Preface

From Lean Production to Lean Solutions

In the summer of 1982 we had a revelation. We were visiting a series of companies in Japan, trying to understand why they were winning in global competition. Then we encountered Toyota.

We quickly realized that this company was quite different from the others we had seen. Toyota's success lay in brilliant management of its core processes: the series of actions conducted properly in the correct sequence at the right time to create value for customers. Its management of product development and production and its collaboration with suppliers and customers in Japan were far better than anything we had ever encountered.

At the moment of revelation we turned to each other and said, "It's not brilliant product innovations or culture or a weak currency or strong government support that makes this company stand out in global competition. It's the brilliant focus on core processes." This was an exceedingly useful insight, because quirky product brilliance or culture-specific advantages can't be copied. But superior process management can.

It took us a while, but by 1990 we were able to describe these processes in *The Machine That Changed the World*.[1] We presented exhaustive evidence that Toyota's key value-creating activities were better on every significant dimension, not only in comparison with foreign auto companies but with other Japanese companies. Toyota's product development, supplier management, customer support, and manufacturing processes were collectively the "machine" that was changing the world. This conclusion naturally raised the question of how companies in any industry in any country could also achieve process brilliance, a question we tried to answer in our next book, *Lean Thinking*.[2]

We proposed five simple principles to guide any firm:

Provide the *value* actually desired by customers. Resist the urge to work forward from existing organization, assets, and knowledge to convince customers that they want what the firm finds easiest to provide.

Identify the *value stream* for each product. This is the sequence of actions (the process) needed to bring a good or service from concept to launch (through the development process) and from an order into the hands of the customer (through the fulfillment process). Challenge every step in these processes to see if they really create value for the customer. Eliminate the steps that don't.

Line up the remaining steps in a continuous *flow*. Eliminate waiting and inventories between steps to slash development and response times.

Let the customer *pull* value from the firm. Reverse the push methods used by firms with long response times, which try to convince customers that they want what the firm has already designed or produced.

Finally, once value, the value stream, flow, and pull are established, start over from the beginning in an endless search for *perfection*, the happy situation of perfect value provided with zero waste.

The Triumph of Lean Production

As the years have passed, we have been cheered that the internal processes in many organizations are improving. The simplest indicator is that most manufactured goods work a lot better today and cost less to buy than when we started our collaboration. For example, defects per car have fallen steadily in the auto industry, even as the real price of a motor vehicle of a given specification continues to decline.[3] And we have been equally gratified to discover that lean production works in every company, industry, and country where it is seriously tried.

Meanwhile, Toyota marches from victory to victory in global competition as it closes in on General Motors for the leadership of the world car industry. By contrast, most of the other Japanese firms we encountered on our 1982 visit have failed or fallen by the wayside. (Honda is still independent and healthy, but Nissan is controlled by Renault; Mazda is part of Ford; Subaru, Suzuki, and Isuzu are tightly tied to GM; and Mitsubishi has suffered a dramatic loss of market share.)

But curiously, despite a growing variety of better products with fewer defects at lower cost available from a growing range of sales channels, the experiences of consumers seem to be deteriorating. In recent years, we've frequently found ourselves discussing this phenomenon with managers. They report that when they are wearing their producer hats in the office or the factory, things seem to be getting better. But when they go home and put on their consumer hats, things seem to be getting worse.

And we have felt this acutely in our own lives. It seems that every conversation the two of us have, working as busy authors separated by an ocean, starts with an account of a consumer frustration that has gotten in the way of getting our work done:

- The custom-built, delivered-in-three-days computer that refuses to work with the printer, the other computers in our home offices, and the software from different providers.
- The car repair requiring many loops of mis-communication, waiting, and complaints about work done wrong.
- The long drive to the "big box" retailer, stocking tens of thousands of different items—most of them better and cheaper than those available 25 years ago, only to return home without the one item we actually wanted.
- The medical procedure that was deeply impressive from a technical standpoint yet unpleasant and time-consuming from a personal standpoint.
- The business trip with endless queues, handoffs, and delays.
- The exasperation of "help desks" and "support centers" that neither help nor support.

Consumption should be easier and more satisfying due to better, cheaper products. Instead it requires growing time and hassle to get all of our goods and services to work properly and work together. Stated another way, today's consumers are often drowning in a sea of brilliant objects. And this seems very strange when we stop to consider that satisfying consumption—not just making brilliant products—is the whole point of lean production.

The Emerging Challenges of Consumption

In the late 1990s, we passed off these observations as short-term phenomena, the consequence of the bubble economy when consumers were offered many new capabilities supported by immature technologies. Surely things would get better in the future.

By the end of the bubble, however, we could see that these consumer problems weren't anomalies; they were normal. We then asked a very simple question: What's going on in the world that we should come to feel this way, gradually shifting our view of the next big challenge for business from producing better products to making consumption more satisfying?

As we reflected on consumption problems, we began to see five key trends that collectively create the challenge now facing consumers:

First, producers are relentlessly adding choices as they "mass customize" their product offerings[4] and steadily increase the number of channels through which products can be obtained. Choice is wonderful but it requires more and more decision time from the consumer.

Second, the regulated economy of the mass production age is steadily contracting. This gives all of us more freedom—which is good.[5] But it also gives us many more activities to manage and decisions to make: How do we invest our pension funds? Which telecommunications providers do we sign up with? What airline/rental car/hotel combination do we pick? The cost associated with making the right choice from this busy menu can easily exceed the time and energy required to make it.

Third, we are shifting from a service to a self-service economy in which we obtain more and more personal capital goods to manufacture our own value—like the computers, printers, scanners, personal digital assistants, and software that surround us as we write this book. (Our fathers and mothers had secretaries with typewriters; we have PDAs and PCs.) And we don't just obtain these personal capital goods. We must also install, maintain, upgrade, and recycle them, often integrating goods and services from many vendors, using our own time and energy.

Fourth, households are changing in every advanced economy in ways that create time and energy pressure for consumers. Workforce participation has risen dramatically, meaning that in two-adult households the member of the household (typically female) who previously managed consumption is now working. And in a growing fraction of households there is only one adult present to earn the living and to manage the consumption. This may mean more money per capita to buy more goods and services, but there is less time to manage them.

Fifth, and finally, the advance of the Internet and information technology are steadily blurring the distinction between consumption and production, often pulling the customer into the provision process. For example, one of our wives recently ordered office equipment online from a well-known manufacturer. Due to confusion about a taxpayer identification number, the order was rejected, but no e-mail with this information was sent. When the equipment failed to arrive on the promised day several weeks later, a trip to the web showed that the order had been canceled. When a human was finally reached at the manufacturer's help desk to discuss how this could have happened, the "customer relationship manager" explained that it is now the customer's responsibility to check the web frequently to make sure the production and shipment process is proceeding to plan. As the wife noted, "I had been appointed operations manager at this company at zero pay, but they forgot to tell me."

This widespread trend toward transparency and direct participation by the consumer in the production process is touted by providers as an unalloyed boon. But to busy consumers with other priorities, it often feels like the gift of unpaid work.

Today's situation of more choices and more knowledge for the consumer, gained at the expense of more responsibility and more decision and management time, can be summed up very simply:

> (1) There are more and more consumption decisions for consumers to make—more categories of products from more suppliers available through more channels to be obtained, installed, integrated, maintained, repaired, upgraded, and recycled.
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> Plus,
> (2) The evolution of the production process, facilitated by information technology and the steady introduction of more personal capital goods, claims more of the consumer's (unpaid) time and energy while blurring the boundary between consumption and production.
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> But,
> (3) Consumers will never have more time in their day (the one real constant and constraint in life) and most consumers will actually have less useful time and energy in the years ahead because of changing households and aging populations in all advanced economies.

Collectively, these forces constitute the consumer's dilemma in the 21st century.

Rethinking Value

As we grasped this situation, we realized that we needed to heed our principles of lean production by returning to the starting point, the question of value. We needed to ask what consumers really want in the era ahead. Then we needed to rethink consumption from first principles as a process—like production, but from the opposite direction—in order to discover a better way for consumers to obtain the goods and services they now want. We call this improved process *lean consumption*.

Lean consumption must have a companion process. Firms must provide the goods and services consumers actually want, when and where they are wanted without burdening the consumer. We've used the term "lean production" in the past, but too many managers act as if production stops at the office door or the factory gate. So we now use the term *lean provision*, which comprises all of the steps required to deliver the desired value from producer to customer, often running through a number of organizations.

Most of us find it easy to think about consumption when we are consumers and easy to think about provision when we are at work. But all of us find it difficult to see these interlocking processes together as a unified value stream. As we have walked through a range of industries in recent years, from airlines to healthcare to insurance to automotive repair services, we have repeatedly observed consumers and employees struggling valiantly with misaligned consumption and provision processes that alienate customers, drain away profits, and burden staff with feelings of rage and despair. Yet they soldier on in a fog of mutual incomprehension.

As we continued our investigations—visiting many companies in many industries in many countries—we began to see that if truly lean provision can be married to truly lean consumption, life can be better for consumers, more satisfying for employees, and more profitable for providers. A win-win-win is possible in which providers, employees, and consumers create lean solutions together. This fundamental insight led directly to this book.