforts. For instance, one recent article on making knowledge management a reality asserted that "it's clear that an intranet is one of the most powerful tools for achieving results within this [knowledge management] arena."³² Another article asserted that "knowledge management starts with technology."³³ We believe that this is precisely wrong. As the Conference Board report noted, "Dumping technology on a problem is rarely an effective solution."³⁴ When knowledge is transferred by stories and gossip instead of solely through formal data systems, it comes along with information about the process that was used to develop that knowledge. When just reading reports or seeing presentations, people don't learn about the subtle nuances of work methods—the failures, the tasks that were fun, the tasks that were boring, the people who were helpful, and the people who undermined the work.

Formal systems can't store knowledge that isn't easily described or codified but is nonetheless essential for doing the work, called *tacit knowledge*. So, while firms keep investing millions of dollars to set up knowledge management groups, most of the knowledge that is actually used and useful is transferred by the stories people tell to each other, by the trials and errors that occur as people develop knowledge and skill, by inexperienced people watching those more experienced, and by experienced people providing close and constant coaching to newcomers.

The Ernst & Young survey described earlier also asked executives to rate their organizations on how well they were doing in the various dimensions of knowledge management. These results are reproduced in Figure 1-2. Managers seem to believe they are doing a good job in generating new knowledge and even doing pretty well in obtaining knowledge from the environment. What they aren't doing very well at all, by their own assessments, is transferring knowledge *within* the organization. And perhaps most important, Ernst & Young didn't even ask if the knowledge

Figure 1-2
Self-Assessment of How Well Organizations Are Doing in Their Knowledge Management Activities



Source: Data from Rudy Ruggles, "The State of the Notion: Knowledge Management in Practice," California Management Review 40 (summer 1998): 82.

in these firms was being used by the firms—not just in decision making, which was covered in the survey, but in day-to-day operations and management practices.

Knowledge management systems seem to work best when the people who generate the knowledge are also those who store it, explain it to others, and coach them as they try to implement the knowledge. For example, Hewlett-Packard's Strategic Planning, Analysis, and Modeling group has had success transferring knowledge about supply chain management that has been implemented in many HP divisions. One of the reasons the group has been successful is that the same people who do this internal consulting are also responsible for storing and disseminating knowledge about it within the company. Corey Billington, the head of this group, describes his job as "part librarian, part consultant, and part coach."³⁵ He is responsible for knowing the technical solutions and the stories surrounding the 150 or so consulting jobs his group has done within HP so that he and others in his group can suggest ideas to help new internal clients and can actually coach the clients as they implement the ideas.

The second problem with much of the existing literature and practice in knowledge management is that it conceptualizes knowledge as something tangible and explicit that is quite distinct from philosophy or values. As Don Cohen, a writer specializing on knowledge issues, put it, "The noun 'knowledge' implies that knowledge is a *thing* that can be located and manipulated as an independent object or stock. It seems possible to 'capture' knowledge, to 'distribute,' 'measure,' and 'manage' it. The gerund 'knowing' suggests instead a process, the action of knowers and inseparable from them."³⁶ A leading Japanese scholar in the area of knowledge in organizations made a simple but important point: "Knowledge is embedded in . . . these shared spaces, where it is then acquired through one's own experience or reflections on the experiences of others. . . . Knowledge is intangible."³⁷

The fact that knowledge is acquired through experience and is often intangible and tacit produces a third problem in turning knowledge into action. One important reason we uncovered for the knowing-doing gap is that companies overestimate the importance of the tangible, specific, programmatic aspects of what competitors, for instance, do, and underestimate the importance of the underlying philosophy that guides what they do and why they do it. Although specific practices are obviously important, such practices evolve and make sense only as part of some system that is often organized according to some philosophy or meta-theory of performance. As such, there is a knowing-doing gap in part because firms have misconstrued what they should be knowing or seeking to know in the first place.

Why Typical Knowledge Management Practices Make Knowing-Doing Gaps Worse

- Knowledge management efforts mostly emphasize technology and the transfer of codified information.
 - Knowledge management tends to treat knowledge as a tangible thing, as a stock or a quantity, and therefore separates knowledge as some *thing* from the use of that thing.
 - Formal systems can't easily store or transfer tacit knowledge.
 - The people responsible for transferring and implementing knowledge management frequently don't understand the actual work being documented.
 - Knowledge management tends to focus on specific practices and ignore the importance of philosophy.
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Why has it been so difficult for other automobile manufacturers to copy the Toyota Production System (TPS), even though the details have been described in books and Toyota actually gives tours of its manufacturing facilities? Because "the TPS techniques that visitors see on their tours—the *kanban* cards, *andon* cords, and quality circles—represent the surface of TPS but not its soul."³⁸ The Toyota Production System is about philosophy and perspective, about such things as people, processes, quality, and continuous improvement. It is not just a set of techniques or practices:

On the surface, TPS appears simple. . . . Mike DaPrile, who runs Toyota's assembly facilities in Kentucky, describes it as having three levels: techniques, systems, and philosophy. Says he: Many plants have put in an *andon* cord that you pull to stop the assembly line if there is a problem. A 5-year-old can pull the cord. But it takes a lot of effort to drive the right philosophies down to the plant floor.³⁹

A similar perspective is evident in the study examining how Honda creates lean suppliers. Honda chooses its supplier-partners in large part based on the attitudes of the companies' management. "In the words of Rick Mayo, the Honda engineer directing these activities, 'We are a philosophy-driven company . . . Honda felt it was easier to teach the technical knowledge associated with a different product or process technology than to find a technically-capable supplier possessing the combination of risk-taking attitude, motivation to improve, responsiveness to future needs, and overall competence that is valued so highly."⁴⁰

Nor is this emphasis on philosophy just the view of some Japanese automobile companies. The importance of values and philosophy is a theme that was repeated by Howard Behar, president of Starbucks International, the coffee company; David Russo, vice president of human resources for

SAS Institute, a software firm recently ranked by *Fortune* as the third-best company to work for in the United States; and George Zimmer, founder and chairman of The Men's Wearhouse, a rapidly growing, extremely profitable off-price retailer of tailored and casual men's clothing. All three of these organizations have been financially successful, and all are renowned for their people management practices. In all three instances, the message was the same: What is important is not so much what we do—the specific people management techniques and practices—but *why* we do it—the underlying philosophy and view of people and the business that provides a foundation for the practices. Attempting to copy just *what* is done—the explicit practices and policies—without holding the underlying philosophy is at once a more difficult task and an approach that is less likely to be successful. Because of the importance of values and philosophy in the management processes of many successful companies, the emphasis on the tangible, explicit aspects of knowledge that characterizes most knowledge management projects is unlikely to provide much value and may be, at worst, a diversion from where and how companies should be focusing their attention.

The First Principle: If You Know by Doing, There Is No Gap between What You Know and What You Do

People are always fascinated by successful companies. Many business books have a large dose of “what successful companies do” in them, and such information certainly can be helpful. But learning by reading, learning by going to training programs, and learning from university-based degree programs will get you and your organization only so far. You and your colleagues can certainly acquire concepts and frameworks and at least the illusion of knowledge, if not the

real thing. But you will not necessarily be any closer to being able to actually implement that knowledge or turn the frameworks into action. There is only a loose and imperfect relationship between knowing what to do and the ability to act on that knowledge. The irony is that this statement is true even for this book, as it is for all books on management. If reading and understanding a book meant that you and your firm could readily implement the knowledge contained therein, there would not be the tremendous advantage accruing to those firms that are actually able to turn knowledge into action. Competitive advantage comes from being able to do something others can't do. Anyone can read a book or attend a seminar. The trick is in turning the knowledge acquired into organizational action.

Our intent in this book is to emphasize those concepts and ideas that turn knowledge into action, but taking action and having an action orientation are still necessary for anything to happen. This means a complementary principle is to learn by doing as well as by reading and thinking. If you and your colleagues learn from your own actions and behavior, then there won't be much of a knowing-doing gap because you will be "knowing" on the basis of your doing, and implementing that knowledge will be substantially easier.

This insight was first suggested to us by various Asian managers and those familiar with Asian, including Japanese, management practices. The contrast between them and their U.S. counterparts in the reactions to the questions we were asking was striking. When we described the "knowing-doing" research project to American managers, they could immediately relate to both its relevance and its importance. They were cognizant of many examples in which they and their organizations failed to implement, in practice, their conceptual knowledge of how to manage. But when we described the project to Japanese and other Asian managers, they seemed perplexed. Operating in systems in which knowledge was largely developed on the job, by doing, and in which managers were more often

tightly embedded in the actual work processes, they found it hard to understand how someone could “know” and not “do.” This seemed like a provocative insight—maybe there was some benefit in learning by doing that was missed in the formal classroom-, case-, and theory-based presentations and discussions so typical of much contemporary management education, though it was not missed in internship and co-op learning programs, which are often much more effective in developing job-relevant skills.

And then, through some students, we became acquainted with Kingston Technology, a company that seemed to exemplify learning by doing. Kingston, for those who don’t know, was ranked as number 2 in the 1998 *Fortune* magazine listing of the 100 best places to work in America. Founded in 1987, the company is the largest maker of computer memory boards—DRAMs—in the world, with 1997 sales of \$1.3 billion and a 55 percent market share in the United States. The firm has grown at a compounded rate of 92 percent since its founding. It operates in a very difficult, cyclical, competitive business that has faced rapidly falling prices and challenging market conditions.

David Sun and his partner, John Tu, have built a company in which the implementation of knowledge is fairly easy and automatic. That is because Sun believes, “If you do it, then you will know.” This means that “if managers ask for input and feedback from employees, over time, they will learn what management practices to implement, alter, or discard. Sun believes that his management practices are effective because his employees, in large part, were responsible for their design and/or fine-tuning. As Sun says, ‘just do what they tell you they want.’”⁴¹

Honda, which has successfully imported lean production techniques to its plants in the United States, also believes in knowledge development and transfer through direct, rather than vicarious, experience. In its efforts to enhance quality, it uses a process that is short on meetings and presentations and long on direct observation:

Honda emphasizes having people actually see quality defects directly. . . . Production workers will often go to another part of the plant to see a car with a defect. . . . Honda has a saying for this . . . "actual part, actual situation." The philosophy is that when a person sees a quality problem, s/he is more likely to analyze it systematically, to communicate the problem more accurately to others . . . , and to be motivated to find a preventive remedy.⁴²

The U.S. Army and other military organizations provide another good example of learning and knowing by doing. When the army is not in combat, it is constantly training for combat. Much of this training is done by having soldiers perform the very actions that will be necessary during wartime. Soldiers engage in staged battles, drills, and other realistic simulations designed to have them observe, perform, and repeat the actions they will need to carry out in real combat. The army's National Training Center "is credited with almost single-handedly transforming the post-Vietnam army. . . . Several of America's most forward-thinking companies—including Motorola and General Electric—study it as a source of ideas about leadership and learning."⁴³ Acquiring knowledge through practice, performance, and even failure is indispensable for organizations of all sizes and types.

Thus, at one level, the answer to the knowing-doing problem is deceptively simple: Embed more of the process of acquiring new knowledge in the actual doing of the task and less in formal training programs that are frequently ineffective. As one comprehensive study of the development of executives concluded, "One learns to be a leader by serving as a leader."⁴⁴ But this practice is rarely followed. It is revealing that, at least in the United States, the philosophy of "if you do it, then you will know" is applied most consistently in occupations in which people might die if the work is done badly. Although there is obviously classroom training for surgeons, the U.S. military, and some for airplane

pilots, in all of these occupations, training quickly turns to learning by doing. In surgery, there is an old, nearly true saying describing how a resident learns a new procedure: “Hear one, see one, do one.”⁴⁵ People in these occupations learn primarily by doing because, regardless of how well they can answer questions about how to do their craft, we only want them to use their knowledge on us when they have shown they can actually do the task.

As we will see in the next chapter, many organizations and managers would rather talk, conceptualize, and rationalize about problems and issues than confront them directly. In business and business education and training, the principle seems to be “hear one, see one, say one.” And, ironically, in many companies people are more likely to get ahead by talking smart than by doing smart and productive things. So our next chapter considers how talk substitutes for action and, in the process, impedes many companies from turning what they know about enhancing performance into action.