CHAPTER 1

Extreme Toyota: An Organization Powered by Creative Contradictions

COPYRIGHTED MATERIAL

An Amazing Track Record

Fifty years ago, Toyota Motor Corporation dipped its toe into the big pond of the U.S. automobile market with a tiny car that could only have been viewed with derision. It was 1957—an era of huge front-end Buicks and tail-fin Cadillacs. As one of the company founders Shoichiro Toyoda recently described it, the *Toyopet Crown* couldn't make it onto the highway unless the on-ramp was downhill. But true to its practice of continuous improvement (*kaizen*), Toyota kept on trying to get it right. It went on to produce the more sensible *Corona* in 1965, followed by the *Corolla*, the *Camry*, the *Lexus*, the *Prius*, the *Tundra*, and you know the rest.

Toyota is now a top dog and has become, by all conventional measures, an amazing company. In 2007, it sold 9.37 million cars and trucks, to rival General Motors as the world's biggest auto producer. In *profitability*, Toyota's net income has consistently surpassed the other auto companies by a factor of over two to one for the past several years. And thanks to a high rate of growth (averaging 11 percent in recent years) and profitability, Toyota's stock (*market capitalization*) at the end of 2007 was worth two times that of the next contender (the then) DaimlerChrysler, and almost 14 times that of General Motors, its largest rival.[1]

The Toyota brand has also become synonymous with strong engineering, durability, and dependability. Surveys on vehicle quality by the marketing information firm J.D. Power and Associates consistently rated Toyota highest among the volume brands, while Toyota's Lexus brand claimed the top position in vehicle dependability for the thirteenth year in a row—above Mercedes, BMW, and the rest.[2] This reputation ensures that the vehicles hold their resale value well into automobile old age. With the Prius, Toyota became the first carmaker to successfully market a hybrid alternative to the conventional internal combustion engine, addressing the public's concern about the effects of fossil fuel consumption on the environment.

By all these measures, Toyota is a paradigm of superior performance among the best and most successful manufacturing companies in the world. What explains this phenomenal success? In our attempt to answer that question, we have based this book on six years of research and unprecedented access to Toyota's facilities (regional headquarters, production sites, training centers, distributors, and dealers) in 11 countries, internal documents (Green Book, Silver Book, Best Practice Bulletins, among others), and activities (Toyota World Conventions, Toyota Way in Sales and Marketing Champions Meetings, Lexus Dealer Meetings, and internal training sessions), including hundreds of interviews from President Katsuaki Watanabe down to shop floor employees.

The results of our research were unexpected and offer important lessons that may help your organization learn from Toyota. Our key discovery was that Toyota's success can be found not just in its famous manufacturing process, the "Toyota Production System," but also in its unique management practice of creating and promoting a fascinating set of contradictions, opposites, and paradoxes within the organization. These paradoxes can be implemented by managers in any organization, with powerful results, as discussed in Chapter 11.

Before identifying Toyota's management paradoxes, let's take a brief look at the systems innovations—the *hard* side of the company—that have contributed to its success.

The Hard Side of Toyota

Toyota's best-known secret weapon is its brilliant and unorthodox system of manufacturing, which it pioneered during the mid-twentieth century as an alternative to traditional mass production. The Toyota Production System (TPS) has enabled the manufacture of high-quality, reliable cars at a lower production cost. This system also has made Toyota nimble in response to fluctuating market demand and able to produce cars fast to match the orders coming in from dealers. Toyota's renowned logistics management system has also been a significant operational advantage for the company, enabling it to monitor inventory levels for parts and raw materials as well as finished products, and keep those levels low.

This optimization of resources in the production of cars allows Toyota to maintain a strong cash-flow position. In combination, these systems keep Toyota competitive in their operational costs. Its short cycle for product development has also been the focus of frequent study. Because Toyota takes substantially less time to introduce a new car compared with many of its global competitors, it can respond more effectively to changes in customer needs.

Both for-profit and nonprofit organizations are now trying to learn and adapt Toyota's methods and processes. Chrysler recently hired two senior Toyota executives to help revive its struggling auto business, and the Japan Post Service recently appointed a former chief of Toyota Motor Italy as its first CEO. In the auto industry, every carmaker has tried to learn from and adapt the Toyota Production System. The quality gap between the manufacturers has been diminishing with each passing year as they successfully emulate Toyota's hard systems innovations.

The Powerful and Mysterious Soft Side

But how about Toyota's *soft* side of management—its practices related to human resources, dealer management, and corporate culture? These practices are as important as the Toyota Production System—and far less understood. The same holds true for Toyota's underlying management philosophy that binds together employees, dealers, and suppliers as well as its intricate, multilayered face-to-face communication infrastructure that enables the organization to function like a small-town company where everybody knows everyone else's business. This book offers a peek at the secrets to the powerful and mysterious soft side of Toyota.

The soft side of management has gained relevance because a once-in-a-century shift from the industrial society to the knowledge society has taken place. These two ages are set apart by their means of production. In the industrial society, the means of production focused on assembly lines, machinery, robotics, and automation. In the knowledge society, the means of production shifted to the "deep smarts" embodied in the head and hand of every employee, dealer, and business partner.[3]

Toyota has developed a new management model fit for industrial production in the knowledge age by viewing the auto industry as a knowledge-driven industry, where growth depends not only on operational efficiency, but also on people and organizational capability. Toyota's model represents a more human approach to industrial production because it positions humans, rather than machines, at the center of all things.

What differentiates Toyota from its rivals is its view of the factory worker as a knowledge worker who accumulates the wisdom of experience from the production lines. It recognizes that cultivating ideas from anywhere—not just the factory floor, but from the office, the field, and the outside world—is critical in the knowledge-driven industry. This is why Toyota goes to great lengths to train, develop, and retain employees and to build better dealers, suppliers, and business partners. Toyota takes a long-term view and invests resources to cultivate people and capability inside and outside the organization.

How Toyota Is Like a Failed, Stagnant Company

While Toyota appears to have succeeded in developing a management model fit for industrial production in the knowledge age, at the same time it lacks many characteristics typical of other large, globally successful companies. The following Toyota policies and organizational patterns resemble those associated with failing or stagnant companies:

- While Toyota is innovative, its management remains homogeneous, in contrast to the more typical innovative organizations that encourage diversity. Toyota management, particularly in Japan, is predominantly male and Japanese. They are proud to be a company from the rural backwater Mikawa region, a suburb of the major commercial city of Nagoya. Regional pride is strong in Japan and the company's rural origin accounts for its male-dominant culture, as well as its simplicity and humility. They have no plans to relocate their headquarters to central Tokyo as Honda, Hitachi, and many other large Japanese companies have done.
- While Toyota is famous for its efficiency, its allocation of human resources seems inefficient. Every company has meetings, but it is amazing to see how many people attend a Toyota business meeting. Many of the employees who attend do not participate in the discussion. There are also excessive numbers of employees working at the management level whose responsibilities bear no relation to operational or financial performance. In its sales organization, Toyota deliberately assigns more employees to regional offices than other auto companies do.
- The formal structure of Toyota is hierarchical and bureaucratic. Many of the top executives are inaccessible to middle managers, and there are clear indications of subtle differences in status at each level of management in the organization, reflecting the rigid social hierarchies in Japanese culture. Visitors to the company get a very different reception when they are meeting a middle manager than when they are meeting an executive vice president. In the former instance, they will be asked to wear a visitor badge and the receptionist will see them off with a 35-degree bow. In the latter case, they will be treated as a trusted guest;

they won't have to wear a visitor badge, and the receptionist will give them a 90-degree bow.

- As opposed to the "up-or-out" culture at companies where employees either rise through the ranks or are pushed out, Toyota practices an "up-and-in" culture that seems counterintuitive in a company where employees must work very hard and compete with each other. When the Japanese economic bubble burst in the 1990s and many companies shed personnel, Toyota did not. By comparison, General Electric's personnel system under Jack Welch systematically weeded out the bottom 10 percent of performers in the organization.
- Toyota does not have a clear strategic focus. Rather, the company seems to try anything and everything to stay ahead of all the others in the auto industry, and it tries to be good at all of it.

Furthermore, we have observed practices that are unusual for a well-run company and that do not make sense from a financial perspective. Toyota's ratio of dividend payouts is very low, averaging just 20 percent of their earnings over the past 10 years. While it has substantially increased its dividend per share, Toyota's payout ratio in 2006 of 21.3 percent was only on par with that of its smaller rivals Nissan and Hyundai-Kia (with 22.9 percent and 17.4 percent, respectively), and far behind its peer DaimlerChrysler (with 47.5 percent).[4] As a result, the company has accumulated substantial idle cash, which in 2007 amounted to $20 billion, earning the company the moniker, "Toyota Bank."

Toyota's performance, as measured by return on invested capital (ROIC),[5] suggests that the company is a mediocre player, even though it has been improving in recent years. Toyota has not utilized its invested capital as productively as other measures of its success, such as revenues, operating margin, and net income, might imply. This combination of paying low dividends, hoarding idle cash, and overinvesting in a mature industry is unique to Toyota and is considered to be a wasteful and ineffective financial practice. What's more, it is prevalent in its employment of human capital as well. As shown in upcoming chapters, Toyota deploys more people in the field than its competitors, retains poor performers, and rejects downsizing its workforce. Instead, it invests in people, hiring large numbers of employees and training them with a view to developing their potential over the long term. Toyota's tendency to accumulate excessive capital and human resources is completely opposite to the actions of most well-managed, profitable, and investor-oriented companies.

Furthermore, employee compensation levels at Toyota are not what one would expect from a successful, established company. The average annual compensation for Toyota's top 33 executives is one-tenth that of Ford's, and much lower relative to their counterparts at the other auto companies, with the exception of Honda.[6] Many Toyota top executives have been celebrated in U.S. magazines like *Fortune* and *BusinessWeek*, as well as in leading Japanese magazines including the *Nikkei Business* and *Toyo Keizai*, yet their compensation levels remain substantially lower than the industry average. In addition, the speed of promotion inside Toyota is very slow. As of 2007, the youngest executive on the board (which consists of internal executives) was 51 years old, while the average age was 61.[7] What motivates these people to work so hard for Toyota?

Another oddity at Toyota is the continuing strong influence of members of the founding Toyoda family, even though their ownership is just 2 percent. Compare this with the share of family ownership at Ford—40 percent; and at BMW—50 percent. For many years, Toyota's CEOs came directly from the Toyoda family. Although nonfamily members have occupied the CEO position from time to time, there is increasing speculation that the next company president will be a Toyoda. Thus, the family retains great influence over many important decisions, although its style of soliciting agreement is different from that of other companies. Governance is not open and transparent, and it is unclear to outsiders exactly how the family wields its power. Many see the family as playing a symbolic role in the company, but they also have a substantial impact on decision making that has been effective for the company so far. This is also at odds with common practice and contributes to the mystery of why Toyota might be considered a model of contemporary business practice.

Management Orchestrated Contradictions, Opposites, and Paradoxes

From the perspective of conventional business practice, Toyota may simply be successful despite itself. Its success contradicts established, successful practice, but in fact, this seeming paradox is key to its success. It is an organization steeped in contradictions, opposites, and paradoxes. Such contradictions are not necessarily seen as bad things at Toyota. In fact, the company actively embraces and cultivates contradictions instead of passively coping with them. It thrives on paradoxes, harnessing opposing propositions to energize itself.

As Akio Matsubara, Senior Managing Director in charge of Human Resource Management, described it, Toyota intentionally builds a positive level of tension within the organization:

> We are constantly confronted with two opposing propositions, sometimes three opposing propositions, sometimes even as many as four opposing propositions. It is a way of deliberately introducing a positive level of tension into the workplace on a regular basis. Each organizational unit avoids making any kind of compromise and we argue it out till the end across the units. This process ensures that we come up with the best solution.[8]

Toyota is hard to understand because contradictions, opposing propositions, and paradoxes are a way of life within the company, whereas other companies are still functioning according to the logic of the industrial era and try to stamp out such differences. As an automotive manufacturer, Toyota is the quintessential industrial firm, but it has survived by staging a successful transition to the postindustrial, knowledge age. The "Toyota Way" is about finding a better way . . . for realizing continuous innovation and constant renewal. We have identified six contradictory tendencies at Toyota that help to unravel the mystery and peculiarity of its success:

1. Moving gradually and also taking big leaps
2. Cultivating frugality while spending huge sums
3. Operating efficiently as well as redundantly
4. Cultivating stability and a paranoid mindset
5. Respecting bureaucratic hierarchy and allowing freedom to dissent
6. Maintaining simplified and complex communication[9]

Moving Gradually and Taking Big Leaps

Seen from the outside, Toyota progresses more like a tortoise than a rabbit in day-to-day operations. It moves step-by-step, experiments, deliberates, and takes time to get things done. The Lexus *LS400* underwent eight design reviews and 50 wind tunnel tests before the first model was approved. In fact, it took six years of development to get the first Lexus out of the factory. When *Scion* (a new brand targeting the American youth market) was launched in the United States, Toyota rolled it out gradually, starting in California in June 2003. It took eight months—until February 2004—to achieve the second launch, in the South and on the East Coast of the United States. The third launch, in the Midwest, was not until June 2004. In between, Toyota conducted experiments and made adjustments to improve each subsequent launch.

In a similar vein, Toyota saved information and anecdotes to include in a booklet on the company's unique culture and methods for more than 70 years. Called *The Toyota Way 2001* and known inside the company as the "Green Book," it includes stories from the company's founder Sakichi Toyoda, who first built the Toyoda Automatic Loom Works, and his son Kiichiro, who established the Toyota Motor Corporation in 1937. The Green Book was finally published in 2001 as a 13-page pamphlet, in Japanese and English, filled with historical information and words of wisdom from the company founders and other senior managers, whose combined reign spanned almost eight decades.

The Lexus was developed gradually. The Scion was launched gradually. And content for *The Toyota Way 2001* was accumulated gradually, over many years. However, all three projects enabled Toyota to make big leaps forward. The leap for Lexus was the creation of a brand-new dealer organization in the United States that the company, in the "Lexus Covenant," describes as the "finest dealer network in the industry" because it treats each customer "as though they were a guest in our home."[10] Scion's big jump, in addition to opening the youth market for Toyota, was setting up a "pure pricing" scheme that let customers know the retail price in advance and eliminated price negotiation. Although first introduced by Saturn, this was an innovative practice for the company and was well received by young customers. *The Toyota Way 2001* resulted in the creation in 2002 of the Toyota Institute in Japan and the Global Knowledge Center in the United States, a big leap toward disseminating the philosophy, beliefs, and values of the company on a global scale.

The 1997 launch of the Prius, an energy-saving hybrid car that combined the high-speed power of an internal combustion engine with the clean efficiency and low-speed torque of an electric motor, was a technological leap in a company better known for its culture of continuous improvement, or kaizen. The practice of kaizen typifies Toyota's gradualism, whereas Prius is the symbol of its ability to leap forward.

A Frugal Big Spender

Toyota is known for its frugality, although for the past two decades, it has held an average of over $15 billion in assets in cash and short-term investments. At the same time, and despite holding such a high level of liquid assets, the company has maintained a very low dividend payout of under $3 billion per year.

For a company most often referred to as the Toyota Bank, its reputation for penny-pinching is matched only by Wal-Mart in the United States. This behavior is evident in the company's humble-looking headquarters in Toyota City and its custom of turning all lights off during lunchtime. Office staff work in crowded conditions, usually all together in one large room (known as *obeya*) with no partitions between desks. "Let's say a piece of equipment broke down," said Masaharu Yamamoto, a retired factory worker. "At Toyota, we do not send it out for repairs or buy a new one. Workers at the factory fix it by themselves and try to reuse it. . . . The thinking goes like this: 'Fix it yourself. Make the best use of what we already have. Let's endure with what we already have.'"[11]

Toyota's frugality is practiced in the United States as well. As the head of United Auto Workers local recalled, when Toyota started running its joint-venture plant with General Motors in Fremont, California, back in 1984, company executives and plant bosses began eating in the same cafeteria as the rank and file. "That never happened when GM was running the factory," he said.[12]

As mentioned, Toyota is also frugal when it comes to executive compensation. Top executives at the company are at the low end of the pay scale, especially compared with smaller rivals like Nissan, Hyundai-Kia, or Renault, where senior managers are paid more than double that of Toyota.

However, Toyota is not timid about investing huge sums of money in research and development, manufacturing facilities, brand equity, dealer networks, and human resources development. It spent $1 billion developing the first Lexus (the LS400). It spent more than 20 billion yen ($170 million) a year competing in Formula One races since its entry in 2002,[13] for a cumulative total of over $1 billion in 2007.

In addition, Toyota would not think twice about spending millions of dollars to bring in distributors from around the world to attend its worldwide distributor conference or bring dealers from all over the United States to the dealers' convention. The weeklong distributors' conference takes place in Japan once every four years. To conduct research for this book, we attended part of the 2003 and 2007 Toyota World Conventions for distributors, which brought together 800 people including spouses from 160 countries, as well as guests from within Japan involved in Toyota's global business, and the company's top 100 executives. The entire program required a year and a half of preparation and consisted of a general meeting, a dinner reception, regional break-out sessions, entertainment programs, a farewell party, and a visit to the Tokyo Motor Show, among numerous other visits and events.

We also attended the Lexus Dealer Meeting in San Francisco in October 2002. A total of 1,000 individuals attended this two-day conference, including 200 Lexus dealers and their spouses from the United States as well as top Toyota executives from Japan, including Dr. and Mrs. Shoichiro Toyoda. What impressed us even more was that the Toyota executives from Japan spent two extra days visiting Lexus dealers and participating in the "New Luxury Tour" training session on how to implement the Lexus customer relations philosophy at every touch point with the customer.

Finally, the company has made huge investments building the University of Toyota and the Global Knowledge Center in Torrance, California, as well as the Toyota Institute in Japan. The University of Toyota was established in April 1998 to continuously improve associate and dealer training at Toyota's U.S. operations through lifelong learning. The Global Knowledge Center, which is housed in the same building as the University of Toyota, was established in July 2002 as a center and unifier of the knowledge and expertise of Toyota distributors from around the world. The Toyota Institute was established at Toyota's headquarters in January 2002 and conducts training at an eye-catching Global Learning Center located near the scenic lakeside town of Mikkabi, a one-hour drive from Toyota City and close to Sakichi Toyoda's birthplace. Its purpose is to develop global leaders and global middle managers by sharing the philosophies and values expounded in *The Toyota Way 2001*.

Operational Efficiency and Redundance

Probably no one would deny that Toyota is the epitome of operational efficiency as an automaker. The famous Toyota Production System turns out high-quality, reliable cars at lower production cost, and makes Toyota nimble in response to changes in market demand. The car that best represents these qualities is the Corolla, which went on sale in Japan for the reasonable price of 432,000 yen in 1966. Forty years later, in 2006, the tenth generation Corolla was priced at 1,400,000 yen (just over $12,000[14]). It is by far the best-selling car for Toyota, with cumulative sales exceeding 32 million units in 144 countries for the past 40 years.[15]

The company also has a proven track record with its short cycle of product development, supply chain management, just-in-time inventory control, and the use of *andon* monitoring boards to immediately locate any problem in the production line so it can stop production and fix it. These well-known strengths, now emulated by other manufacturers, are all part of the hard side that makes Toyota operationally efficient. Contrasted with some of the soft side practices, Toyota starts to look downright redundant. As noted, Toyota holds a lot of meetings attended by a lot of people, many of whom do not participate in the discussion. When we interviewed an executive from Toyota at the Tokyo office in 2006, the meeting was also attended by five other Toyota employees, observing and listening intently, and taking copious notes, but rarely saying anything. Toyota employs numerous "coordinators": multilingual employees who help break down cultural and language barriers between its Japan-based headquarters and its international operations. This liaison-functional role was abolished at Nissan under Carlos Ghosn.

During the Toyota World Conventions in 2003 and 2007, we were astonished to find hundreds of Toyota employees serving as attendants to guests and their spouses, including Toyota's executive hosts for a whole week. In fact, there were as many Toyota staff members as there were guests. We concluded, half jokingly, that so many employees were there to ensure that the meetings took place "just in time" and to serve as a buffer "just in case" something happened. This employee presence had also been evident at the 2002 Lexus Dealer Meeting.

In addition, Toyota assigns more employees to regional sales offices in the United States relative to other carmakers, to build deeper communication links with dealers. "I think the most important thing that differentiates Toyota from other companies is the zone manager concept, and the way it treats its dealers in its business operations," said Yoshimi Inaba, Executive Vice President and former President of Toyota Motor Sales, U.S.A. "Toyota is different from other manufacturers in its philosophy toward dealers. Simply said, we treat our dealers as partners. We truly listen to their opinions and incorporate them as an integral part of our entire business formula. We pursue growth with our dealers based on the same Toyota principles while helping to make them profitable."[16]

Redundancy is also apparent among the ranks of senior executives, who spend an inordinate amount of time visiting dealers. Toyota executives constantly mine their dealers for insights about the car market, while executives at other car companies tend to view the dealers as unmanageable obstacles separating the factory from the customers.[17] A living legend within Toyota when it comes to dealer visits is Jim Press, former President of Toyota Motor North America. He would frequent the dealer's showroom, talking to everyone from technicians in charge of parts, service, and car washing to receptionists. His detailed notes were passed on to corresponding divisions and area offices for action to be taken up later.

Stability and Paranoia

By most measures, Toyota is a stable company. Except for a short period leading up to 1950, when the company faced near bankruptcy and over 1,500 employees were laid off, the company has recorded stable sales and net income growth. With high growth, excellent profitability, and earnings stability, the company has attained a consistently higher valuation in the capital markets during the past 10 years relative to its competitors.

The number of employees has grown steadily over the years, reaching close to 300,000 in 2007, partly as a result of Toyota's "up-and-in" personnel policy. As noted, Toyota did not shed personnel, even after the Japanese economic bubble burst in the 1990s, choosing instead to retain its entire workforce. Toyota also retained its dealers in most countries, even if they were underperformers. As with employees, the company has a long-term, stable relationship with its dealers, many of whom are second-generation operators.

The Corolla is a symbol of stability for Toyota. This basic family car was initially outfitted with a 1,100cc engine that, over the past 40 years, has grown to 1,800cc. At the same time, its fuel efficiency has steadily improved, with the latest tenth-generation hatchback model achieving 40.5 mpg (17.2 km/l), the best in its class in Japan. Corolla has been the best-selling model in Japan for 36 of the past 40 years, and accounts for 16 percent of all units sold by the company worldwide on a cumulative basis.[18]

At the same time, Toyota's top executives seem to thrive on paranoia. They constantly hammer in messages like "Never be satisfied" or "There's got to be a better way." One of the favorite sayings of former Chairman and President Hiroshi Okuda is "Reform business when business is good." In his inaugural address, Okuda said, "doing nothing and changing nothing" is the worst thing to do in the new century. Likewise, President Katsuaki Watanabe is fond of saying, "No change is bad."[19]

Thus, when Watanabe was appointed president in 2005, he instilled paranoia across the company by announcing his dream list of expectations during his term. They included a car that can make the air cleaner as it runs; a car that will not hurt drivers and pedestrians and never get into an accident; a car that can make drivers healthier the longer they drive it; a fuel-efficient car that can go from one coast of the United States to the other on one tank of gas and eventually around the world.[20]

"You have to put your life on the line in order to make something good," said Watanabe a few months after becoming president. "If you compromise in the process, nothing good will come of it. If you listen to this person's and that person's opinion, your spiky horns get dull. You have to keep sharpening your horns."[21] He is going to extremes in suggesting that employees put their lives on the line or keep their horns sharpened, but such remarks resonate within the organization.

Watanabe seizes every opportunity to instill an atmosphere of urgency. When a string of recalls put a dent in Toyota's reputation for quality during the summer of 2006, he made several public apologies and described the problems as a "crisis." Toyota used the quality issue to shake up the whole organization, its subsidiaries, and its suppliers. Watanabe acknowledged: "There are so many challenges we need to address."[22]

Hierarchy and Freedom to Dissent

Watanabe remembers how he came up the ranks fighting with his bosses and is fond of saying, "Pick a friendly fight." The voicing of opinions contrary to those of top management or headquarters is an everyday occurrence at Toyota. Dissenting against your bosses, not blindly following their orders, bringing bad news to them and generally not taking them too seriously are all permissible behaviors at Toyota, as discussed in Chapter 7. In fact, we were surprised to hear so many dissenting opinions during our interviews with Toyota executives. Those voicing concerns about the status quo did not seem to feel any fear or stigma about bad-mouthing the company. They appeared to be confident that they were doing the right thing by providing constructive criticism. The targets for their critical comments shall remain anonymous, but ranged across a wide spectrum from headquarters to younger workers. Here are some typical comments:

- There [are] definitely two camps within the Toyota organization. There are those who have grown up on the international side of the business and those who have come through the domestic side. And often, these organizations don't know each other, probably don't trust each other, and probably don't like each other because of battles over scarce product.
- We have a generation of young Toyota Motor Sales, U.S.A., associates[23] who are coming up the ranks, who have never known anything other than good times. They never had to deal with cars arriving at the docks that haven't been well received by the public and had to sell their way out of that. . . . All they have known is the good times.
- As an organization, we may have had various fears. . . . Toyota did very well in the twentieth century, and I suppose there are things we must try not to forget at the start of the new century. But I'm seeing signs of forgetting. There is always the danger of forgetting.
- As the company has grown and in areas where we have lost the original guiding principles, you may find elements of our problem. There are warning signs that Toyota may not be as good 20 years from now.

From an outsider's perspective, the organizational structure of Toyota appears very hierarchical, constituting silos up to the executive vice president level, despite efforts to flatten the organization that began in the late 1980s. In 1988, the company instigated a move to limit the number of stamps of approval (*hanko*) required within each department from seven or eight to three. Since 1989, it has flattened the seven layers of official status within each division to three—staff manager, department manager, and general manager. These reforms helped to eliminate functional bureaucracy within departments but did not eliminate the silo mentality between departments such as the production control department, the purchasing department, the finance department, or the personnel department.

Simplified and Complex Communication

It is an unwritten rule at Toyota that you simplify your words when communicating with others. As Human Resource Director Akio Matsubara explained:

> In my work, I am constantly being told to describe myself in easily understood terms. This is particularly relevant in IT-related work. I understand that they are working very diligently, but I have no idea what they are saying. In other words, in that world, you have to be someone who has done that kind of software work in order to understand them. So we are constantly asking people to break things down to a manageable level and discuss them using a simple language.[24]

Another common practice is the use of A3 (11 x 17 inch) paper as a simplified format for presentation, with subheadings for background information and clear statements of objectives, analysis, action plan, and expected results. These sheets, which include process flowcharts and histograms, are then posted on the walls for everyone to see in a practice known as *mieruka*, to broaden communication throughout the company.

At the same time, Toyota maintains a complex web of communication networks that aim to connect everybody in the company. The lofty aspiration is to reach a state where "everybody knows everything." To approach this ideal, intracompany communication links are established horizontally across functional and geographic lines and vertically across hierarchical divisions, as well as diagonally or informally across personal and professional interests, hobbies, educational background, birthplace, and other potential areas of linkage. As a result of these interwoven links, employees at Toyota belong to large numbers of committees (*iinkai*), self-organizing study groups (*jishuken*), and informal groups (close to 20 such groups exist within Toyota).

Toyota's communication networks extend beyond the company to its business partners, most notably its dealers. In the case of the Lexus in the United States, communication with the dealers occurs through channels that include daily data transmissions, telephone and intranet communications, and frequent visits from area offices and by the Lexus Division managers. The most time-consuming form of communication is face-to-face meetings, including the National Dealer meeting, the Fireside Chat meeting, the National Dealer Advisory Council meetings, and the Lexus Dealer Advertising Association meetings (see Chapter 7).

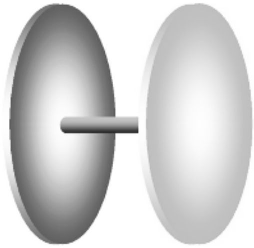
Embracing Contradictions as a Way of Life

So what accounts for Toyota's steady move to the top and now its ability also to leap forward as a global leader of the auto industry? Much has been made of the Toyota Production System (TPS), its logistics management, and its fast product development. But these systems or hard innovations do not fully account for Toyota's continuing success. Looking at the soft side of Toyota, we see rigid hierarchies and financial and human resource practices more often associated with inefficient global companies, making its success even more puzzling. Nevertheless, it is the soft side of Toyota that is more revealing of its core strength, and on closer examination, it offers a peek at a unique approach to organizational behavior in the era of the knowledge worker.

After six years of research and over 220 interviews, we have come to understand that it is the way Toyota combines the hard and soft sides that allows it to continue outperforming competitors. Both sides depend on each other to work. They are like two wheels on a shaft (Figure 1.1) that bear equal weight and together move the entity forward in the right direction. It is Toyota's relentless focus on the human being as the center of production and consumption that drives this company's continuing success. It is a model of the new global company that is also a mirror of human creativity—always growing and always incomplete.[25]

This brings us to the theoretical basis of this book, which is how Toyota symbolizes the transition of the global economy and society from the industrial age to the knowledge age. In the

FIGURE 1.1 The Two Sides of Toyota.



industrial society, contradictions, opposites, and paradoxes were commonly viewed as characteristics to be avoided or eliminated. The renowned management scientist Frederick Taylor prescribed scientific methods and procedures such as time and motion studies to eliminate conflict and contradiction in the workplace and increase efficiency on the factory floor. No one is a better practitioner of Taylorism than Toyota. But contemporary studies in human cognition show that we learn by doing and by being forced to reconcile our unique perspective with those of others who disagree with us. The opposing insights of others are necessary for us to understand the organic whole. This is how new knowledge is created.[26] We believe Toyota embraces this understanding in its view of the organization and production by cultivating contradictions and challenges in human interactions and channeling the resulting creativity into the production process.

Conclusion

The first step to better understanding Toyota is to recognize that contradictions, opposites, and paradoxes are a way of life within the company. Toyota relentlessly pits opposing forces against each other to realize continuous innovation and constant renewal. We identified the six contradictions that characterize the relationship between the hard and soft sides of Toyota and pervade its culture. But what is it that pushes

Toyota onward and upward to the never-ending next phase of development? If contradictions, opposites, and paradoxes are simply recognized and embraced without any movement to a higher-order resolution of these tensions, then the organization stalls. The two wheels joined by the shaft (Figure 1.1) must produce movement forward in the right direction. In the case of the Lexus, if the development team at Toyota had recognized the need to achieve both fuel efficiency and high-speed capability but could not resolve this apparent conflict by moving to a higher-order resolution (in the philosophical language of Hegel, this is a dialectical resolution called *aufheben*),[27] the Lexus LS400 would not have been a class leader in both fuel efficiency and performance and would have been subject to the gas-guzzler tax, preventing the Lexus from becoming the number one selling luxury car brand in the United States.

Contradictions, opposites, and paradoxes within Toyota are self-generated and deliberately imposed. Toyota strives to remain “extreme,” a state of disequilibrium where radical contradictions coexist, pushing it away from the comfort zone to create healthy tension and instability within the organization. This tension becomes the catalyst for movement forward. The organization finds new solutions beyond opposing traits, sending it off on a new trajectory. This trajectory moves upward in an expanding spiral as the firm continuously pursues innovation and self-renewal in the resolution of opposites. This resolution is not a compromise or balance, but a transcendence of opposites, leading the firm to higher levels of performance.[28]

In Chapter 2, we show how the cultivation of contradictions inside Toyota that spur innovation is guided by a larger pattern of expansive and integrative forces operating on the company that respectively drive it to the outer reaches of achievement and pull it together as a unified organization.