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The Future of Service Excellence through People and Technology

> It's tough to make predictions, especially about the future.

Among the witticisms attributed to the former manager of the New York Yankees Lawrence Peter "Yogi" Berra is "it's tough to make predictions, especially about the future."[1] This shrewd advice encourages us to be circumspect in what we write. Rather than make outright prophesies, we consider the future by revisiting the past. One person who has been more prescient than most about the future of technology is John Diebold (1926–2005). A graduate of Harvard Business School, where he earned a distinction, John Diebold was author of such best-selling books as *Automation* (written in 1952 when he was aged twenty-six and one year fresh out of Harvard), *Making the Future Work* (1964), and *Managing Information: The Challenge and the Opportunity* (1985).[2] In an article published in 1965, Diebold described the "threshold of 'information revolution' that will affect the practice of management in ways that our conventional notions of computers can only hint at."[3] To help pay for his studies, Diebold took a low-paying job in a consulting company (which no classmates wanted). Diebold later bought the company. With his first book, John Diebold is acknowledged to have originated many of the technological concepts that are now commonplace, and is acknowledged to have originated the word *automation* as it is used nowadays. John Diebold's consulting company focused on helping organizations understand and appreciate the business and social benefits of information technology (IT).

In this book our motifs have been people, service, and technology. Our recurrent themes have been the concept of the moment of truth and ergonomics/human factors. In this chapter we revisit our themes and offer perspectives for the future. As noted in earlier chapters, the moment of truth is the interface between service provider and customer. Richard Normann estimated that a large company in the service sector experiences tens of thousands of moments of truth every day of its operations.[4] At each moment of truth both service provider and customer have opportunities to assess service quality. Subsequent actions of the customer (buying or walking away) give an indication of some aspects of service quality. We are not entirely convinced that after a service encounter service providers take actions of similar decisiveness. From our personal experiences and from talking with others,

we note that a vast majority of service providers do not evaluate the quality of a service encounter in the same manner as their customers. Furthermore, from our own experiences of service and our observations of service offered to others, we see that the vast majority of service providers not only neglect to take this opportunity, but also regard such opportunities as an intrusion into the ways they do business.

The Moment of Truth from an Ergonomics Perspective

In designing people/technology systems, the actual design process is critical in creating a successful moment of truth in the meeting between the technology and people. Ideally, direct participation is needed from the intended users.[5] It is generally accepted that involving users in product design can improve the design of products.[6] Similarly, information from users' experience of service can helpfully contribute to improve service design.[7] Admittedly, on many occasions this might be difficult, as the expected users may not be available at the design stage of the process. This is especially so when designing generic technological systems intended for use by users with diverse attributes. To address this deficiency, a number of work tools have been developed. In a macro-perspective on ergonomics and design of new people/technology service systems, it is necessary to analyze the intended user group and their available skills and competencies. This has to be related to the demand for skills and competencies in achieving certain functions or objectives. This theoretical model for defining an optimal level of automation for supplementing technology will rely on the different criteria mentioned before and related to ergonomic design work.

In other chapters in this book we describe concepts and practices of the moment of truth. Traditionally in these management theories, the setting is a meeting of personnel on one side and the consumers/users on the other. Apart from these two participants, service organizations have a leader, support staff, and support processes (such as quality standards). In this new ergonomic approach to service management the use of technology is included to a greater or lesser extent to give expanded parameters for the moment of truth. In this context, principles of ergonomics become a vital component for analysis, design, and use. Normally the available skills and knowledge among the intended user groups are much more widespread than what is needed for a certain task. But at the same time, the intended user groups (in the current context users can be employees or customers) may not necessarily possess the right skills and competencies needed to create

excellence in service. Technology, for example, in the form of different types of information, can supplement these missing skills and competencies.

Service through Automation: A New Era Takes Shape

Automation is not new. For millennia humankind has sought to replace human energy and effort with simple tools and subsequently with machinery. It is said that the invention of the wheel in and of itself was not that world changing. After all, elliptical rocks and pebbles roll down gradients all the time when displaced by footfalls. What is interesting is the next stage of development, when someone conceived that circular rocks could be matched in pairs or in sets of four connected by a rigid pole and a platform added. Then the shapes that had rolled down a gradient of their own accord could now partly replace the burdens of humans or their pack animals. From this relatively early experience of harnessing modest forms of technology, a history of humankind can plot technological development.[8] In the so-called information age, a history of human development with computers is no less fascinating.[9]

Throughout this book we have focused on the interactions between people and technology for the provision of customer services. Service mediated by technology calls for an expanding interpretation of the moment of truth. When technologies aid and support the service encounter (service task, service standards, and service delivery), there is a different framework for service management. A customer's role in a service encounter will need to be reframed where there is no apparent human service provider. While for some components of the service technology may be faster (comparing process, for example), there will be a noticeable lack of human responsiveness to the emotional content of the service encounter. As we know from personal experiences, gaining service solely from technology (such as online inquiries or commercial transactions) can strain the patience of the customer.

Below we describe several possible emerging scenarios of people and technology interactions and describe (in brief) their different roles. We begin from a simple form (traditional human-human service provision) and develop to more advanced levels of technology as an agent-actor in service provision.

The conventional human-to-human provision of service arguably accounts for the overwhelming structure of service encounters throughout the world. Buyers and sellers in traditional market environments taking place daily on all continents engage in this form of service encounter. A possible exception may be Antarctica, where scientific researchers replenish their supplies through radio and forms of information and communication technology (ICT). At the most fundamental configuration the human provider of services (whether frontline face-to-face or from a back office) engages with other

humans to offer, transact, and deliver services. The service may be physical (traditional market transactions, healthcare, and personal services) or intellectual (information services such as giving directions to a location, educational services). Increasingly, services may be virtual and delivered to consumers through technological systems and processes. When technologies aid or deliver services to customers, the technology interface (which the customer experiences) needs to be user-friendly. Technology tends to substitute process efficiency for emotional content. At present, technology is emotion-free and efficiency (e.g., speed, consistency, repeated routines) replaces human speed response times and possible error through boredom with repetition. When humans are expected to approach the predictability of machines, employers tend to produce instruction manuals with a range of acceptable responses to be made by the employee in different service encounter eventualities with the customer. Often rote responses to customers by service providers do little to make a positive impression of the service. In the absence of a human service provider, and as current mainstream technologies are emotion-free, technology interfaces with customers need careful design and management. Apart from speed of response and faster transaction times, it would be of little value to replace a human service provider with a machine.

A slightly different situation is evident when people engage in physical activity with technological support. Here the technology may supplement or enhance human physiognomies. Technologies can give added strength or speed (e.g., various items of construction equipment) or reduce the threats of injury (e.g., equipment used in fighting fires, bomb disposal, or mine clearing). The purpose of these technologies is for biofeedback to improve the human operator's current and actual performance. In the hands of highly skilled and professional operators, the human-machine partnership can be impressive, with each augmenting the strengths of the other. In this context the technology provides service to the human customer, although the situation may not be immediately recognizable as a service encounter as such. Nonetheless, the situation shows some features that are useful in service design. Ideally, the service encounter is co-produced with both the service provider and the customer contributing equally (or near equally) to shaping the service encounter. The total service encounter is shaped for mutual benefit (a win-win scenario for each participant).

A greater role of technology in service delivery to the customer is when the service user reacts physically to responses of technology signals, for example, when participating in online activity. In this sense, the human customer acts as a role player in a technological (web-based or Internet) preprogrammed experience. The human participates in social role playing mediated by the ICT. This example gives the user benefits that are mainly virtual and possible experiences of satisfaction. Simulators are used for skills training (such as learning to fly an aircraft) and are sometimes also used for personality and social training.

The Customer as Co-Producer of Value in the Service Encounter

Work by Robert F. Lusch and his colleagues focuses on service-dominant (S-D) logic, one of which foundation premises (FPs) is that the customer is always a co-producer in the production of value for the service encounter.[10] The role of co-producer in a service encounter extends to the internal customer in the service organization.[11] In our earlier examples and discussions we envisage the internal customer to include personnel responsible for service standards and service delivery (see Chapter 1). From the side of the service provision, it is suggested that the whole organization is responsible for delivering service.[12] Jan Carlzon, the astute president of SAS, demonstrated this mind-set when he gave all SAS employees a marketing function. In the case of SAS, this ensured that all employees were committed to delivering quality at the 50 million moments of truth identified by Jan Carlzon in his organization.[13]

When the personal nature of service so engages the customer as to elicit emotional involvement, there is a strong likelihood that such a customer will become a regular user of the service and possibly a loyal advocate of the service to others. Ideally, then, service-providing organizations should aim to provide service excellence to ensure that customers climb the loyalty ladder toward its summit. Using an example of a technology product, service-providing organizations need to design their service in a way similar to that in which Apple designs its products. At every Apple product launch around the world customers are prepared to wait in line to become customers. Indeed, it is more than a product launch and more like a cultural event.[14] While some skeptics may say this is a result of very effective marketing, nonetheless, customers of Apple products, but especially the iPad and iPhone, say they cannot lead their lives without these products.[15] Only rarely is it possible to hear such a customer response about a service.

Figure 12.1 shows that in the delivery of service an organization needs to engage with both internal and external resources in order to ensure the delivery of smooth service to the customer.

Co-creation of service value depends on components that include the service offering (customer needs at the time of the service), the value proposition (the added value gained by the customer in the service), conversation and dialogue (ongoing between the service provider and the customer), and the value network and processes (contributory agents and delivery systems for the service). According to Lusch et al. (2007), "S-D logic superordinates service (the process of providing benefit) to products (units of output that are sometimes used in the process)."[16] This gives the service organization a "service-centered view that is customer oriented and relational," and its resources are employed in serving the customer and building relationships.[17]

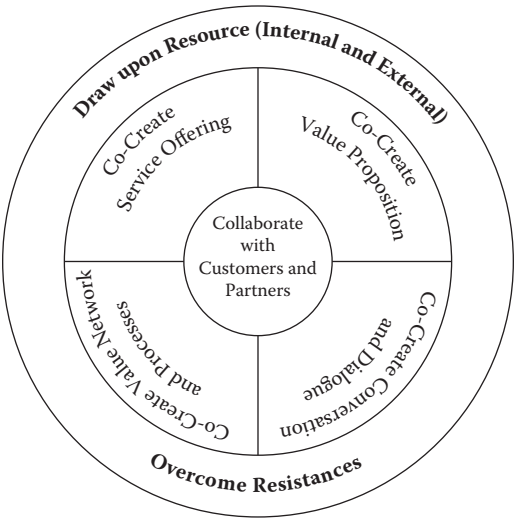

FIGURE 12.1
Service-dominant marketing. (From Robert F. Lusch, Stephen L. Vargo, and Matthew O'Brien (2007), Competing through Service: Insights from Service-Dominant Logic, *Journal of Retailing*, 83(1), 7.)

We began this chapter with the notion that making predictions about the future can be tough. We can state with almost 100 percent certainty that technology will play an increasingly larger part in this future. In 1965, Gordon E. Moore, then CEO of Fairchild Semiconductors and later the co-founder of Intel, stated that the number of transistors it is possible to place on an integrated circuit seemed to be doubling about every two months.[18] Moore's law, as it has since become known, has developed into a general law that states that technology doubles in capacity and halves in price about every twenty-four months.[19] Anyone with a personal electronic device might justifiably say that nowadays the pace of technological innovation is accelerating.

Will the pace of technological change influence the provision of service? No doubt. This trend has been noticeable for some time. Arguably, a greater influence on service quality is people's increasing willingness to accept technology as an important feature of their lives. High levels of technology acceptance will ensure that customers are ahead of service providers in how they wish to compare, assess, order, and use the services they need. When everyone seems to be "connected" most of the time, service has to deliver values and benefits that customers not only want, but also expect. Technology not only connects businesses to customers (actual and potential), but also connects customers to the wider world, and more importantly, the wider world of competitors' customers.

Bill Shankley (1913–1981), manager of Liverpool Football Club from 1959 to 1974, said, "Some people believe football is a matter of life and death.

I'm very disappointed with that attitude. I can assure you it is much, much more important than that." Organizations whose business has service at its core and whose activities focus mainly on service design, management, and delivery are likely to find increasingly that, for survival, service is a matter of life or death.

Endnotes

1. Lawrence Peter "Yogi" Berra (1925–) spent most of his baseball career from 1946 until 1965 with the New York Yankees, where he played in 100 major league games annually. As a player, coach, or manager, Berra appeared in twenty-one World Series. Retired as a player after the 1963 World Series, Berra was then hired to manage the team. In 1972 he was elected to the Baseball Hall of Fame.
2. *Automation* (1952), published by Van Nostrand Publishers, New York (reissued in 1983 by the American Management Association); *Making the Future Work: Unleashing Our Powers of Innovation for the Decades Ahead* (1964), published by Simon & Shuster, New York; *Managing Information: The Challenge and the Opportunity* (1985), published by Amacom Books, New York.
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4. Richard Normann (2002), *Service Management: Strategy and Leadership in Service Business* (3rd ed.), Chichester, UK: John Wiley & Sons, p. 21.
5. Gavriel Salvendy (ed.) (2013), *Handbook of Human Factors and Ergonomics*, Hoboken, NJ: John Wiley & Sons.
6. Myung Hwan Yun, Sung H. Han, Sang W. Hong, and Jongseo Kim (2003), Incorporating User Satisfaction into the Look-and-Feel of Mobile Phone Design, *Ergonomics*, 46(13–14), 1423–1440.
7. See Stanislav Karapetrovic (1999), ISO 9000, Service Quality and Ergonomics, *Managing Service Quality*, 9(2), 81–89; Teresa A. Swatz and Dawn Iacobucci (eds.) (2000), *Handbook of Services Marketing and Management*, Thousand Oaks, CA: Sage Publications.
8. See, for example, Arnold Pacey (1990), *Technology in World Civilization: A Thousand Year History*, Cambridge, MA: MIT Press.
9. See, for example, Brad A. Myers (1998), A Brief History of Human-Computer Interaction Technology, *Interactions*, March–April, pp. 44–54. Also see Melvin Kranzberg and Carroll W. Pursell Jr. (1967), *Technology in Western Civilization: The Emergence of Modern Industrial Society Earliest Times to 1900* (vol. 1), Oxford: Oxford University Press; Melvin Kranzberg and Carroll W. Pursell Jr. (1967), *Technology in Western Civilization: Technology in the Twentieth Century* (vol. 2), Oxford: Oxford University Press; Melvin Kranzberg (1995), Technology and History: Kranzberg's Laws, *Bulletin of Science, Technology and Society*, 15, 5–13.
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11. Evert Gummesson (2008), Extending the Service-Dominant Logic: From Customer Centricity to Balanced Centricity, *Journal of the Academy of Marketing Sciences*, 36, 15–17.
12. See Robert F. Lusch and Stephen L. Vargo (2006), Service-Dominant Logic: Reactions, Reflections and Refinements, *Marketing Theory*, 6, 281–288; Robert F. Lusch, Stephen L. Vargo, and Matthew O'Brien (2007), Competing through Service: Insights from Service-Dominant Logic, *Journal of Retailing*, 83(1), 5–18; Robert F. Lusch and Stephen L. Vargo (eds.) (2006), *The Service-Dominant Logic of Marketing: Dialog, Debate and Directions*, Armonk, NY: M.E. Sharp.
13. Jan Carlzon (1987), *Moments of Truth*, Ballinger Publishing Company, p. 3.
14. Isabel Pedersen (2008), No Apple iPhone? You Must Be Canadian: Mobile Technologies, Participatory Culture and Rhetorical Transformation, *Canadian Journal of Communication*, 33(3), 491–510.
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16. Robert F. Lusch, Stephen L. Vargo, and Matthew O'Brien (2007), Competing through Service: Insights from Service-Dominant Logic, *Journal of Retailing*, 83(1), 6.
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