Service Science
MGMT 150 / COGS 152
University of California, Merced
Fall 2012

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Lecture   Thursday, 6:00 – 8:45 PM, COB 105

UCMCROPS   F12-COGS 152/MGMT 150 LEC

URL   http://faculty.ucmerced.edu/pmaglio/mgmt150.html

Grades

Four short papers	7 points each
Two exams	20 points each
Participation	7 points
Attendance	5 points
Final paper	20 points
(Extra credit available	15 points)

Assignments

Aug 30   **Service Journal**. Two-page paper due: Describe *two specific services* you've
used, one that you think is good and one that you think is not-so-good.
Describe how each works and your interactions with them, showing why you
think one is better than the other and how you might improve the not-so-good
one. **Hint:** Keep a service journal all term—it may come in handy for later
assignments.

Oct 4   **Real Complaints**. Two-page paper due: Analyze a set of actual customer
complaint letters. Complaint letters for a specific industry (e.g., banking) or
firm (e.g., American Airlines) can be downloaded from the customer feedback
site www.planetfeedback.com or www.complaints.com. A sample of 25 letters
should be used. Read each carefully and classify the complaints along
dimensions of service quality, such as reliability, responsiveness, assurance,
empathy, tangibles, and so on. Also classify the types of solutions suggested in
the letters, and perhaps suggest your own. Your paper should outline the
complaints and improvements. **Hint**: You may find it useful to classify and
tally types of complaints and improvements, and report the numbers.

Nov 1   **Service Design**. Two-page paper due: Create and describe a service blueprint
for one of the services you've encountered (e.g., as described in your service
journal). Focus on **either front-stage or back-stage** processes (not both). Fill
in a blueprint diagram (available on UCMCROPS), describe how each process
works, where the decision points are, how problems or errors may be handled,
and so on. **Hint:** You can also relate your diagram and design to a service
journal entry.

Nov 15   **Innovation**. Two-page paper due: Invent a new innovative service based on
an existing service you have experience with (e.g., as described in your service
journal). Your description should focus on differences from the existing
service and on how your suggestions make it better. Innovation in service
results from systematic reconfiguration of the roles and responsibilities in a
service system (see Normann & Ramirez, 1993). For example, you may take an
existing offline service and identify modifications to enhance the service using
interactive capabilities of online technologies, or you may consider some ways
in which service customers can take on more or less responsibility for service
processes. Many other approaches are possible. **Hint:** You can also relate your
innovative service design to a service journal entry.

Nov 29   **Extra Credit: Service Interview.** Two page paper. Interview a front-stage or
back-stage worker at a service business. Describe what the worker's
environment is like (climate, culture, internal services), what the business's
priorities (values) are, and how service operations work, including the role of
the customer. Relate what you learn to concepts we've discussed and read
about this term (such as culture, productivity, satisfaction, recovery, and
anything else that seems relevant – this is critical, be reflective and logical).
Assess the business based on your discussion. Be clear on what business and

what kind of worker your interviewed – no need to name names, but be clear as to what you did. **Hint**: Develop a little interview "protocol" or guide beforehand to ensure you cover everything you want in your interview.

Dec 6   **Final Paper.** Five-page (plus references) paper due: The final paper must (1) pose a question about service or a question for service science more broadly, and (2) provide a thoughtful, well-reasoned discussion of the issues related to it. All papers must include references to at least six published articles, chapters, or books that are **not** on the *required* reading list. You cannot use web sources (such as Wikipedia), but must rely on traditionally published materials. References must be formatted in a standard style, either following *The Chicago Manual of Style*, the *Publication Manual of the American Psychological Association,* or some other standard. **Hint**: You can find plenty of potential references on the *optional* reading list.

Ground Rules and Other Useful Information

Being in Class

When you're in class, be in class. If you have a laptop, use it to take notes or look up things related to the class or to the discussion, but please don't use it for any non-class activities. It's simple: Show up, pay attention, ask questions, participate.

Participation

In-class participation is required. So raise your hand. Get called on. You don't have to answer questions. You can ask them. Just take part in the discussion. Be an active part of the class. You'll learn more. There are seven points for participation, and if we don't know who you are, you can't get too many of them.

Attendance

Attendance is required. There are five points for attendance, and we will take attendance at each lecture. Miss two lectures, lose one point, miss four, lose two points, and so on. Please try to attend especially when there is a guest speaker.

Guest Speakers

We have lined up great guest speakers this term, including practitioners and professors. The guest speakers may not always be tightly related to the lecture topic of the day (scheduling is hard), but will always be relevant to service. These folks have gone out of their way and traveled to be here for you. So show up, be polite, and participate.

Exams

There will be two exams, one on September 20 and one on October 25. Exams are worth 20 points each. All questions will be multiple-choice, based on both required readings and lectures. There will be extra-credit questions based on optional readings.

Papers

All papers must be single-spaced with one-inch margins on all sides, and formatted in a legible font (such as Times Roman) with font-size 12. All papers must be clearly written (see Strunk and White's *Elements of Style*) and proofread so they contain few typos.

Short Papers: Maximum length, two pages

There are four assignments plus an optional extra-credit assignment. Each is a short, two-page paper worth 7 points: 2 points for turning it in on time, up to 2 points for reasonably clear and grammatical writing, and up to 3 points for coherent and appropriate content.

Final Paper: Maximum length, 5-pages (plus references)

The final paper is due on the last day of class. It paper is worth 20 points: 5 for clarity of thought and writing; 5 for execution in terms of formatting, organization, and logic; and 10 for effort, which depends on how interesting, well thought out, and supported the paper is.

Turning in Work; Late or Missing Work

Papers must be turned in through UCMCROPS by 6:00 PM the day they are due. Short papers can be turned in up to a week late, but the maximum score for a late paper is 5 points. The extra credit assignment cannot be turned in late. The final paper cannot be turned in late. If you have a problem with any of this, contact Paul or Michelle.

Cheating and Academic Honesty

Don't cheat. Like all universities, UC Merced has a formal policy on this:
http://studentlife.ucmerced.edu/what-we-do/student-judicial-affairs/academicy-honesty-policy .

Disability Services

UC Merced is committed to ensuring equal academic opportunities and inclusion for students with disabilities (see http://disability.ucmerced.edu/). If you need any assistance, please contact Paul or Michelle.

Office Hours and Contact

Paul's office hours are before class on Thursdays 5:00 – 6:00 PM. To schedule an appointment at a different time, contact Paul by email at pmaglio@ucmerced.edu.

Michelle's scheduled office hours are Mondays 1:00 – 3:00 PM. For other times, contact Michelle at mgreenwood@ucmerced.edu.

And please feel free to contact Paul or Michelle with any type of issue or question you have about the class.

If you send email, please put *MGMT 150* or *COGS 152* in the subject line or else we may miss it.

Course Outline: So what is service science?

The US economy – and economies of all industrialized nations – are made primarily of service jobs (more than 80% of jobs in the US are service jobs. So chances are that when you get out of school, you are going to be working in a service job or in the service sector.

Service science is the study of service, which can be broadly defined as actions that one takes on behalf of another (such as washing a car or managing web servers). There really is no such thing as service science today – there is no single accepted, integrated, interdisciplinary scientific study of the service economy or of service jobs. Service science is more like a movement whose goal is to focus attention on service-related problems. Service science is emerging. Its basic unit of analysis is the *service system*, made of configurations of people, technologies, and other resources that interact with other configurations to create mutual value. Many systems can be viewed as service systems, including families, cities, and companies.

More precisely, *service* is the application of resources (including competences, skills, and knowledge) to make changes that have value for another entity. For instance, in information technology (IT) outsourcing services, a service provider operates computing infrastructure for a service client. The provider augments the client's capabilities, taking on responsibility for monthly service-level agreements and year-over-year productivity improvements. The formal representation and modeling of service systems is nascent, largely because of the complexity of modeling people, their knowledge, activities, and intentions. Service system complexity is a function of the number and variety of people, technologies, and organizations linked in value-creation networks, such as professional reputation systems of a single kind of knowledge worker or profession, work systems composed of multiple types of knowledge workers, enterprise systems, industrial systems, national systems, and even the global service system. Knowledge workers depend on their knowledge, tools, and social-organizational networks to solve problems, be productive, continually develop, and generate and capture value. Service science must combine formal models with models of human behavior to understand service systems.

Course Learning Goals: What will you learn in this course?

In this course, you will learn about service. You will learn what service is, why it is different from other sectors and other jobs, and why it is important. You will learn about problems in service, such as measuring performance, increasing quality, and creating innovation. You will learn how some have recently begun to study service from a variety of different perspectives – including social sciences, cognitive science, management, engineering, and others – to address these problems. This new approach is called *service science*. You will learn how this kind of interdisciplinary research might be effective in studying and understanding service. In the end, you will be able to have an informed and intelligent conversation about the nature of service, how to think about measurement in service, and how to increase innovation in service. And you will be (at least a little more) ready for the workforce you are about to enter.

Course Learning Outcomes: Wait... what will you be learning?

By the end of this course, you will be able to:

1. Define "service" and articulate the study of service science.
2. Differentiate service from other sectors and other jobs, and articulate why this differentiation is important.
3. Describe problems in the service sector and their origins.
4. Use disciplinary perspectives of the social sciences, cognitive science, management, and engineering to interpret the study service and address problems within the sector.
5. Describe measurement practices in service and how to increase innovation in service.

To support success across the Service Science minor coursework, these course learning outcomes will help you reach the Service Science *Program Learning Outcomes* (see the SSHA Service Science webpage for more information):

1. Describe through a multidisciplinary lens the process of how knowledge is converted to value in the services sector
2. Assess how goods and services can be improved, administered, and optimized
3. Apply appropriate information technology to analyze basic business processes and recommend strategies for improvement and optimization
4. Present basic knowledge of the relationship between IT and service systems
5. Use professionalism in writing and speaking that is consistent with the discipline

To support success across the Management coursework, these course learning outcomes will help you reach the Management *Program Learning Outcomes* 2, 3, and 5 (see the SSHA Management webpage for more information):

2. Apply theories and concepts from the discipline of Management and related fields (e.g. accounting, economics, statistics, finance, marketing, human resource management, strategy and business law) to management situations.

3. Use effective written and oral communication consistent with the discipline and professional environments.

5. Evaluate ethical, social, and external issues as they relate to the organization, operations, and people.

To support success across the Cognitive Science coursework, these course learning outcomes will help you reach the Cognitive Science *Program Learning Outcomes* 1 and 3 (see the SSHA Cognitive Science webpage for more information):

1. Explain and apply knowledge of landmark findings and theories in cognitive science, and use that knowledge as context for understanding the current state of affairs.

3. Interpret and appreciate formal and computational approaches in cognitive science.

Readings

Books (Available at the UC Merced Bookstore)

Hsieh, T. (2010). *Delivering happiness: A path to profits, passion, and purpose.* New York: Business Plus.

Teboul, J. (2006). *Service is front stage: Positioning services for value advantage.* Insead Business Press/Palgrave Macmillan.

Note: This text is also available online for free through UC Merced library.

Book Chapters (eBook available for purchase on web)

Fitzsimmons, J. A. & Fitzsimmons, M. (2011). *Service Management: Operations, Strategy, and Information Technology* (Seventh Edition). McGraw Hill.

Note: To purchase this eBook ($56.61), go to

https://create.mcgraw-hill.com/shop/#/catalog/details/?isbn=9781121608856

Articles and Chapters (Available through UCMCROPS)

Campbell, C. S., Maglio, P. P. & Davis, M. M. (2011). From self-service to super-service: How to shift the boundary between customer and provider. *Information Systems and eBusiness Management*, 9(2) 173-191.

Chase, R. B. (1978). Where does the customer fit in a service operation? *Harvard Business Review, 56*, 137 – 142.

Clark, H. H. & Brennan, S. E. (1991). Grounding in communication. In L. B. Resnick, J. M. Levine & S. D. Teasley (Eds.), *Perspectives on Socially Shared Cognition.* APA Press.

Frei, F. X. (2006). Breaking the trade-off between efficiency and service. *Harvard Business Review, 84*, 93 – 101.

Frei, F. X. (2008). The four things a service business must get right. *Harvard Business Review* (April): 70-80.

Glushko, R. J. (2010). Seven contexts for service system design. In P. P. Maglio, C. A. Kieliszewski, & J. C. Spohrer (Eds.), *Handbook of service science.* New York: Springer.

Gummesson, E. (2010). The future of service is long overdue. In P. P. Maglio, C. A. Kieliszewski, & J. C. Spohrer (Eds.), *Handbook of service science.* New York: Springer.

Heskett, J. L., Jones, T. O., Loveman, G. O., Sasser, W. E., Schlesinger, L. A. (1994). Putting the service profit chain to work. *Harvard Business Review, 72,* 164 – 174.

Hutchins, E. (1995). How a cockpit remembers its speeds. *Cognitive Science, 19*, 265 – 288.

Maglio, P. P., Srinivasan, S., Kreulen, J. T., Spohrer, J. (2006). Service systems, service scientists, SSME, and innovation. *Communications of the ACM, 49*, 81– 85.

Maglio, P. P., Kandogan, E., & Haber, E. (2008). Distributed cognition and joint activity in computer-system administration. In M. S. Ackerman, C. Halverson, T. Erickson, & W. A. Kellogg (Eds.), *Resources, co-evolution, and artifacts: Theory in CSCW*. New York: Springer.

Maglio, P. P. & Spohrer, J. (2008). Fundamentals of service science. *Journal of the Academy of Marketing Science*, 36, 18-20.

Maglio, P. P., Vargo, S. L., Caswell, N. & Spohrer, J. (2009). The service system is the basic abstraction of service science. *Information Systems and e-business Management,* 7, 395-406.

Moon, Y. & Frei, F. X. (2000). Exploding the self-service myth, *Harvard Business Review*, 78, 26-7.

Normann, R. & Ramirez, R. (1993). From value chain to value constellation: Designing interactive strategy. *Harvard Business Review, 71*, 65 – 77.

Spohrer, J. & Maglio, P. P. (2010). Service science: Toward a smarter planet. In W. Karwowski & G. Salvendy (Eds.), *Introduction to service engineering*. New York: Wiley & Sons.

Spohrer, J. & Maglio, P. P. (2008). The emergence of service science: Toward systematic service innovations to accelerate co-creation of value. *Production and Operations Management*, 17(3), 1-9.

Spohrer, J., Maglio, P. P., Bailey, J. & Gruhl, D. (2007). Steps toward a science of service systems. *Computer, 40*, 71-77.

Vargo, S. L. & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing, 68*, 1 – 17.

Optional Readings (Available through UCMCROPS)

Bitner, M. J., Ostrom, A. L., & Meuter, M. L. (2002). Implementing successful self-service technologies. *Academy of Marketing Executive, 16*, 96 – 109.

Bitner, M. J., Ostrom, A. & Morgan, F. (2008). Service blueprinting: A practical technique for service innovation. *California Management Review, 50,* 66 – 94.

Chase, R. B. & Dasu, S. (2001). Want to perfect your company's service? User behavioral science. *Harvard Business Review*, (June), 79 – 84.

Chesbrough, H. & Davies, A. (2010). Advancing services innovation: Five key concepts. In P. P. Maglio, C. A. Kieliszewski, & J. C. Spohrer (Eds.), *Handbook of service science*. New York: Springer.

Gadrey, J. (2002). The misuse of productivity concepts in services: Lessons from a comparison between France and the United States. In J. Gadrey & F. Gallouj (Eds). *Productivity, Innovation, and Knowledge in Services: New Economic and Socio-economic Approaches.* Cheltenham UK: Edward Elgar, pp. 26 – 53.

Glushko, R. J. & Tabas, L. (2009). Designing service systems by bridging the ''front stage''and ''back stage'', *Information Systems and eBusiness Management*, 7, 407-427.

Hagel, J. & Singer, M. (2000). Unbundling the corporation. *The McKinsey Quarterly*, *2000/3*, 148 – 161.

Herzenberg, S., Alic, J. & Wial, H. (1999). A new deal for a new economy. *Challenge, 42*, 102 – 129.

Hill, P. (1977). On goods and services. *Review of Income and Wealth, 23*, 315 – 338.

IfM & IBM (2008). *Succeeding through service innovation: A service perspective for education, research, business and government.* Cambridge, UK: University of Cambridge Institute for Manufacturing. ISBN: 978-1-902546-65-0

Johnson, B. C., Manyika, J. M., & Yee, L. A. (2005). The next revolution in interactions. *The McKinsey Quarterly, 2005/4*, 20 – 33.

Lovelock, C. (1983). Classifying services to gain strategic market insights. *Journal of Marketing, 43*, 10 – 20.

Lovelock, C. & Gummesson, E. (2004). Whither services marketing? In search of a new paradigm and fresh perspectives. *Journal of Service Research, 7*, 20 – 41.

Miles, I. (2008). Patterns of innovation in service industries. *IBM Systems Journal, 47*, 115 – 128.

Palmisano, S. J. (2006). The globally integrated enterprise. *Foreign Affairs, 85*, 127 – 136.

Prahalad, C. K. & Ramaswamy, V. (2000). Co-opting customer competence, *Harvard Business Review*, 78, 79-93.

Sampson, S. E. (2010). The unified service theory: A paradigm for service science. In P. P. Maglio, C. A. Kieliszewski, & J. C. Spohrer (Eds.), *Handbook of service science*. New York: Springer.

Schneider & Bowen (2010). Winning the service game: Revisiting the rules by which people co-create value. In P. P. Maglio, C. A. Kieliszewski, & J. C. Spohrer (Eds.), *Handbook of service science*. New York: Springer.

Schultze, U. & Bhappu, A. D. (2005). Incorporating self-serve technology into co-production design. *International Journal of E-Collaboration, 1*, 1 – 23.

Syllabus

Aug 23   Lecture 1: What is Service?
                Reading: Fitzsimmons & Fitzsimmons (2011), Chapter 1 (pp. 3–16)
                        Teboul (2006), Chapter 1
                Optional: Hill (1977), Lovelock (1983), Herzenberg et al (1999)

Aug 30   Lecture 2: Creating a Service Culture
                Reading: Fitzsimmons & Fitzsimmons (2011), Chapter 9 (pp. 203-226)
                        Heskett et al (1994)
                        Teboul (2006), Chapter 3
                Optional: Schneider & Bowen (2010)
                Service Journal Assignment Due

Sept 6   Lecture 3: Delivering Happiness
                Guest Speaker: **Steve Shackelton**, National Park Service
                Reading: Hsieh (2010)
                Optional: Fitzsimmons & Fitzsimmons (2011), Chapter 3 (pp. 39-70)

Sept 13   Lecture 4: The Role of the Customer
                Guest Speaker: **Michael Dixon**, Naval Postgraduate School
                Reading: Chase (1978)
                        Fitzsimmons & Fitzsimmons (2011), Chapter 2 (pp. 17-38)
                        Teboul (2006), Chapter 2
                Optional: Chase & Dasu (2001), Sampson (2010)

Sept 20   **Exam 1**

Sept 27   Lecture 5: Measuring Service Quality
                Guest Speaker: **Joe Serna**, Bank of America
                Reading: Fitzsimmons & Fitzsimmons (2011), Chapter 6 (pp. 125-166)
                        Frei (2006)
                        Teboul (2006), Chapter 6 – 7
                Optional: Gadrey (2002)

Oct 4   Lecture 6: Self Service and Super Service
                Guest Speaker: **Pat Selinger**, Allstate Insurance
                Reading: Fitzsimmons & Fitzsimmons (2011), Chapter 5 (pp. 103-124)
                        Campbell, Maglio & Davis (2011)
                        Moon & Frei (2000)
                        Teboul (2006), Chapter 4
                Optional: Bitner et al (2002), Schultze & Bhappu (2005)
                Real Complaints Assignment Due

Oct 11   Lecture 7: Coordination and Distributed Cognition
                Guest Speaker: **Nick Flor**, University of New Mexico
                Reading: Clark & Brennan (1991)
                        Hutchins (1995)
                        Maglio, Kandogan & Haber (2008)
                Optional: Johnson et al (2005), Prahalad & Ramaswamy (2000)

Oct 18	Lecture 8: How to Design a Service Reading: Fitzsimmons & Fitzsimmons (2011), Chapter 4 (pp. 71-102) Glushko (2010) Teboul (2006), Chapter 5 Optional: Bitner, Ostrom & Morgan (2008), Glushko & Tabas (2009)
Oct 25	**Exam 2**
Nov 1	Lecture 9: Service Optimization Reading: Fitzsimmons & Fitzsimmons (2011), Chapters 8 (pp. 167-200) Fitzsimmons & Fitzsimmons (2011), Chapter 12 (pp. 227-252) Teboul (2006), Chapter 8 Optional: Hagel & Singer (2000) **Service Design Assignment Due**
Nov 8	Lecture 10: Service Innovation Guest Speaker: **Henry Chesbrough**, UC Berkeley Reading: Chesbrough & Davies (2010) Normann & Ramirez (1993) Teboul (2006), Chapter 10 Optional: Miles (2008)
Nov 15	Lecture 11: Service Systems Reading: Frei (2008) Maglio et al (2006) Maglio et al (2009) Spohrer et al (2007) **Innovation Assignment Due**
Nov 22	*Thanksgiving Holiday (No Lecture)*
Nov 29	Lecture 12: Service Science Guest Speaker: **Bob Glushko**, UC Berkeley Reading: Maglio & Spohrer (2008) Spohrer & Maglio (2008) Vargo & Lusch (2004) Optional: Lovelock & Gummesson (2004) **Extra Credit: Service Interview Assignment Due**
Dec 6	Lecture 13: Future Reading: Fitzsimmons & Fitzsimmons (2011), Chapter 14 (pp. 253-277) Gummesson (2010) Spohrer & Maglio (2010) Optional: IfM & IBM (2008), Palmisano (2006) **Final Paper Due**