Overview: Managing Rare Events and Learning from the Unexpected

The 2010 Medici Summer School was held in La Pietra International Conference and Events Center, Florence, Italy, between June 7th and 11th. It was co-sponsored by Alma Graduate School of Management (University of Bologna), HEC Paris School of Management and Stern School of Business (New York University) and is the second edition of the Medici Summer School in Management Studies for doctoral students and young researchers. The Summer School is designed to promote doctoral education and research in management studies and contribute to the development of enlightened practice in the management of business organizations. The one-week program allows for ample interaction between students and faculty as it combines lectures, research seminars and student presentations, as well as social events. 25 PhD students from various universities including Oxford, Cambridge, NYU, McGill, LBS, Bologna, and HEC, among others, attended the school. This year's focus was on the role that "unexpected events" play in organizational functioning. The discussions revolved around two key questions: *How do unexpected events affect, and get shaped by, organizations? How can managers learn from and manage unexpected events?* Starting with a discussion on the notion of rare events and their meaning for research on strategy and organizations, the summer school continued with the application of econometric models to rare events and examined how these models fare in the presence of rare events. The focus then shifted to the cognitive aspects of rare events, and how managerial interpretation mattered. Finally, the current state of research on rare events and possible avenues for future research on the subject was explored.

1st day

On the first day, Joe Lampel (City University) explored how rare events can be an impetus to pursue fundamental change for organizations. He argued that *the issue is not so much what organizations learn "from" rare events but what they learn "through" rare events*. Starting from two definitions of unusual events (either as low-probability estimates or as enacted salience), he investigated three potential consequences of unexpected events for organizations: auditing existent response repertories, strengthening organizing routines, and transforming organizational identity. As an example of learning processes triggered by rare events, he presented his empirical study about the Baltimore & Ohio Railroad Museum's roof collapse, which offered an opportunity for learning and transforming the organization's identity.

2nd day

On the second day, William Greene (NYU) gave his first lecture, in which he talked about the distinction between rare and unusual events, modeling, probabilities, correlation and regression. He emphasized that assigning probabilities to events requires a construct of a meaningful framework within which the experiment can be repeated, and that assigning infinitesimal probabilities to events in retrospect is not a productive exercise. A rare event, as a *black swan*, is a highly improbable event with three principal characteristics: *it is unpredictable, carries a massive impact; and after the fact, we concoct an explanation that makes it appear less random, and more predictable, than it was.* He continued his lecture with econometric modeling when there are *unusual* events -rather than *rare*events- and how to use outside information in a Bayesian update. Invalid model assumptions such as Gaussian Copula function of David Li, which was used to price hundreds of billions of dollars' worth of CDOs filled with mortgages, is also discussed.

3rd day

William Greene held the morning session and gave his second lecture. The topics covered included linear and robust quantile regression, robust quantile models for counts and binary choice when the event is unusual. Greene concluded by emphasizing that rare events are outside the realm of modeling paradigm and hence econometric models can only accommodate unusual events. Still, models may be merely inadequate, as outliers are "unusual" in the context of the model and may be a consequence of the specification. Raghu Garud (Penn State University) held the afternoon session of the third day. He discussed the prevailing view of rare events as very low-probability estimates. Preferring the "unusual event" expression to that of "rare event", he shed light on narrative development processes that help organizations learn from unusual experiences. Through narratives, actors within organizations *create situated understandings and negotiate consensual meanings of these unusual events.*Meanings are more constructed upon experiences and memories of actors than given by events. That helps explain differentiated responses amongst organizations to unexpected events.

4th day

On the fourth day, Zur Shapira (NYU) discussed whether it is possible to learn under extreme and recurring conditions. He presented his paper "*Organizational Learning under Extreme Turbulent & Recurring Conditions: Effect of costs of anticipated consequences on hurricane evacuation decisions"*, which focuses on the behavior of local officials in making evacuation decision. He discussed how judgmental issues involved in decision making increased the number of evacuation "errors" and he pointed to the gap between the intentions to learn and the harsh reality that makes such learning a very difficult task.

5th day

On the last day, Jerker Denrell (Oxford University) raised a surprising question: Are the best performers the most impressive? He suggested that when trying to explain extreme performances of firms, people give more credit to luck than to skills. A fat-tailed error term generates non-monotonic association between outcomes and expectations. He also discussed the implications of under-sampling of failure, which makes it very hard to identify factors that lead firms from "incompetent" to "fine". Throughout the week, students were able to present their papers and get feedback from both faculty and peers. Students also had the opportunity to carry informal discussions with faculty during lunch breaks and during a pizza party at a very nice restaurant overlooking Florence from the famous Fiesole heights.