Industry Evolution

Johann Peter Murmann

PhD Seminar

ETH Zurich

30 May to 3 June 2016 | 9 am to 12:30 pm | Location: J 414

Readings: Everyone will be expected to read all papers and participate in the discussion.

Format: Each day two students will lead the discussion of the four papers assigned for the day. The two students should divide the four papers and assign each person to be the primary discussion leader for two papers. We have roughly 3 hours per day. The expectation is that the two student facilitators are leading the discussion for about half of the time, i.e. 1.5 hours. This does not mean that you need to talk the entire time. As a lead discussant, you should be able to summarize the readings, relate the readings to existing conversation in research, identify what the readings propose, and explain why what they propose is important. Ideally the lead discussant does this by posing a series of discussion question to the entire group. At least a week before your session (ideally earlier), I would like you to send me a draft of the discussion question you want to use for your session. I will give you feedback on these questions and may suggests additional ones. I leave it up to you to decide whether you want to use PowerPoint slides for your session.

Monday, May 30: Industry Evolution: Fundamentals

Utterback, J. M., & Abernathy, W. J. 1975. A Dynamic Model of Process and Product Innovation. Omega, 3(6), 639-656.

Klepper S, Graddy E. 1990. The evolution of new industries and the determinants of market structure. The RAND Journal of Economics 21(1): 27-44.

Klepper, Steven and Kenneth L. Simons (1997)."Technological Extinctions of Industrial Firms: An Inquiry into their Nature and Causes." Industrial and Corporate Change 1997(2):379-460.

Klepper, Steven. 2002. "Firm survival and the evolution of oligopoly". Rand Journal of Economics, Vol.33, No. 1, pp.37-61.

Tuesday, May 31: Industry Evolution & Technology

Anderson P, Tushman ML. 1990. Technological Discontinuities and Dominant Designs: A Cyclical Model of Technological Change. Administrative Science Quarterly 35(4).

Miller, R., Hobday, M., Leroux-Demers, T., & Olleros, X. 1995. Innovation in Complex System Industries: the Case of Flight Simulation. Industrial and Corporate Change, 4(2), 363-400.

Murmann JP, Frenken K. 2006. Toward a Systematic Framework for Research on Dominant Designs, Technological Innovations, and Industrial change. Research Policy 35(7): 925-952.

Agarwal R, Tripsas M. 2008. Technology and industry evolution. The Handbook of Technology and Innovation Management 1.

Wednesday, June 1: Industry Evolution & Organizations

Burgelman, R. A. 1991. Intraorganizational Ecology of Strategy Making and Organizational Adaptation: Theory and Field Research. Organization Science, 2(3), 239-262.

Klepper S. 2002. The capabilities of new firms and the evolution of the US automobile industry. Industrial and corporate change 11(4): 645-666.

Siggelkow, Nicolaj 2001. "Change in the Presence of Fit: The Rise, the Fall, and the Renaissance of Liz Claiborne". Academy of Management Journal 44/4: 838-857.

Danneels, E. 2010. Trying to become a different type of company: dynamic capability at Smith Corona. Strategic Management Journal, 32(1), 1-31.

Thursday, June 2: Industry Evolution & Institutions

Nelson RR. 1994. The co-evolution of technology, industrial structure, and supporting institutions. Industrial and Corporate Change 3(1): 47-63.

Nelson, R. R. 2008. What enables rapid economic progress: What are the needed institutions? Research Policy 37(1), 1-11.

Murmann JP. 2013. The coevolution of industries and important features of their environments. Organization Science 24(1): 58-78.

Murmann JP. 2013. The co-development of industrial sectors and academic disciplines. Science and Public Policy 40(2): 229-246.

Friday, June 3: Industry Evolution & Cognition

Bijker, W. E., Hughes, T. P., & Pinch, T. 1987. "Introduction" and "The Social Construction of Facts and Artifacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other". In W. E. Bijker, T. P. Hughes, & T. Pinch (Eds.), The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology Cambridge, MA: The MIT Press.

Garud R, Rappa MA. 1994. A socio-cognitive model of technology evolution: The case of cochlear implants. Organization Science 5(3): 344-362.

Kaplan S, Tripsas M. 2008. Thinking about technology: Applying a cognitive lens to technical change. Research Policy 37(5): 790-805.

Benner MJ, Tripsas M. 2012. The influence of prior industry affiliation on framing in nascent industries: The evolution of digital cameras. Strategic Management Journal 33(3): 277-302.