

# Unleashing the Power of Connecting Disciplines

*Diane H. Schmalensee*

I am a business consultant and not an expert in organizational learning, but I have been privileged to observe the power of connecting different disciplines or viewpoints. The possible breakthroughs and insights from combining two skill sets and ways of viewing the world are far beyond what is usually possible using just one discipline.

While talking with Ed Schein recently, I realized that my experiences might be relevant to organizational learning experts. Here I give some personal examples of the benefit of connecting disciplines and my tentative thoughts on how to encourage the connection.

## Solving Problems by Focusing on Other Interests

While I was in my early twenties, a good friend, who had studied romance languages and Dante, told me that he had a great breakthrough in deciphering the structure of Dante's work. He had been searching for months for new mathematical structures in Dante's poems, when doing the *Sunday Times* crossword puzzle suddenly made him wonder if Dante might not have used a form of linking letters like a puzzle. Eureka! There was such a structure, and my friend published a paper on his new insight. It was simple and elegant and would not have occurred to him if he hadn't loved crossword puzzles as well as Dante.

When I was a young working mother, I found that I didn't have enough time for job and family. I took a highly recommended time management course and was shocked when the instructor told us to take up a hobby. The instructor explained that we are more productive when we work smarter rather than harder. Sticking only with what we know each day can make us more efficient in a narrow sphere but does not make us more productive or valuable. The most valued employees are those who know what's important and who can bring flashes of insight and new thinking to the job. Hobbies or other outside interests are great sources of these creative ideas, so the instructor recommended them as a way to cut through the clutter that comes with a narrow focus on one issue.

While deciding whether to accept this counterintuitive advice, I recalled a business professor telling me that he got his best ideas in the shower when he let his mind roam freely—from movies to books to his usual course work. He invested in a larger hot-water heater and felt it helped his creativity and career. So I decided to take the time management instructor's advice. I still felt too busy. But, by continuing to make time for my family and outside interests, I was forced to focus on what was truly important at work and to find creative ways of getting my job done.

One of my main tasks at work was to translate and transmit marketing practitioner thinking to marketing academics and vice versa. In searching for ways to save time, I decided to schedule meetings to bring the two groups of people together instead of acting as their go-between. Ola! This saved time but also allowed the people to collaborate in ways that would not have been possible if I hadn't created the shared-interest group meetings. We all were proud of what we were able to accomplish with this new process.



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## Connecting Academic and Business Thinking

In the 1980s, I worked for the Marketing Science Institute (MSI), an organization based on the power of connecting business and academic thinking. Founded more than 40 years ago by Thomas B. McCabe (longtime chairman of Scott Paper Company), MSI was created to encourage academics to advance marketing science by working on issues important to marketing executives. Over time, MSI has evolved into a powerful force for the best, most creative marketing thinking, with a sizable percentage of the articles in the leading marketing journals evolving from MSI-sponsored work. It regularly brings business people and academics together to share insights. As vice president of research for MSI, I was able to see the power that resulted from merging their viewpoints.

When I joined MSI, little academic research focused on services marketing. However, as the service industry began to boom in the 1980s, the services marketing executives began to ask for insights into how to measure and improve service quality. Three academics from Texas A&M (Leonard Berry, Parsu Parasuraman, and Valarie Zeithaml) agreed to find a way to measure service quality, a risky decision as they had to strike out into uncharted areas instead of expanding on previous research. However, their pioneering work, which they called ServQual, became the basis for measuring customer satisfaction and loyalty. They showed businesses how customer perceptions of services differed from perceptions of products and how expectations played a major role in satisfaction. In the process, they all received recognition and awards for their work. Voila! Business has benefited, and the careers of all three academics have prospered because they were willing to bring their academic thinking to bear on a practical, unstudied issue.

### Crossing Boundaries

While I was at MSI, we sought to improve the product development process. In order to develop hypotheses, we encouraged our marketing executive members to bring counterparts in their firms' operations, supplier relations, quality improvement, and manufacturing to MSI meetings on new product development. Two members from Harris Corporation—one in marketing and one in manufacturing—reported that this ended a history of suspicion and made them both heroes in their firm when they were able to find quicker, more effective ways of developing new products. A quality expert from Armstrong and a marketing researcher from DuPont, who were asked to speak on an MSI panel, found that they learned so much from each other that they became more valuable to their firms. And a researcher from Marriott reported that she learned to speak the same language as her operations team, which meant that the team was finally willing to act on information she provided.

Bingo! Bringing together different mind-sets, languages, and approaches to shared issues broke down silos, created lasting friendships, and led to breakthroughs in work processes. These improvements could not have happened if people had not crossed their comfortable thought or departmental boundaries.

### Connecting Mind-Sets and Disciplines

My husband, an economist, worked early in his career on the issue (raised by a Federal Trade Commission case) of why consumers were not buying a cheaper lemon juice made by Golden Crown instead of the more expensive Real Lemon brand, which dominated the market. Contrary to economic theory, consumers were paying more for a brand that tests showed to be comparable in quality. He just couldn't understand those pesky, unpredictable consumers, but my experience as a household purchasing agent and user of lemon juice suggested an explanation. Consumers don't always have perfect knowledge about quality and may be reluctant to try something new just because it is less expensive. Since the difference in the prices of Real Lemon and Golden Crown was less than a penny a meal and the risk of ruining a meal was high if Golden Crown did not taste as good, I was personally

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reluctant to try Golden Crown. Thus, my husband used naïve but real-world consumer experience in the case to explain the seemingly inexplicable consumer behavior.

Similarly, around 1987, a marketing academic at University of Texas-Austin asked a finance/accounting colleague to work with him on the problem of how to measure brand equity and how much to invest in building a brand—a high-priority topic at MSI at the time. The combination of marketing with accounting and finance led to some of the best early work on brand equity and made breakthroughs that would have been impossible by relying on marketing knowledge alone. The connection of academic disciplines advanced both disciplines and careers and created an exciting research stream for both people that continued for a decade.

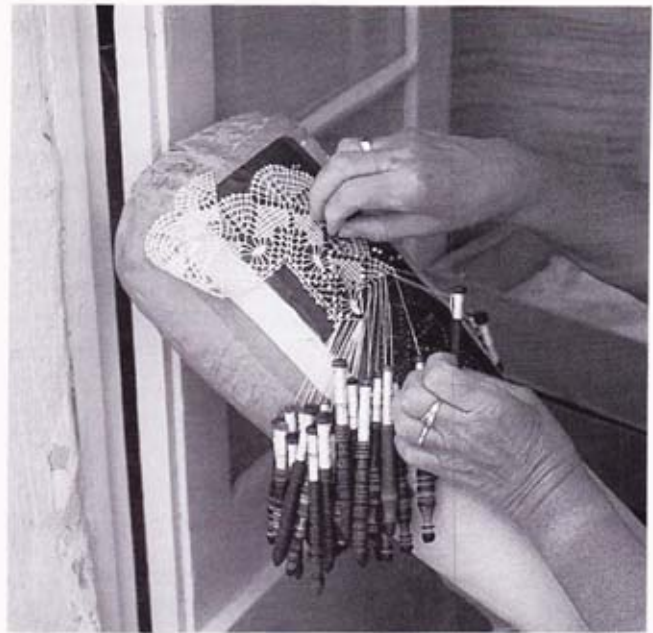
A final example is the collaboration at MIT of economists, atmospheric chemists, climatologists, oceanographers, biologists, statisticians, and political scientists working on the global climate change issue. They began by meeting regularly for lunches and then held Global Climate Change Forums once or twice a year to bring business and government representatives to the discussion. As a result of this merging of viewpoints, they produce many important publications and influence public debate on the topic. One conclusion from their work together has been the realization that because temperatures naturally fluctuate, it is difficult but not impossible to determine trends in the midst of so much fluctuation. Another result has been the need to bring scientific evidence to bear on a political issue. The team has realized that, with a topic as difficult and complex as climate change, no one discipline could have the impact that the collaboration has been able to achieve.

## Learning a Second Discipline

In the late 1980s, Curt Reimann of the Department of Commerce and I began to correspond on how customers evaluate quality and how to increase customer satisfaction. He was in charge of developing a national quality award (now known as the Baldrige Award for Performance Excellence) and wanted to integrate the concept of customer satisfaction with other quality improvement concepts. While I feared the correspondence might not be time well spent, I knew and cared about the subject, and so continued the process.

When the award was finally announced, Curt asked me to become an examiner. The training course took nearly a week and revealed that I was quite different from the other examiners. Most of them were quality engineers, who used process design, flow charts, and statistical process control approaches and terminology that were completely new to me. I told Curt that I felt I should resign because I didn't fit the usual mold, but Curt said that he had asked me to join the group because I was from a different discipline. He felt the engineers and I could learn from each other. How right he was! The eight years I've spent as a Baldrige examiner and ten or so years with the Massachusetts quality award (MassExcellence) have been among the most productive and exciting of my career. The merging of the quality and marketing disciplines has given me insights I never could have had if I had stayed in my comfortable marketing zone.

For instance, the Baldrige model focuses on how a whole organization is managed. It draws on many disciplines to do this, including engineering, organizational development and management, and marketing. As a marketer, I had never understood why top managers didn't act eagerly on the valuable marketing advice we marketers provided. By adding the Baldrige perspective on how to manage an organization, I was able to see that executives must weigh the needs of employees and shareholders along with the needs of customers. I also learned that a firm's incentive structure has a big impact on what gets done. Based on these insights, I was able to write an award-winning article with a long-time marketing colleague entitled, "From Information to Action"



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(Schmalensee and Lesh, 1998/1999). Drawing on the quality improvement, change management, and marketing literatures and experiences of many marketers and top executives, the article seeks to expand marketers' view of why firms do or don't act on customer information and how to increase the odds of action.

Another example is the perspective Baldrige has given me on leadership. Years ago, I attended an executive gathering at the Wharton School on the nature and development of leadership. We spent a great deal of time discussing whether leadership was more than charisma. Although the meeting was interesting, I didn't feel that management science had all the answers. Once I began to study Baldrige's leadership category (which draws on learnings from organizational theory and management science), I began to see that leadership was a process rather than a personality trait. This has allowed me to help executives and organizations develop their leadership skills. I could not have written the article or helped boost company leadership if I had not added the things I learned from Baldrige to my skill set.

### What Can We Conclude?

I hope my personal examples have brought to mind similar ones from your own experiences. There are many ways in which disciplines can connect—when individuals develop more than one interest or skill set, when academics and business people collaborate, when different academic disciplines work together on a topic of mutual interest, or when business people from different departments cooperate. Regardless of how the disciplines connect, the connection releases creativity and power that would be impossible if people had remained rooted in their original mind-set.

Why is this connection of disciplines so powerful?

- The connection often provides a tool for solving problems or offers alternative solutions for problems that can't be solved using the usual methods. The Dante puzzle, the brand equity collaboration, and the new product development cooperation are examples.
- The connection allows us to view our own discipline's concepts in a broader context, in the way that the Baldrige view of company management helped me put my original marketing viewpoint into a broader perspective.
- The connection fosters communication among people with different but tangential backgrounds. MSI is an excellent example of mixing business and academic backgrounds and of encouraging different academic disciplines to talk in order to produce innovative publications and insights.
- The connection encourages creativity by removing us from single discipline ruts and helping us master something new or see something in a new light.



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How can we best encourage the connection of disciplines? Connections between people from different disciplines work best when people meet face to face—preferably on neutral territory—to discuss a topic of mutual interest. When they listen with respect to the others' viewpoints and learn the others' language, they can learn and make discoveries together. At MSI, people in the same firms and academics from different departments met face to face, discussed topics they all found important, and communicated despite their different terminologies.

Connecting disciplines within individuals as they add new skill sets could occur through outside forces (as when Curt Reimann invited me to join the Baldrige team), through a hobby (as with the Dante puzzle), or when a person consciously decides to study a new subject. Regardless of the cause, the results are almost certainly best when a person invests enough time to understand the new subject well. It takes time and planning to connect disciplines, but the results are well worth the effort.

Is the effort of connecting disciplines and mind-sets always worth the effort? Might there be times when the results do not justify the effort? From my own experiences, I think not. But I recommend these questions as worthy of further study.

## Reference

Schmalensee, D.H. and A.D. Lesh, "From Information to Action." *Marketing Research* 10 (Winter 1998/Spring 1999): 23–36.

## Commentary

by *George L. Roth*

Schmalensee powerfully illustrates the importance of looking outside traditional approaches to solve old problems in new ways. In particular, she finds that academics are more innovative when they learn from developing new hobbies, working with industry people, or collaborating with colleagues from different disciplines. Her observations and insights about connecting management research, consulting, and practice are a tenet of SoL.

When professionals with different traditions, training, and skills work together, they can give each other new insights that produce innovative results as they reexamine their theories, assumptions, and models. Similar to more formal learning situations in which people are introduced to new theories and techniques through education or consulting, examining existing data in new ways creates opportunities for the emergence of new worldviews and effective action strategies.

Should we be surprised to learn that creating these "connections" is unusual or extraordinary? The institutional contexts that Schmalensee describes are generally all part of disciplined scholarly pursuits. In each example, a traditional approach was unable to yield the outcomes that "straying" into related pursuits did produce. The results from these innovations were both professional—achieving desired objects and yielding significant contributions—and personal—building interpersonal relationships and providing individuals with a sense of satisfaction. The expectations of our professional roles and how we report what we find constrains the ways in which we present our accomplishments. In academic publications, we rarely read about the sources of the powerful insights that come from discipline-connecting collaborations.

There is a deeper lesson in these examples for academics and practitioners alike. The benefits of personal results, pursuing our passions, finding common ground, and developing shared interests are the ingredients of a recipe that makes for significant accomplishment. We often fail to collaborate and connect with people who are different from us because it is hard work, takes more time and extra effort, makes us talk about things that do not seem "work related," and requires us to let go of the way we have always done things. These collaborations are risky because we never know what, if anything, will come from our efforts. In terms of what we produce, when we collaborate, and the significant new insights that arise from these connections, it is often hard to attribute them and decide who gets credit.

In my current role as Executive Director of the Ford-MIT Alliance, it is a daily challenge to build connections among MIT faculty and Ford managers. The Ford-MIT Alliance is a five-year, \$20 million program examining engineering, education, information technology, and environmental concerns at Ford and in the automotive industry. The alliance involves matching commitments of funding, access, support, and involvement from Ford with education, research, teaching, and participation from MIT. It is made up of a series of projects, many like the Global Climate Change Program that Schmalensee described.<sup>1</sup> The goal of the alliance, similar to 11 alliances that MIT currently has,<sup>2</sup> is to bring faculty from various disciplines together to work with industry people. The industry-connected research can help MIT enhance its groundbreaking research reputation and make direct connections, through these industrial partners, for getting feedback and implementing research results.

MIT's alliances, like "the power of connecting disciplines," sound good in theory. In practice, however, it is hard work to make these arrangements function to everyone's benefit. The people involved do not share an institutional context or sense of what is most important. At the same time, the very thing that makes collaborative arrangements difficult is also what makes them attractive;



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that is, the opportunity to work with someone unlike you, someone who thinks differently and sees the world from another perspective. It is those differences that create challenges and opportunities for original insights, novel solutions, and new opportunities.

For academics and managers, collaboration is hard work because it involves stepping away from familiar objectives. We have learned that a personality match is equally important to the research subject (technical) match. Each collaborative project matches an MIT faculty member with a Ford manager as co-principal investigators. The choice of collaborators depends on the intellectual interests of the MIT faculty member and the Ford manager's area of business responsibility. While an overall strategy might specify what is relevant, important research, if the potential collaborators are not carefully matched, the project does not move forward. When assessing a possible project, we ask if the people involved have an appropriate attitude and the mutual respect needed to be able to learn from each other. Are they tolerant of others with different viewpoints? Do they want to spend time with each other? Thus, is there a possibility of connecting across disciplines? Not surprisingly, the research projects that have been most successful by both academic and industry standards are those in which the co-principal investigators had extended, significant interactions with one another during the research process.

What we have not done to date is use this insight—that creating a shared vision and common understanding in a new project gets better results—to facilitate activities that would help a shared vision develop. In the successful research projects, the shared vision, common understanding, and mutual sense of purpose have come from informal interactions when people spend significant time together. It would be possible to facilitate such a process if people would commit time, attention, and energy. But, much as in business, there is a sense that people are too busy, the interpersonal and shared vision goals too soft, and there is not enough time to spend on broad, philosophical inquiry. Yet, as Schmalensee proposes, finding and developing shared interest is key to connecting across disciplines. When we draw on the personal results of learning and possible professional accomplishments that connecting different disciplines might provide, we have a recipe for creating conditions that produce innovative results by everyone's measure.

### Notes

1. For more on the Global Climate Change program, see <http://web.mit.edu/globalchange/www/>.
2. MIT's mega-partnerships involve multiple projects and programs with funding of more than \$25 million over five or more years. See <http://web.mit.edu/newsoffice/nr/2000/alliance.html> for a listing and description of MIT's alliances.